

# AGENDA

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# *ANALYSIS*

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# Australia and the Zero Lower Bound on Interest Rates: Some Monetary Policy Options

Declan Trott<sup>1</sup>

## Abstract

*This paper argues that Australia needs a contingency plan for monetary policy when interest rates hit zero, and considers various options. Level targeting appears undesirable as a long-run policy due to the lack of an appropriate target variable – prices, wages and nominal GDP all being unsuitable – but may be useful as a temporary expedient. Other possibilities include a higher inflation target and temporary exchange rate targeting.*

## Could ‘it’ happen here?

Australia survived the global financial crisis relatively unscathed, despite much higher interest rates than in other developed countries (see Figure 1). But our exceptional status may be short-lived. In May 2015, the cash rate was cut to 2 per cent, the lowest level since the current series began in 1990, and by some measures the lowest short-term rate since at least 1960. Nevertheless, unemployment has risen steadily, despite the fact that investment in the resources sector has yet to fall back to normal levels.

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<sup>1</sup> declan\_t@hotmail.com. Thanks to Greg Connolly, William Coleman and an anonymous referee for comments. This paper has also been greatly benefitted by Scott Sumner’s blog ‘The Money Illusion’ and Nick Rowe’s blog ‘Worthwhile Canadian Initiative’.

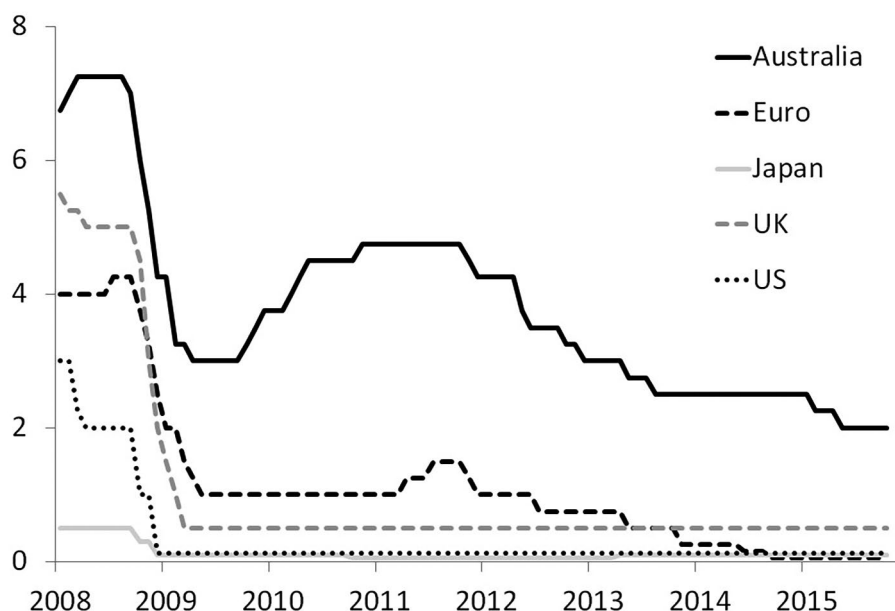


Figure 1: International official interest rates, % p.a.

Source: Reserve Bank of Australia, *Statistical Bulletin*, table F13

It would seem prudent, then, to be prepared for interest rates to approach zero, as has already occurred in most other OECD countries.<sup>2</sup> Sheehan and Gregory (2013) and Freebairn and Corden (2013) have called for increased infrastructure spending on this basis. Yet, as these authors acknowledge, such a policy faces considerable challenges. Furthermore, if warnings of ‘secular stagnation’ have any validity, near-zero interest rates may not be a once-in-a-generation emergency to be dealt with using ad hoc expedients, but an increasingly common situation requiring a more systematic response. In this case, changes to monetary policy would appear more desirable.

This paper considers various means by which monetary policy may stimulate aggregate demand when its usual instrument – the short-term interest rate – is unavailable. The objectives of monetary policy are taken here to be the conventional ones of a stable value of money and full employment, analysed

2 Of the 40 member countries listed (counting the Eurozone as 19 separate countries) in OECD.Stat Monthly Monetary and Financial Statistics, 31 have experienced at least one month with ‘Immediate interest rates, Call Money, Interbank Rate’ less than 0.5 per cent p.a. since 2008.



under the broadly ‘Keynesian’ assumption that fluctuations in nominal spending have significant effects on real output. Financial stability objectives are assumed to be dealt with separately via (macro)prudential regulation.<sup>3</sup>

The paper begins by describing the problem of the zero lower bound, and the logic of expectations management in general and level targeting in particular as a solution. It then argues, however, that level targeting requires a more careful choice of target variable than the current regime of inflation targeting, and that the price level, nominal GDP and nominal wages all appear problematic. A more eclectic mix of policies is then considered.

## The zero lower bound, and the vital role of expectations

As long as money can be stored at negligible cost, interest rates cannot fall below zero, because hoarding money would then be a superior alternative to lending it. This poses a problem for conventional monetary policy, under which the usual response to falling inflation or rising unemployment is a lower interest rate. What happens if the interest rate cannot be cut any further? The experience of Japan in the 1990s, and much of the world since 2008, shows that near-zero interest rates are perfectly compatible with low and falling inflation, high and rising unemployment, and output well below previous estimates of potential.

Can monetary policy still be effective in such a situation? Theory suggests that expectations management is the key. In the standard permanent income or life-cycle model, current spending is determined by expected future income and interest rates. If promises about future policy are successful in changing these expectations, they may increase demand without any immediate change in the central bank’s balance sheet. Conversely, even a very large balance sheet expansion may be ineffective if it is believed to be temporary and thus does not change expectations.<sup>4</sup> Krugman (1998), motivated by the then unusual experience of Japan, showed that, while a temporary monetary expansion would fail to raise prices and output at the zero lower bound (since it cannot change the current interest rate, and, being temporary, will not affect any future variables), a credible permanent expansion could work, by increasing

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3 While this separation is potentially controversial, it is the author’s opinion that the alternative – a willingness to tighten monetary policy in the face of a perceived asset or credit bubble, despite benign or below-target inflation and employment outcomes – is more risky, assuming not only the ability to second-guess market pricing, but that the blunt instrument of aggregate demand restriction is preferable to more targeted measures directed at the ‘bubble’ sector. Furthermore, if low nominal interest rates are considered dangerous, a tight money policy would tend to worsen the problem in all but the very short run by creating lower inflation (the Fisher effect), as the recent experience of Sweden illustrates.

4 The actions of Japan’s central bank in the 2000s, and the Swiss more recently, come to mind.

the expected future price level and therefore reducing the real interest rate. (This assumes that a permanently higher money supply must eventually create proportionally higher prices at some point in the future when the interest rate rises above zero.) Sumner (1993) made a similar point, though without reference to the zero lower bound, when he argued that a large but temporary increase in the money supply would not have a proportional effect on the price level, in the context of colonial American note issue.

Combining promises about future policy with additional action in the present may be desirable both as a signal to make the promises credible, and to overcome problems not accounted for in the simple life-cycle model, such as credit constraints and adaptive or backward-looking expectations. Thus, Svensson (2003) argues that optimal policy at the zero lower bound involves three elements: commitment to a higher future price level, concrete action to demonstrate this commitment, and an exit strategy. Similarly, Woodford (2012: 87) advocates ‘a combination of commitment to a clear target criterion ... with immediate policy actions that should stimulate spending’. Such action might include fiscal stimulus, exchange rate intervention, or central bank asset purchases, some of which are discussed below.

## Target the level, not the rate?

Repeated mention of the future price level leads naturally to consideration of level targeting. Price level targeting is identical to inflation targeting – more generally, targeting the level of any index is equivalent to targeting its rate of change – as long as the target is hit in every period. A price level target increasing by 2 per cent p.a. and a 2 per cent inflation target both imply that, if the current price level is 100, it should be 102 next year, and 104 the year after that. But under inflation targeting, there is no subsequent correction of mistakes. If actual inflation in the first year is only 1 per cent, giving a price level of 101, the inflation target implies a new target price level of 103 for the year after. Under level targeting, by contrast, the target price level remains at 104, implying a temporary rise in inflation to 3 per cent to make up for the previous undershooting.

This difference has important implications for real interest rates. The zero lower bound is associated with low and falling inflation, both because low inflation reduces the target interest rate, and because the zero lower bound forces real interest rates to be higher than desired, causing further disinflation. Under inflation targeting, the best case is that inflation is expected to return to target quickly, so that expected real rates remain stable. In the worst case, inflation expectations become unanchored, leading to a death spiral of higher real rates

and disinflation. Under a credible level target, exactly the opposite effect occurs. Lower inflation today implies higher inflation tomorrow, cutting expected real rates.

Expectations of real income, as well as interest rates, also play an important role, and can magnify the effects of successful policy. As Romer (2013: 2) puts it:

... if aggressive monetary policy actions can cause expectations of real growth, this may have an even greater impact on consumer spending and investment. Consumers who expect to have a job are far more likely to buy cars and remodel their kitchens than those who do not. And firms that expect to have customers are far more likely to build new factories and buy new machines than those that do not.

She describes the ‘regime shift’ that occurred in the United States in 1933, when the Roosevelt administration suspended the gold standard and announced an intention to reflate commodity prices to their pre-Depression levels.<sup>5</sup> Stock prices and expected inflation rose dramatically and industrial production increased 57 per cent in four months, despite fiscal contraction and a national banking holiday.

This period of history offers other relevant examples. Crafts (2013) argues that British monetary policy after going off the gold standard in 1931 *de facto* followed a price level target. Sweden, however, may be the only country to adopt a *de jure* price level target (also in the 1930s), as described in Berg and Jonung (1999). Both of these countries achieved relatively rapid recoveries from the Great Depression following their monetary regime changes.

While this paper focuses on level targeting’s effectiveness at the zero lower bound, this is not the only argument in its favour. Woodford (2003: 498, 501) finds that price level targeting can be optimal, and in a much wider set of cases, optimal monetary policy displays some history dependence – that is, past errors are partially, but not completely, corrected – even if policymakers care only about the inflation rate (as opposed to the price level) and the zero lower bound is irrelevant. While it is optimal *ex post* to allow bygones to be bygones, *ex ante* it is worthwhile to have some commitment to reversing over- or undershooting, because it will moderate price setters’ response to a given shock.

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5 See [www.popmodal.com/video/2066/Vintage-pro-inflation-propaganda](http://www.popmodal.com/video/2066/Vintage-pro-inflation-propaganda).

## Alternative target variables: Nominal GDP and nominal wages

While both the theory and history of level targeting make it appear promising as a means of escape from the zero lower bound, there are questions over its suitability as a permanent policy regime. In particular, idiosyncratic shocks to the price level – that is, shocks that are uncorrelated with the output gap, or ‘supply shocks’ – pose a much greater problem under level targeting. Under inflation targeting, it is standard practice to ‘look through’ shocks such as tax changes or commodity price fluctuations. For example, in 2011 the Bank of England estimated that sterling depreciation, higher energy prices and rising VAT would generate a 12 per cent rise in the UK price level, and decided that these ‘temporary shocks’ should be accommodated rather than reversed by monetary policy (HM Treasury 2013: 24). Level targeting does not permit this, and if these shocks are persistent, they will require costly fluctuations in output to hit the target. Coletti et al. (2012), for example, find that persistent commodity price shocks make price level targeting inferior to inflation targeting, a finding that is highly relevant to Australia.

If the price level is an unsuitable target, what other options are there? It is widely agreed that monetary policy targets should be wholly or partly nominal, since a purely real target such as output or unemployment may be unattainable and, in any case, leaves nominal values such as the price level indeterminate. Mankiw and Reis (2003) and the Bank of England (2013: 23) agree that a good target should be procyclical – ‘a good guide to the broad economic conditions’ – and have low exposure to idiosyncratic shocks – not ‘likely ... to provide a misleading signal’. Two variables often suggested as an alternative to the CPI are nominal GDP and nominal wages.

*Nominal GDP* has several appealing features. It neatly combines the twin goals of price and output stability, without relying on unobservable variables such as the output gap, and avoids the quality-adjustment problems of price indices. As ‘nominal income’ or ‘national income’ targeting, it enjoyed some academic popularity in the 1980s and early ‘90s, although it was never adopted by a central bank.<sup>6</sup> Interest in the concept then waned due to the widespread adoption of inflation targeting, and also because research did not show any clear advantage. In an Australian context, for example, both McKibbin (1997) and de Brouwer and O’Regan (1997) found that an interest rate rule responding to inflation

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6 For a brief history, see [content.ksg.harvard.edu/blog/jeff\\_frankels\\_weblog/2012/06/13/nominal-gdp-targeting-could-take-the-place-of-inflation-targeting/](http://content.ksg.harvard.edu/blog/jeff_frankels_weblog/2012/06/13/nominal-gdp-targeting-could-take-the-place-of-inflation-targeting/).

and the output gap outperformed a nominal income rule. Orphanides (2003), however, came to the opposite conclusion using US data, when measurement error in the output gap is taken into account.

After 2008, nominal GDP targeting experienced renewed popularity. Level targeting was seen as a way to overcome the zero lower bound, and nominal GDP showed the effects of the recession in the US and Europe much more clearly than the price level did.<sup>7</sup> This resurrection was led by ‘market monetarist’ bloggers such as Scott Sumner, but has since received endorsement from Romer (2011) and Mishkin and Woodford (2013) in the United States, and Quiggin (2012) and McKibbin (2015) in Australia.

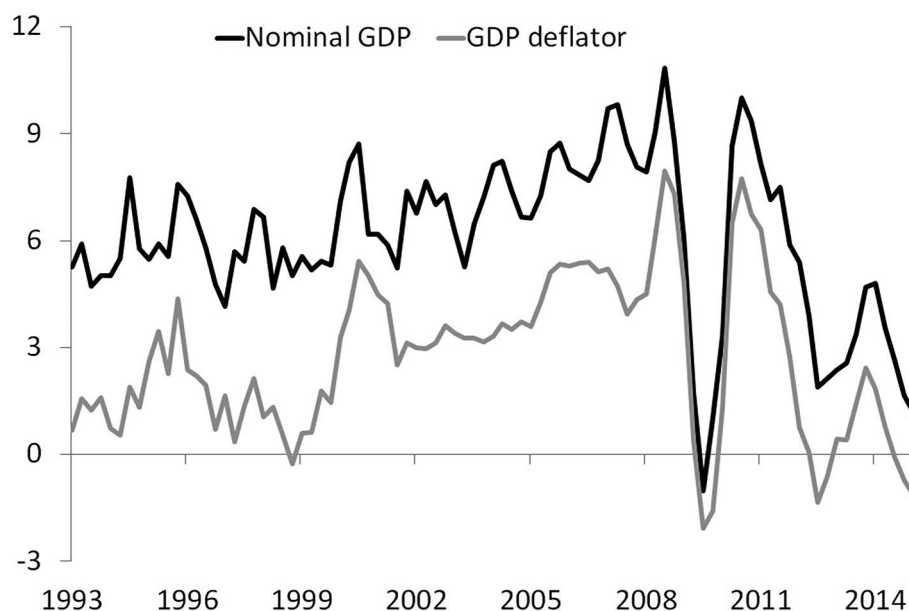


Figure 2: Growth in nominal GDP and GDP deflator, % year-ended

Source: Reserve Bank of Australia, *Statistical Bulletin*, table H1 & author's calculations

The historical behaviour of Australian nominal GDP, however, appears to make it an unsuitable target for monetary policy. Figure 2 shows the growth rates of nominal GDP and the GDP deflator. After being fairly stable at around 6 per cent p.a. in the 1990s (with a spike when the GST was introduced), nominal GDP growth began to accelerate in the early 2000s, peaking at over 11 per cent in the year to 2008 Q3. It then fluctuated wildly, actually turning negative in 2009, before rising and falling again. Most of these gyrations were due to the GDP deflator rather than real GDP (the gap between the two series). It therefore

<sup>7</sup> While some view this lack of deflation as evidence that the output gap was never very large, others argue that inflation becomes very sticky at low rates, due to nominal wage rigidity (see below).

seems plausible that they represent idiosyncratic shocks rather than procyclical movement – that is, that the extreme high and low growth rates of nominal GDP did not represent a correspondingly high or low output gap.<sup>8</sup>

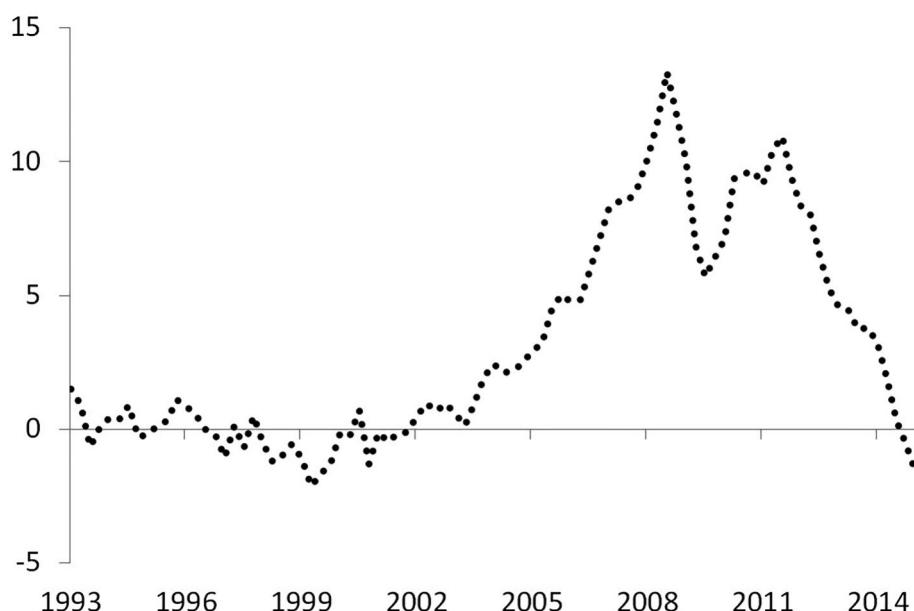


Figure 3: Nominal GDP, % deviation from 1993–2003 trend

Source: Reserve Bank of Australia, *Statistical Bulletin*, table H1 & author's calculations

Figure 3 shows the deviation of nominal GDP from an OLS exponential trend line fitted to 1993–2003 data. This time period is chosen to represent typical conditions under the current inflation target, between the end of the ‘recession we had to have’ and the beginning of the mining boom, and yields a 6.1 per cent p.a. trend growth rate (consistent with roughly 3.5 per cent real growth and 2.5 per cent inflation). Nominal GDP was above this trend continuously for over 12 years starting in 2002, peaking at over 13 per cent above it during 2008, and only falling below it in the last quarter of 2014.

Clearly, actual monetary policy since 2003 is poorly described by a nominal GDP target, whether in growth rates or levels. It might be argued that policy during this period was actually far too loose, and that keeping on the previous trend line would have been appropriate. There was, however, little sign that the economy was overheating. As Figure 4 shows, while the headline CPI exhibited several fluctuations due to the introduction of the GST and various

<sup>8</sup> The latest (November 2014) OECD estimates of the output gap are 1.9 per cent for 2007 and 1.1 per cent for 2008, but the contemporary (December 2008) estimates were only 1.0 per cent and 0.3 per cent respectively (Economic Outlook nos 96 and 84).

fuel and food price shocks, the trimmed mean did not rise significantly above the 2–3 per cent target band until 2008. Even this late spike in price inflation was not reflected in wages. Growth in the wage price index (WPI) was almost completely stable at just over 4 per cent during the peak of nominal GDP growth from 2005–08. Strikingly, there was also no recession when the period of rapid nominal growth ended.

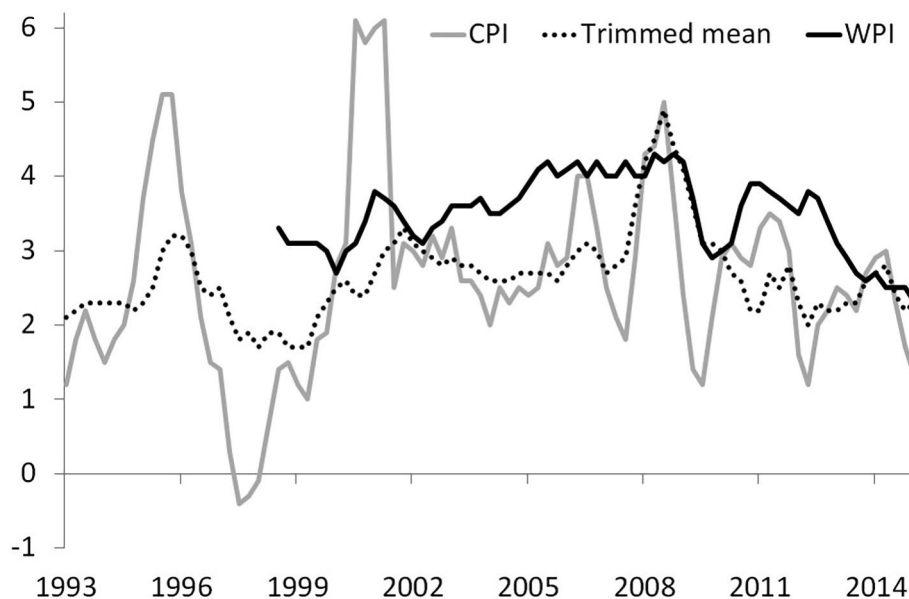


Figure 4: Price and wage inflation, % year-ended

Source: Reserve Bank of Australia, *Statistical Bulletin*, tables G1 & H4

Counterfactually, consider what sticking to the 6.1 per cent p.a. trend growth rate of 1993–2003 would have entailed in 2008. Nominal GDP growth would have been five percentage points lower. For all real variables to remain unchanged, nominal wages would have had to fall by 1 per cent rather than rise by 4 per cent. This seems implausible. Alternatively, real output and employment would have been lower, which seems unnecessary and undesirable given stable wage growth.

*Nominal wages* are another possible target. Sumner (1995) describes proposals for nominal wage targeting dating back to the early nineteenth century. Mankiw and Reis (2002) find that wages are more procyclical and suffer smaller idiosyncratic shocks than the CPI. Other studies (for example, Erceg et al. 2000; Canzoneri et al. 2005; Givens 2009) also find that nominal wages perform well as a target, either on their own or as part of a composite index.

Yet nominal wages may present unique dangers as a formal target. There is a large literature documenting downwards nominal wage rigidity – workers are reluctant to accept (and employers reluctant to impose) absolute nominal wage cuts (for example, Kahn 1997; Bewley 1999; Dickens et al. 2007). It is harder to reduce nominal wages by 2 per cent when prices are stable than to keep them constant when prices rise by 2 per cent.

This might seem to be an argument in favour of a reasonably high target for nominal wage growth. Yet it is also a reason for caution. In the spirit of Goodhart's Law, it seems reasonable to speculate that, if an explicit wage target was adopted, this target would become the new norm for wage setting. Some downward stickiness could easily transfer itself from zero to the target rate. Under, say, a 4 per cent p.a. wage target, it might take very high unemployment to force wage growth below 4 per cent. Moreover, as there is no equivalent evidence for upwards nominal wage rigidity, it might not take a very tight labour market for aggregate wage growth to rise above target, particularly if conditions in different sectors of the economy were not uniform. While the weaker sectors would be constrained by the 4 per cent lower bound, there would be nothing preventing wages in the stronger sector from rising faster. By turning nominal wages into a policy target, they might cease to be a good indicator of the state of the economy, and hitting the target might require a permanently elevated rate of unemployment.

Some close relation of nominal GDP or the WPI might do a better job, much as core measures of inflation are used to alleviate the weaknesses of the headline CPI. The ideal would be a nominal income measure that was less subject to terms of trade and other shocks, or an index which behaved similarly to nominal wages without providing a focal point for wage rigidity.

A preliminary investigation did not turn up any promising candidates on the income side. While it was hoped that they might have been less affected by the terms-of-trade boom, nominal non-mining GDP, gross national expenditure (gross domestic product less net exports), and compensation of employees (all at current prices) behaved in a very similar way to nominal GDP.<sup>9</sup> The alternative measures of labour costs considered by the Reserve Bank of Australia (RBA) (2006: 63–4) are both more volatile and on average grow faster than the WPI. This would make the Goodhart's Law problem even worse. A composite index, including for example the WPI and core inflation, might be more promising.

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9 ABS 5204.0 table 5, ABS 5206.0 tables 3 and 7.



## Other options

Since a permanent level targeting regime appears to be unsuitable for Australia unless a better target variable can be constructed, other options for monetary policy at the zero lower bound require consideration.

A *higher inflation target* has been advocated by Bernanke (1999), Rogoff (2008), Mankiw (2009), and Blanchard (Davis 2010). The logic – higher expected inflation lowers real interest rates and raises expected real incomes – is similar to that of level targeting, while being a less radical change from the existing policy regime. It has the disadvantage that higher inflation is not restricted to periods of catch-up (although Akerlof et al. (2000) argue that inflation of up to 4 per cent is optimal, even ignoring the zero lower bound). Against this, it has the major advantage of letting bygones be bygones when the economy is hit by supply shocks. A higher inflation target might lack credibility if it is initiated at a time when the central bank is already undershooting its target. The experience of Japan under ‘Abenomics’, however, suggests that even a modest increase in the inflation target may be helpful, especially if combined with other measures. Tulip (2014) has argued that activist fiscal policy may substitute for a higher inflation target; conversely, any constraint on fiscal policy would make it more desirable.

For a small, open economy, the *exchange rate* is a logical alternative to interest rates as a policy instrument. Svensson’s (2003) ‘foolproof’ policy combines a price level target with a crawling exchange-rate peg that is abandoned when the target is reached. The price level target makes a lower nominal exchange rate credible, while the currency peg demonstrates the central bank’s commitment to the target. As with any accumulation of foreign exchange, however, there is a risk of capital loss.<sup>10</sup>

A similar approach could be applied to level targeting without exchange rate intervention. While even a core price index may not be suitable for level targeting on a long-term basis, there would be less risk in employing it temporarily, particularly if the commitment is only to making up shortfalls from the target rather than reversing rises above it. Either regime could be initiated at policymakers’ discretion, or automatically once the cash rate fell below a certain level.

*Quantitative easing* and *negative interest on reserves* are two expedients made possible because interest rates vary widely depending on the risk and duration of the loan, while the real costs of holding cash allow some room for negative

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<sup>10</sup> Notwithstanding this risk, the RBA has occasionally intervened in currency markets since the floating of the dollar in 1983. See, for example, [www.rba.gov.au/publications/bulletin/2011/dec/7.html](http://www.rba.gov.au/publications/bulletin/2011/dec/7.html).

interest to be charged on central bank reserves. ‘Quantitative easing’ – central bank purchase of a wider-than-usual range of assets to reduce term and risk premia – may have some effect even when short-term safe rates are at zero. The Swedish, Swiss and European central banks have demonstrated that negative interest on reserves is practical. These measures are unlikely to be much help in isolation, however. As Woodford (2012: 86) states, the effect of asset purchases, absent a change in expectations about future policy or direct allocation of credit by the central bank, is highly uncertain, and ‘it would be hard to defend the use of such a policy as a signal in order not to have to make any verbal commitments about policy’. In the Australian context, Elias and Kulish (2010) are sceptical that money growth has any effect separate from short-term interest rates, but Jones and Kulish (2011) are more positive about the use of long-term interest rates as a policy instrument. (Long rates are, however, still subject to the zero lower bound, and carry similar capital risks to exchange rate intervention.) Negative interest rates are, of course, intrinsically limited by the option of holding currency.

*Forward guidance*, or the issuing of contingent statements about the future path of interest rates, is by contrast explicitly designed to work through expectations. It may be seen as a less rigid (and possibly for that reason less effective) version of the commitment to more expansionary future policy inherent in level targeting or a higher inflation target.<sup>11</sup>

## Conclusions

This paper has made several suggestions for policy at the zero lower bound, having argued that a permanent level targeting regime is undesirable. The general theme is that effective policy requires a clear goal for the future as much as concrete action in the present. Since there appears to be no single policy regime that is ideal for all situations, however, the zero lower bound may require some flexibility in targets as well as instruments. Options include a higher inflation target and temporary exchange rate or price level targeting. Forward guidance, quantitative easing, and negative interest rates seem of limited value on their own.

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11 Arguably, forward guidance in this sense will only be effective if it implies a greater tolerance for above-target inflation. For example, a statement that ‘interest rates will not rise until unemployment is below x per cent’ is only informative if the inflation target would otherwise imply a rise in interest rates while unemployment is still above x per cent.

Such an approach may lack the simplicity and symmetry of pure inflation or level targeting. Yet the constraint presented by the zero lower bound (and downwards nominal wage rigidity) is by definition asymmetric and state-contingent. Perhaps policy should be, too.

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# The Curtin–Chifley Origins of the Australian Bank Deposit Guarantee

Chris Berg<sup>1</sup>

## Abstract

*In 2008, the Australian government introduced a guarantee of bank deposits. However, in 1945 the Curtin–Chifley government had already introduced what it believed was an explicit bank deposit guarantee. Using archival material, this paper shows how it was understood to be a guarantee by the cabinet, Labor parliamentarians, and the Commonwealth Bank. The guarantee was an important yet almost entirely forgotten part of the Curtin–Chifley government’s social reform program. This paper uncovers the origins of the perception of a deposit guarantee in this forgotten 1945 debate, the attempts by policymakers and the Commonwealth Bank to roll back those perceptions in subsequent decades, and the Rudd government’s reversion to an explicit guarantee scheme in 2008.*

In 2008, the Australian government announced it would freely guarantee all retail and wholesale deposits in Australian banks, subsidiaries of foreign-owned banks, credit unions and building societies. Until the global financial crisis, the Australian government, the Reserve Bank of Australia (RBA), and academics and commentators had repeatedly denied that any deposit guarantee existed (Edwards and Valentine 1998; Mitchell 2006; Quiggin 2002). At best what guarantee existed was an implicit guarantee; an assumption that the government would, in the case of a bank failure, step in to guarantee deposit liabilities *ex post* (Gray 2004). Regardless of that repeated denial, there had

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been a long-standing belief held by the public that their bank deposits were guaranteed by the Australian government. A 2006 survey by the RBA suggested that 60 per cent of Australians believed the Commonwealth government either directly guaranteed deposits or, if a bank failed, would ensure they received their money in whole or in part (Reserve Bank of Australia 2006). This paper addresses the origin of that public perception, and raises questions about the status of depositor protection between 1945 and 2008.

In 1945, the Curtin government introduced legislation to regulate the banking sector and formalise the central banking functions of the Commonwealth Bank. Section 13 of *An Act to regulate Banking, to make provision for the Protection of the Currency and of the Public Credit of the Commonwealth and for other purposes 1945* (hereafter 1945 Banking Act) introduced a mechanism for the Commonwealth Bank to take over banks that could not meet their liabilities. This provision was taken by the Curtin government to be an explicit *guarantee* of depositors' funds. The government informed parliament, the public and, crucially, the Commonwealth Bank itself that this provision was intended to be a deposit guarantee. Furthermore, the language of the provisions remained relatively unchanged throughout many rounds of regulatory reform over the next seven decades.

This is not the first time it has been suggested that the 1945 Banking Act was understood to offer Australian depositors a full guarantee of their deposits. In a brief appendix to a paper outlining the history of prudential regulation in Australia, Hogan and Sharpe (1990) note that the Chifley government seemed to believe it had instituted a deposit guarantee scheme. Their evidence for this claim is suggestive, rather than definitive. Thomson and Abbott (2000) refer to documents in archives of the RBA that outline negotiations concerning the shape of the deposit guarantee but do not consider the political and regulatory significance of those documents.

Otherwise, histories of financial regulation in Australia assume that the 1945 Banking Act was not much interested in prudential and depositor protection issues. The received wisdom is summed up by an Australian Prudential Regulatory Authority Paper which states that 'the RBA did not guarantee the repayment of deposits. Instead the [Banking] Act conferred a number of powers on the RBA to ensure depositor protection' (Goldsworthy, Lewis and Shuetrim 2000: 3). The prudential aspects of the Banking Act have been subject to little scrutiny by economic historians. For example, in his history of the Commonwealth Bank, Giblin (1951) does not look at the relevant provisions of the Banking Act. Schedvin (1992: 68) notes the mechanism for Commonwealth Bank takeovers, but does not discuss it in detail, merely commenting that the power was 'inspired by the ghost of the 1890s banking crisis'.



This paper brings to bear Lyons and Chifley government records and Commonwealth Bank archives on the origins of the deposit guarantee and how it was understood by the parliament, the Chifley government and the central bank. The paper begins by detailing the situation which prevailed before the 1945 Banking Act, and how governments reacted to banking failures in the depressions of the 1890s and 1930s. It then outlines the mechanism the 1936 Royal Commission into Monetary and Banking Systems devised by which insolvent and illiquid banks were to be taken over by the Commonwealth Bank. The paper then considers how the Labor government reconceived this mechanism from one which was to protect the stability of the banking system to one which it believed would provide a guarantee to depositors. RBA Archives show how the Commonwealth Bank negotiated with the government for more supervisory powers in order to protect itself against assuming financial responsibility for failed private banks. The paper then covers the parliamentary debate in order to understand how the legislature understood the guarantee, before examining how the perception of a guarantee faded. The relevant provisions of the Banking Act have never been tested. Discussions surrounding the Bank of Adelaide's demise in 1979 show how the RBA saw these provisions three decades after they were introduced. The paper concludes with some comments about how we should think about the trajectory of Australia's deposit guarantee in the light of these findings.

## Depositor protection before the 1945 Banking Act

In 1893, 13 of Australia's 27 trading banks suspended payments, precipitating and contributing to a major financial crisis. Shudders in the economy had begun two years earlier, with the collapse of a number of building societies and land banks. This became a financial crisis with the suspension of the Federal Bank of Australia in January 1893, which was followed by a wave of bank suspensions in a panic at the end of April and early May.

Australia in the nineteenth century is usually described as one of the 'free banking' episodes in world history (Dowd 1992; Schuler 1992). There was little that could be described as 'prudential' regulation. Owners were subject to double liability and notes could only be issued on paid-up capital. What regulatory controls existed were poorly implemented and often ignored (Butlin 1953; Hickson and Turner 2004; Pope 1987; Turner 1904). Otherwise banks were regulated under general colonial companies law drawn from British companies acts or their own charters or private incorporating acts (Merrett 2013; Waugh 1992). Under colonial joint-stock company legislation, a minority of creditors had the right to force liquidation of a firm. With the financial system

facing a drain on deposits in 1891 and 1892, both New South Wales and Victoria passed legislation to prevent such minority liquidation. These changes allowed a majority of creditors holding three-quarters of the firm's liabilities to come to a compromise with the firm that would be binding on the minority of creditors not party to that arrangement.

The amended company law set the stage for the reconstructions. The Associated Banks of Victoria disavowed any mutual assistance in March 1893, which has been seen as the proximate cause of the next few months' events (Butlin 1961; Coghlan 1918; Merrett 1993; Sykes 1988). The changes to liquidation policy encouraged banks to reconstruct: recapitalise with the funds of their depositors, in a new bank under the same name, and defer repayment of deposits. Shareholder and depositor meetings were stacked to achieve the new majority requirement for reconstruction plans (Sykes 1988: 183). Pope (1987: 29) argues this was a policy-induced crisis: 'One interpretation of the "crash" of April–May 1893 is of a rush by banks to seize the vantage ground offered by reconstruction.' Alternatively, in the view of Merrett (1993, 2013) the reconstruction schemes forestalled a deeper run and a deeper financial crisis.

Almost every bank that had suspended in the first half of 1893 had reconstructed and reopened by mid-August that year. However, the consequences of reconstruction were severe. Of the £65 million of deposits held in banks which ultimately reopened, £9 million was converted into preference shares or interminable deposits; £42 million had been repaid by 1901, but the last repayment to depositors was made as late as 1918 (Royal Commission into Monetary and Banking Systems 1937). The 1890s depression was longer and more severe than that of 40 years later. In Victoria, the 'bank smash cancelled out the gold rushes and the land boom' (Shann 1930: 331).

The trauma of this banking crisis cast a long shadow. Meudell (1927) reflected decades later that 'France had her political terror in 1793 and Australia her financial terror in 1893'. The depression of the 1890s played a key role in developing the theory of the 'money power', a belief held by many in the labour movement that working people's savings were under the control of an alliance of government and British bankers. As they saw it, reconstruction had been a deliberate attempt by bankers to expropriate workers' earnings. 'As a means of robbery it is much simpler than burglary', declared the *Sydney Worker* in April 1893 (cited in Love 1984: 23).

The Great Depression of 1929–39 did not spark the sort of banking crisis in Australia that the country had experienced half a century earlier (Fisher and Kent 1999). One possible explanation for this is the highly conservative banking standards adopted by banks in the twentieth century. Banks adhered to a high reserves policy and shunned the sort of aggressive competition for

deposits that characterised nineteenth-century banking. The reduction in the number of banks led to an 'oligopolistic' (Schedvin 1973: 598) banking structure. The conservative structure of the banking sector was also encouraged by depositors' flight to safety from trading banks to savings banks, the latter enjoying a guarantee derived from their government ownership.

One bank that failed during the Great Depression was the Primary Producers' Bank of Australia, a Queensland-incorporated bank with 42 branches in various states catering to farmers and graziers. When primary producers suffered rapid drops in the prices of their products, they were unable to repay their loans and others who had deposited funds began to withdraw. The bank suspended payments in 1931. Nevertheless, depositors received 19s 9d in the £1 – in other words, almost 99 per cent of their original deposits (Royal Commission into Monetary and Banking Systems 1937).

Another bank that failed was the Government Savings Bank of New South Wales. The cause of this failure was more political than economic. With the election of the Lang government in New South Wales in October 1930, Lang's Nationalist opponents argued that the bank and its depositors would have to support Jack Lang's expansive public works program and commodity price guarantees. This led to a drain in deposits, which was exacerbated in early 1931 by the New South Wales Treasury's refusal to pay a large amount of interest on government stock. Further compounding the public's lack of confidence in the bank was a belief that it was subject to political interference. The Government Savings Bank closed in April 1931. The bank amalgamated with the Commonwealth Bank and reopened in December. These cases demonstrated to contemporaries that Commonwealth Bank support was discretionary. Throughout 1931, negotiations between the Government Savings Bank and the Commonwealth Bank were terse and protracted, and depositor confidence was not helped by public statements from the central bank that it was not bound to take over the NSW entity (Polden 1972).

Despite the relatively high degree of stability in Australia's financial sector, the banks were a target of much fractious debate and hostility during the Great Depression. The 1934 federal election centred on banking issues. Lyons was under pressure from the Country Party, which had been particularly affected by the contraction of credit, and for whom heterodox economic theories, most prominently Douglas Social Credit, had great appeal. Lyons agreed during the campaign to James Scullin's call for an inquiry into banking. It was not until August 1937 that the Royal Commission into Monetary and Banking Systems tabled its report in parliament. The Royal Commission was mostly concerned with the organisational structure of the Commonwealth Bank, the regulation

of interest rates, credit and currency supply, and rejecting heterodox monetary theories. It also defended the existence of private banks, although a dissenting appendix written by Ben Chifley made the case for nationalisation.

Prudential regulation was not a focus of the Royal Commission, but it did nonetheless make a key recommendation which was to inform the Banking Act eight years later. Under the heading of 'Prevention of Bank Failures', the Royal Commission recommended that the Commonwealth Bank should be empowered to take over a bank that was unable to meet its obligations. The reasoning provided by the Royal Commission was that the inability of one bank to repay its depositors on demand would have system-wide significance. A failure in one bank could spill over into a failure in another bank. If a bank was unable to meet its obligations, the Commonwealth Bank would assume control of the bank in order to conduct a thorough investigation of its finances. If the bank was essentially solvent, the Commonwealth Bank would act to shore up confidence. One action the Royal Commission suggested was possible to help confidence was publicly guaranteeing the deposits of the stricken bank. However, if the Commonwealth Bank determined that the bank was unsound, the central bank was to appoint officers to arrange for the bank to be wound up. In particular, 'as soon as it is in a position to do so, it should announce its estimate of the amount which the depositors may expect to receive' (Royal Commission into Monetary and Banking Systems 1937: 236). The clear suggestion from the Royal Commission was that the Commonwealth Bank would not offer a blanket guarantee of depositors' funds. The Commonwealth Bank was to advise banks if they were 'acting in such a manner as to endanger the whole system' and intervene if a bank was illiquid, but market discipline was to offer the ultimate depositor protection. Furthermore, the Royal Commission took pains to note that the interests of depositors were only of concern insofar as the failure of one bank could cause failures in the rest of the banking system; hence it ruled out any intervention in non-bank businesses.

In November 1938, the Treasurer, R. G. Casey, introduced the Commonwealth Bank Bill 1937–38 in the parliament. The Bill translated a large number of the recommendations of the Royal Commission into legislation, including the following provision for Commonwealth Bank takeovers of insolvent and illiquid banks:

If any bank informs the Commonwealth Bank of Australia that the first mentioned bank is unable to meet its obligations or if that bank suspends payment, the Commonwealth Bank of Australia may take all or if that bank suspends payment, the Commonwealth Bank of Australia may take all or any of the following actions, namely:

appoint an officer of the Commonwealth Bank of Australia to investigate the affairs of the first-mentioned bank;

assume, for such time as the Board thinks necessary, the control of and carry on during that time the business of that bank; and

appoint a person to administer the affairs of the bank or a liquidator to conduct its winding up.<sup>2</sup>

Casey's Cabinet memorandum for the Commonwealth Bank Bill stated that 'the fundamental basis of the recommendation is the fact that the failure of a bank to meet the demands of its creditors may seriously threaten the stability of the whole banking system'. The Commonwealth Bank would either offer 'some assistance such as a guarantee of deposits or a temporary loan', or, if the bank was insolvent, the Commonwealth Bank would appoint a receiver or liquidator (National Archives of Australia, A571, 1937/4600: 125). This was consistent with the Royal Commission's recommendations outlined above.

One contentious issue in the Lyons Cabinet, which became significant during the later debate under the Chifley government, was how much the Commonwealth Bank could compel banks to provide information about their financial well-being. The Cabinet rejected giving the Commonwealth Bank a power to require information from banks. It also rejected a similar recommendation of the Royal Commission which would have empowered the Treasurer to direct the Auditor-General to investigate the affairs of any bank. Casey considered that the recommendation 'presents substantial difficulties' and Cabinet ultimately rejected it (National Archives of Australia, A571, 1937/4600: 133-4).

In the event, the Commonwealth Bank Bill did not proceed beyond its second-reading speech. The death of Joseph Lyons and the advent of the Second World War meant that it was shelved, along with a Banking Bill that had not proceeded past the draft stage. Wartime Commonwealth control of banking and credit policy was first developed by voluntary agreement under the Menzies and Fadden governments. When John Curtin became prime minister in October 1941, his treasurer Ben Chifley announced that he would introduce banking control under National Security regulations, the first of which was gazetted in late November. While these regulations reflected some of the recommendations of the Royal Commission, these controls were directed towards specific wartime needs around inflation management and interest rate controls. Prudential regulation of banking was not a high priority.

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2 Commonwealth Bank Bill 1937-38 (Cth) s.7AB (Austl.).

## The preparation of the 1945 Banking Act

The question of what the postwar political and regulatory environment would look like had been a live question even early in the war. There was a widespread belief that the end of the war would bring about depression, and banking regulation would be a key tool in restraining possible postwar inflation (Myers 1959; Stephens 1976). Shortly after gaining power, John Curtin told an interviewer that his government

... would be guided by the recommendations of the Royal Commission, which was never sought by the Australian Labor Party, but which no one except the Labor Party ever seems carefully to have read. We shall interpret Labor's currency and banking policy in the light of the recommendations of that Commission. We shall never upset those recommendations by prejudiced – although our predecessors ignored them by evasion. (Crisp 1960)

The looming end of the war offered a fixed deadline for regulatory change. Constitutionally, regulations under the National Security Act would expire at the end of hostilities. The Curtin government believed that if it failed to give the national security regulations a statutory foundation before the war was over it would be hard to do so in peacetime. In 1943, the government revisited the Lyons government's banking bills. However, these were soon discarded and work began on a fresh pair of bills (Schedvin 1992). In June 1944, the government began working with the Commonwealth Bank on detailed technical matters relating to banking (Butlin and Schedvin 1977).

While Curtin and Chifley had begun their government with a pledge to enact the strictures of the Royal Commission, the discussion over a statutory banking bill went further than that. Chifley told Cabinet that the government now saw the Royal Commission as 'somewhat out of date', given the controls had been enacted during the war (Crisp 1960). In September 1944 the press started reporting that the federal government would permanently exercise 'much closer and deliberate' control over banking than at any time in Australian history (*The Age*, 26 September 1944: 3). The government did not consult the private banks while developing the banking bill. In the early technical discussions between the government and the Commonwealth Bank, the former tended to accept the recommendations of the latter without much concern (Butlin and Schedvin 1977). This deference was not to last as the draft bill approached its finalisation.

The federal Cabinet considered the Banking Bill and the Commonwealth Bank Bill in a series of meetings between 10 and 17 January 1945, presided over by the acting prime minister Frank Forde while John Curtin was ill. The question of how the legislation should deal with a bank which was unable to meet its

obligations was raised on the last day of those meetings. Cabinet records show the Curtin government had a substantially different policy intention from that of its predecessor. Rather than simply protecting depositors, the cabinet was informed that there would be a 'guarantee against loss which would be incorporated into the Banking Act'. This guarantee would apply 'to depositors as distinct from the Bank itself' (NAA: A2703, Vol. 1D).

Unfortunately, Cabinet minutes for the ensuing discussion do not identify the speakers, so we are unable to put names to statements. Nevertheless, the proposal sparked some debate among the Labor ministers. One objection raised at the meeting was that the guarantee would favour the private banks at the expense of the Commonwealth Bank, which the Labor Party was working to boost as a competitor to the private banking system: 'If the Government guaranteed the assets of depositors in private banks people would be encouraged to keep their accounts in the private banks ... the private banks would be buttressed up by the provision.' In response, advocates of the provision argued that the guarantee 'would become operative only in the case of doubt as to the private banks' stability' and that 'investment in the Commonwealth Bank should be encouraged by emphasising that the Commonwealth Bank was the only bank which had complete stability'. Another objection was raised that 'to be consistent' there ought to be a Commonwealth officer stationed in every private bank, providing a supervisory function. The bill's supporters responded by noting that the banks would be 'compelled to disclose completely their financial position, including the full market value of their assets' (NAA: A2703, Vol. 1D).

One participant stated during the meeting that 'it should be made clear that the claims of depositors will be protected'. The Cabinet finally approved that in the circumstances when the Commonwealth Bank assumed control of a private bank 'the depositors shall be guaranteed the security of their deposits' (NAA: A2703, Vol. 1D). However, the final legislation was not to be as unambiguous.

Records of the Attorney General's Department show how the Banking Act was redrafted to reflect changing views about the purpose of bank takeovers. The Royal Commission had offered its recommendations about Commonwealth Bank takeovers of illiquid and insolvent banks under the heading 'Prevention of Bank Failures'. In the draft act prepared in late 1944, the division was titled 'Provisions with respect to Banks unable to meet their obligations'. In late January 1945, this title was rewritten as 'Stability of Banks' (NAA A2863 1945/14 PART 2). Then in early February 1945 – that is, after the legislation had gone to cabinet – the title was rewritten again to become 'Protection of Depositors' (NAA A2863 1945/14 PART 4). Likewise, the marginal note beside section 13 was redrafted between January and February 1945 from a neutral 'Supply of information', to 'Commonwealth Bank to safeguard depositors', and

then finally 'Commonwealth Bank to protect depositors' (NAA A2863 1945/14 PART 2; PART 4). These changes in terminology illustrate the shift in philosophy about the purpose of this provision and the banking legislation in general.

## Negotiating with the Commonwealth Bank

It was only after the cabinet signed off on the government's policy that the issue of depositor protection was discussed with the Commonwealth Bank. Between 17 January and 30 January 1945 Frederick Wheeler, who had been the secretary to the government's Financial and Economic Policy Committee, informed the central bank that the government intended that 'the Commonwealth Bank should guarantee the deposits of a trading bank if and when it assumes control of the affairs of that bank' (RBA Archives, S-d-78). The proposal caused a flurry of activity within the Commonwealth Bank. The subsequent negotiation between the Commonwealth Bank and the Chifley government illustrates how the Commonwealth Bank saw the significance and effect of the deposit protection provisions, and how draft legislation was modified to take into account the central bank's concerns.

The major concern of the Commonwealth Bank was that taking over a distressed bank and guaranteeing depositors' funds could mean that any shortfall between assets and depositor promises would have to be covered by the Commonwealth Bank. It noted the government had not proposed to allocate any more capital to the Commonwealth Bank to protect against such an occurrence, and it was possible that wearing these losses could impede the operations of the central bank. In one memo (RBA Archives, S-d-78) the bank argued that:

In taking control of a bank it might have to assume responsibility for a much larger sum of deposits than the value of the assets it would acquire. In such circumstances the loss should be a national one and it would be reasonable for provision to be made for the Commonwealth Government to guarantee the bank against loss in the event of its assuming control of another bank.

The Commonwealth Bank emphasised the difference between the proposals of the Chifley government and the other major deposit-guarantee system internationally – that provided by the (United States') Federal Deposit Insurance Corporation (FDIC). In a note (undated but almost certainly produced on or around 1 February 1945) the Commonwealth Bank outlined what it saw as the key distinguishing features of the FDIC. The FDIC was a separate entity to the United States Treasury and the Federal Reserve system. It was an insurance system rather than a blanket guarantee. Banks were required to pay into the FDIC one-twelfth of 1 per cent per annum of their deposits in order to qualify for FDIC cover. The amount insured by the FDIC was limited to \$5,000 per



deposit. Which banks were eligible for cover was at the discretion of the FDIC. Banks seeking insurance had to gain FDIC approval, and banks which the FDIC believed were unsound or had failed to comply with law or regulation could have their FDIC coverage terminated. The Commonwealth Bank's analysis emphasised the complex supervision arrangements that provided information about banking practices to the FDIC. Furthermore, the FDIC had its own bank examiners for supervisory purposes. As the Commonwealth Bank pointedly noted, the FDIC 'believes that whenever possible protection to depositors against loss through bank failure should be provided through preventive action rather than by paying off depositors after failure' (RBA Archives, S-d-78).

Looking at early drafts of the bill, the Commonwealth Bank observed that it was being expected to take control of a bank only very late in a process of failure, and only at the instigation of the private banks themselves. Only after a bank had informed the Commonwealth Bank that it 'considers that it is likely to become unable to meet its obligations or is about to suspend payment' or if the bank actually became unable to do so would the central bank be able to assume control. This would expose the Commonwealth Bank to liabilities over which it had no influence.

As a consequence, the Commonwealth Bank requested that the final legislation grant extra powers in addition to those in the draft bill: 'In the opinion of the officers of the Commonwealth Bank, it is desirable that the Commonwealth Bank should not be asked to assume responsibility for the repayment of deposits with other banks unless it is given suitable power to take preventive measures against bank failures' (RBA Archives, S-d-78). The first additional power was a discretionary power to assume control of a trading bank 'which the Commonwealth Bank *considers may* become unable to meet its obligations' (RBA Archives, S-d-78, *emphasis added*). Rather than being dumped with a failed bank – as the Casey legislation had provided – this way Commonwealth Bank would be able to take *pre-emptive* action and hopefully re-establish a bank's soundness before it became insolvent.

The second additional power the Commonwealth Bank requested was 'to maintain a continuous detailed inspection of the affairs of each bank' (RBA Archives, S-d-78). The draft bill seen by the Commonwealth Bank provided for periodic investigations of the books, accounts and transactions of each bank by the Auditor-General. This had been a recommendation of the Royal Commission and, as we have seen, one which the Lyons government rejected. However, as the government was now asking the Commonwealth Bank to blanket guarantee depositors' funds, Auditor-General supervision by itself was seen as inadequate to the prudential task. In the Commonwealth Bank's view, the Auditor-General's supervision would not have the 'technical skill and expertise of a trained banker'

in determining whether a bank's investments 'have been, and are being, wisely made'. The Auditor-General's periodic audits should be supplemented by direct Commonwealth Bank investigatory powers (RBA Archives, S-d-78).

The third power that the Commonwealth Bank requested was to be enabled 'to give directions to banks about individual advances, investment, reserves & dividends' (RBA Archives, S-d-78). This would constitute far more expansive regulatory control over the banking sector than had been envisaged previously, and far exceeded the intent of the Royal Commission of the Lyons and Chifley government, which saw control of advances policy to be an instrument of monetary policy, rather than a prudential control. One Commonwealth Bank memo (RBA Archives, S-d-78) spells out the far-reaching implications of the deposit guarantee and the implied control over banking business:

[T]he suggested obligation upon the Bank to guarantee other bank deposits appears to cut across other provisions in the draft legislation.

For example, unless the Commonwealth Bank, in addition to the power to inspect, has power to assume control, it would have to have the power to inspect and to direct a bank regarding its investments. This would, in effect, take the management of another bank out of its own hands ... The power to direct would have to be applied in individual cases, whereas the whole intention of the advance policy provision is that broad lines of policy would be delineated ...

The implications of a direct guarantee of the nature proposed are such that it would be contended that this was just an indirect manner of achieving nationalisation.

The Commonwealth Bank proposed an alternative arrangement, modelled on the FDIC. In this alternative, the government would set up an insurance fund 'built up from premiums paid by the banks on their deposits'. The fund would have an inspector of banks, and depositor losses would be borne by the fund. This, in the Commonwealth Bank's view, would avoid 'objectionable' examinations of bank affairs, and eliminate the need for bank takeovers (RBA Archives, S-d-78).

The Curtin government rejected the alternative proposal of an FDIC-like insurance fund. The Labor Party had an antipathy towards contributory schemes that had been shown in the campaign against the Lyons government's proposed national insurance scheme (Coleman, Cornish and Haggar 2006; Watts 1987). It also declined to allot the Commonwealth Bank new funds. However, the proposal presented to the Labor caucus in late February 1945 and the bill presented to parliament in March granted many of the other powers the Commonwealth Bank had requested. The final bill allowed the Commonwealth Bank to require any bank to supply it with information relating to financial stability, and, if a bank failed to comply, appoint an officer to directly investigate

the bank's affairs. Similarly, the proposal brought to caucus specifically noted that the Commonwealth Bank could assume control of a bank which was unable to meet its obligations 'according to its own statement or in the opinion of the Commonwealth Bank' (*The Advertiser*, 21 February 1945: 5). The final bill also provided for a range of penalties if the newly taken-over bank did not afford the Commonwealth Bank access to its financial information or submit its business to the Commonwealth Bank.

The Banking Bill was introduced into parliament on 9 March 1945, alongside the Commonwealth Bank Bill. Protection of depositors was covered under Division 2 of the bill. Section 11 read: 'It shall be the duty of the Commonwealth Bank to exercise its powers and functions under this Division for the protection of the depositors of the several banks' (Banking Bill 1945 (Cth) s.11 (Austl.)). The mechanism for resolving bank failures appeared in section 13, and stated that:

A bank which considers that it is likely to become unable to meet its obligations, or is about to suspend payment, shall forthwith inform the Commonwealth Bank.

Where a bank –

so informs the Commonwealth Bank;

becomes unable to meet its obligations or suspends payment; or

in the opinion of the Commonwealth Bank, is likely to become unable to meet its obligations or is about to suspend payment,

the Commonwealth Bank may –

appoint an officer of the Commonwealth Bank to investigate the affairs of the bank concerned; and

assume control of and carry on the business of that bank ...

Where the Commonwealth Bank has, in pursuance of subsection (2.) of this section, assumed control of the business of the bank, the Commonwealth Bank shall, subject to the next succeeding subsection, remain in control of and continue to carry on, the business of that bank until such time as –

the deposits with the bank have been repaid of the Commonwealth Bank is satisfied that suitable provision has been made for their repayment; and

in the opinion of the Commonwealth Bank it is no longer necessary for the Commonwealth Bank to remain in control of the business of the bank. (Banking Bill 1945 (Cth) s.13 (Austl.)).

Yet the legislation as written leaves us with a puzzle. There is nothing in the provisions introduced to parliament that explicitly states that deposits were to be guaranteed. Indeed, these provisions are perfectly internally consistent with the *absence* of a deposit guarantee. First, much was left to the Commonwealth Bank's discretion. The Commonwealth Bank 'may' assume control of an insolvent or illiquid bank, not 'must'. It is unclear what 'suitable provision' would constitute. Second, Section 15 of the Banking Act provided for depositor preference, which would seem to contradict any guarantee of deposits: 'In the event of a bank becoming unable to meet its obligations or suspending payment, the assets of the bank shall be available to meet that bank's deposit liabilities in Australia in priority to all other liabilities of the bank.'

In such circumstances as a bank's assets exceeded liabilities, this suggests some creditors, including depositors, might lose money.

Yet such a plain-English reading does not reflect the final agreement of the Curtin government cabinet, nor tally with the stated intention of the Curtin government in its discussion with the Commonwealth Bank a month earlier. While the government had not offered an FDIC-like contributory arrangement, it had nonetheless provided the greater supervisory powers which the central bank had argued were necessary in the context of a full deposit guarantee. Furthermore, as the next section will discuss, Labor parliamentarians believed that Division 2 offered depositors a full guarantee of their funds.

## The parliamentary debate

How did parliament understand the bank deposit guarantee? Unfortunately, the implications of this provision were not presented to parliament as clearly as we might like. In his Second Reading speech on the Banking Bill, Chifley stated that the legislation had been written with the Royal Commission in mind but also took 'additional measures' to meet postwar conditions and learn from the wartime experience of banking control by regulation. One of the objects of the Bill was 'to safeguard depositors of the banks from loss'. Chifley did not use the word 'guarantee' to describe the protection of depositors. He focused mostly on the circumstances under which the Commonwealth Bank had a responsibility to assume control of a distressed bank. However, he did object to the 'considerable propaganda' which had been distributed in the preceding months suggesting that the interests of depositors 'would suffer under the proposed legislation'. In Chifley's view, the government's legislation had been deliberately framed to 'protect the depositors of the banks' (CPD, House of Representatives, 9 March 1945: 554).

Neither was depositor protection a focus of the subsequent parliamentary debate. Arthur Fadden recognised that the bill provided for protecting depositors against bank failures, but said Chifley ‘must have had his tongue in his cheek when he thought out that part of his speech’ as there had been no bank failures in Australia since 1893, a success which he attributed to amendments to the Commonwealth Bank Bill in 1924. Robert Menzies focused much of his objections on the special accounts procedure, which extended the wartime arrangement whereby banks were required to lodge surplus funds with the Commonwealth Bank in order to effect profit control and manage inflation (CPD House of Representatives, 22 March 1945: 792). Menzies pointed out that the voluntary arrangement that had been negotiated by the Fadden government in 1941 for the special accounts procedure had explicitly identified that the special accounts would be used for depositor protection, but no such purpose was mentioned in the Banking Bill (CPD House of Representatives, 21 March 1945: 750). His concern was that depositors might be told, when withdrawing their funds, that their money had been frozen in the Commonwealth Bank.

Overall, the line of attack presented by opposition parties was that depositors’ funds would be at risk from the bill, rather than protected by it. The question of Commonwealth Bank governance – the Commonwealth Bank Bill replaced the central bank’s board with a single governor – had become a debate over political control of the Commonwealth Bank, and Labor’s opponents argued that political control threatened the safety of depositors. However, Menzies recognised the existence of and ‘had no intrinsic objection’ to the depositor protection mechanism of Commonwealth Bank takeover (CPD House of Representatives, 21 June 1945: 3461). In this charged political debate, it is not obvious how the opposition parties saw the scope of the depositor protection provisions – that is, whether they understood it as a reflection of the Royal Commission’s recommendations or, as the Chifley government intended, a new unconditional guarantee on all deposits regardless of the solvency of individual banks.

However, one parliamentary debate is both indicative of the opposition’s confusion and suggestive of attitudes towards the proposed scope of depositor protection. On 27 June 1945, the Country Party moved an amendment to replace the words ‘for the protection of the depositors of the several banks’ in section 11 with ‘to ensure that each of the several banks shall meet its liabilities to its depositors, and safeguard the interest of borrowers’ (CPD House of Representatives, 27 June 1945: 3673). The amendment was intended to underscore the opposition’s argument that the advances policies dictated by the Commonwealth Bank and the special accounts procedure might prevent private banks from meeting their liabilities. Earle Page told parliament that, as the Commonwealth Bank would have power to ‘maintain rigid operations of the private banks’, it ‘should ensure that depositors shall suffer no loss’ (CPD House

of Representatives, 27 June 1945: 3679). The Labor members dismissed these arguments. Lazzarini, the Minister for Home Security and Minister for Works, responded that the government's legal advisers had satisfied the government that the provision as written provided 'complete protection' for 'all persons who have any monetary interest in the private trading banks' (CPD House of Representatives, 27 June 1945: 3674). The Country Party amendment was voted down.

Indeed, in the process of defending against claims that the banking legislation placed depositor funds at risk, Labor parliamentarians offered a clearer outline of the purpose behind those provisions than Ben Chifley had when introducing the bill. For instance, Allan Fraser, the member for Eden Monaro, responded to the 'deliberate attempt [to] scare the depositors in private trading banks' by saying that 'for the first time in the history of this country' banking legislation would 'provide a real and an effective guarantee of the safety of bank deposits' (CPD House of Representatives, 5 June 1945: 2521). The Labor member for Perth, Tom Burke, said the bill's regulations would 'ensure that the public shall be protected against ... losses of money' (CPD House of Representatives, 21 June 1945: 3468). The Tasmanian Senator Charles Lamp described the provisions as 'the most important in the bill' (CPD Senate, 20 July 1945: 4338). Charles Morgan, the Labor member for Reid, told parliament that the legislation would have allowed the banks that failed during the Great Depression 'to fall back upon the Commonwealth Bank in order to protect their depositors and borrowers' (CPD House of Representatives, 27 June 1945: 3674).

The Banking Bill passed the parliament in November 1945. In the 1947 debate over bank nationalisation, the shape of the deposit guarantee was used to reassure parliament and voters about the security of their funds. Chifley told parliament that:

The truth is that the banking legislation of 1945 created a precedent in the financial history of the British Empire. It gave to the people of Australia a guarantee that all depositors would receive their money on demand, even if those deposits were held in a private bank which had gone into liquidation. In effect, the Labor Government was the first government of any country which gave to depositors a guarantee that their interests would be protected ... the Government has endeavoured to give to those people who have deposited money in private banking institutions what is in effect a guarantee that they will not lose their money. (CPD House of Representatives, 18 November 1947: 2188)

Likewise, John Dedman, who had been the Labor minister for postwar reconstruction at the time of the Banking Act's introduction, told an audience in the wake of the defeat of nationalisation that 'very few people in Australia

today were aware that all depositors' accounts in private trading banks were guaranteed by the Commonwealth government, under the 1945 Banking Act' (*Port Lincoln Times*, 17 November 1949: 2).

## The deposit guarantee disappears

The Chifley government saw its banking legislation as one of the major pegs on which its social and economic policy were hung. Presenting the White Paper on Full Employment to parliament, Dedman said that it was 'closely linked' to the banking reforms, as 'the basic purpose of the banking legislation is to ensure that no out-worn financial prejudices or the resistance of vested interests will ever again be a bar to the achievement of full employment' (CPD House of Representatives, 30 May 1945: 2238). As late as 1973, Gough Whitlam was referring to the deposit guarantee as the fundamental bargain of Australian financial regulation: 'No bank registered under Australian Parliament legislation can go bankrupt. In return for that guarantee against loss, banks pursue a lending policy which the government of the day approves' (CPD House of Representatives 23 May 1973: 2480).

The mechanism through which the Curtin–Chifley government believed deposits were guaranteed has never been tested. However, in 1979 the RBA did consider a takeover of the Bank of Adelaide under the Banking Act provisions. Discussions within the RBA about the viability of this process give us an image of how the central bank saw its obligations to depositors before the changes to financial regulation in the 1980s.

In early 1979, the Bank of Adelaide faced imminent failure. The crisis was caused by the fact that its wholly owned subsidiary, the Financial Corporation of Australia (FCA), was virtually insolvent (Merrett 1985). The Bank of Adelaide's capital was not sufficient to cover FCA's losses, and the bank started looking for external support, first with the federal government, and second with the RBA. In a meeting on 5 May 1979, the RBA offered the Bank of Adelaide an ultimatum: it was to find a larger Australian trading bank to merge with under any terms. Unless arrangements for a merger were made, the RBA would use its powers under section 13 of the Banking Act to take over operation of the bank (RBA Archives, D08-53041). This would occur, RBA governor Harry Knight allegedly told the Bank of Adelaide, 'whether it is lawful or not' (*Sydney Morning Herald*, 7 November 1979: 25). A potential merger between the Bank of Adelaide and the ANZ Banking Group was announced on 22 May 1979. The ANZ merger was accepted by Bank of Adelaide shareholders in October 1979, albeit under a cloud of ill-will towards the RBA (de Meyrick 2003: 317).

The Bank of Adelaide rescue operation exposed for the RBA many of the weaknesses of the Banking Act's provisions. One contested question was whether the Commonwealth Auditor-General would be able to grant the takeover authority to the RBA given that it was the FCA rather than the Bank of Adelaide which was directly in trouble. Furthermore, unless it was informed by the Bank of Adelaide that the bank was unable to meet its obligations, the RBA would have to act on a report by the Auditor-General, and action might be tied up in court (RBA Archives, D15-268223). Thus the RBA concluded that such action 'depends to a considerable extent on the good sense' of Bank of Adelaide management (RBA Archives, D15-217021).

More pressingly, there was considerable uncertainty within the RBA as to its obligations in the case of a bank takeover. A memorandum prepared by the RBA's Banking and Finance Department in April 1979 stood by the established principle that 'insolvent companies should be allowed to die'. However, it also saw a tension between this principle and the fact that 'the community has taken special measures to afford investors in certain institutions some protection *in the event of default*. This attitude is inherent in the protection of depositors as implied in the Banking Act' (RBA Archives, D15-184639, emphasis added). Furthermore, RBA officials were assuring worried Bank of Adelaide depositors that the Banking Act's provisions ensured 'they can't lose money' (RBA Archives, D15-268229).

The introduction of foreign banks into Australia in the early 1980s and the dismantling of much of the financial regulatory apparatus that was brought in by the Banking Act was accompanied with a codification and formalisation of prudential standards. This necessitated a clarification of the status of depositor protection. The 1981 Campbell Committee had viewed deposit insurance as an unnecessary substitute for the existing depositor protections of the Banking Act (Committee of Inquiry into the Australian Financial System 1981). The Hawke government's Martin Review Group rejected a government deposit guarantee (Australian Financial System Review Group 1984). Thus, in 1985, the governor of the Reserve Bank stated that 'the Reserve Bank is the guardian, not the guarantor, of depositors' interests' (Johnston 1985). The 1997 Wallis Inquiry, observing the decline in government ownership and therefore the subsequent decline in explicit guarantees, stated blankly that 'the government should not provide an absolute guarantee in any area of the financial system' (Financial System Inquiry 1997: 192). The 2004 Davis Study of Financial System Guarantees, which followed the recommendations of the HIH Royal Commission, described the existing regulatory framework as follows:



When dealing with the insolvency of a financial institution, the prudential framework tries to ensure that there is sufficient leeway to identify and manage the exit of a troubled institution before significant losses to certain stakeholders accrue. However, this is not always possible and the customers and other creditors of a financial institution may not always be repaid in full. (Davis 2004)

Yet to a significant degree the provisions governing banks which are unable to meet their obligations to depositors remained the same between 1945 and 2008, the year that the Rudd government introduced the Financial Claims Scheme as an explicit deposit guarantee. The Banking Act 1945 was superseded by the Banking Act 1959, which transferred the provisions with negligible change. Those provisions remained intact up to the establishment of the Australian Prudential Regulatory Authority (APRA) in 1998. Amendments to the Banking Act in 1998 made specific provision for insolvent authorised deposit-taking institutions (ADIs) to be wound up under corporations law, and granted the depositor priority that banks had been subject to since 1945. Yet the Banking Act maintained the process formulated by the original 1945 Act by which banks – now all ADIs – are taken over, but now by APRA rather than the Reserve Bank. Even after the introduction of the Rudd government's Financial Claims Scheme in 2008, the Banking Act 1959 provides that APRA terminate its control of an ADI either when 'deposit liabilities have been repaid or APRA is satisfied that suitable provision has been made for their repayment'.

This history calls out for explanation. The clear legislative intent of the Curtin–Chifley government was that the Commonwealth Bank would guarantee depositors' funds in the case of a bank failure. This is what Ben Chifley told the cabinet, Labor members told the parliament, the government told the Commonwealth Bank, and Labor supporters told the public in later years. However, the text of the Banking Act did not explicitly reflect this guarantee. Indeed, as written the relevant provisions of the Banking Act differed in only minor ways from parallel provisions in the Lyons government's proposed banking legislation, which was deliberately not intended as a blanket guarantee of depositors. The deposit guarantee in 1945 was explicit but not explicit in statute.

There are a few possible implications of this. It is possible that over time the RBA deliberately interpreted the Banking Act against the original intent of parliament. Denying that an explicit guarantee existed relieved the RBA of financial liability for depositors of failed banks. Alternatively, the provision's disuse – there were three decades between the parliamentary debate and the consideration of taking over the Bank of Adelaide – meant that institutional memory of the 1945 discussions was lost. An ahistorical reading of the Banking Act would make Division 2 look unproblematic. Certainly the challenge of simply taking control of the Bank of Adelaide was formidable enough without

considering how to respond to depositors' demands once control was achieved. And the Banking Act has been picked over by inquiry after inquiry since the Campbell committee, none of which has considered that Division 2 implies anything other than what it says. Explanations for why the Curtin–Chifley government failed to give surer statutory footing to their intent are going to be even more speculative.

The Financial Stability Forum (2001) emphasises that an effective deposit insurance system is one in which the scope and limitations of the guarantee are well-known and understood by the public (see also Garcia 1999). Yet how well the public understands deposit guarantees has attracted surprisingly little study (Bartiloro 2011; Bowyer, Thompson and Srinivasan 1986; Inakura and Shimizutani 2010; Reserve Bank of Australia 2006; Sträter, Cornelißen and Pfingsten 2008). However the legislation was to be interpreted by policymakers in later decades, the Curtin–Chifley government fuelled a public perception that the Commonwealth Bank would bail out depositors in a failed bank. In subsequent decades, the RBA rowed back this perception by stating that no such guarantee existed, and that depositors needed to exercise discipline through the market and monitor their bank's performance. Their attempts to manage these perceptions would have been negatively affected by the Victorian government's guarantee of depositors of the State Bank Victoria in 1990 and the Commonwealth support for the insurance firm HIH in 2001. When the Rudd government guaranteed all ADI depositors in 2008, this can be seen as a reversion to the policy of its Labor predecessors six decades earlier.

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# The Australian Public's Preferences Over Foreign Investment in Agriculture

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## Abstract

*This paper estimates a model of how the Australian public's preferences over foreign investment in agriculture are determined. The results show that the attributes of foreign investment of greatest concern to the public are not the same as those used by the foreign investment approvals regime to flag proposals for scrutiny.*

## Introduction

In a 2012 poll, 63 per cent of Australians said that they were 'strongly against' '... the Australian government allowing foreign companies to buy Australian farmland to grow crops or farm livestock' (Lowy Institute 2012). A further 18 per cent said they were 'somewhat against', taking total disapproval to more than 80 per cent. Another poll in 2014 reported that 60 per cent of the public were against '... the Australian government allowing foreign companies to invest in agriculture', as compared with 38 per cent who were in favour (Lowy Institute 2014). Along with foreign investment in ports and airports, this was the lowest level of support across industry sectors, and compared with 58 per cent in favour for manufacturing and 55 per cent for the financial sector.

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The basic rationale for Australia having a foreign-investment approvals regime is to provide the public with reassurance that proposed investments will bring community benefits. Yet, at least in the case of agriculture, the polling evidence presented above suggests that the regime is struggling to provide this reassurance. There could be a simple explanation, at least in part. The regime will only provide the public with reassurance if its design is consistent with how their preferences over foreign investment are determined. For example, the approvals regime makes extensive use of dollar-value thresholds. Currently, a proposed investment from a foreign, privately owned company in an Australian agribusiness is only scrutinised by the Foreign Investment Review Board (FIRB) if its value exceeds \$252 million.<sup>2</sup> However, the Australian government has announced its intention to reduce this threshold to \$55 million in December 2015 (FIRB 2015).<sup>3</sup> In March 2015, the dollar-value threshold for foreign purchases of agricultural land was cut from a non-cumulative \$252 million to a cumulative \$15 million.<sup>4,5</sup> Yet whether dollar-value thresholds act to provide the public with reassurance depends on whether it is the dollar value of foreign investment that is relevant to their preference formation. If preferences are insensitive to the dollar value, or if they are positively related – that is, the public prefers higher dollar-value foreign investments to lower dollar-value ones – it would be unsurprising if the regime failed to instil confidence. At the same time, the danger is that moves to lower dollar-value thresholds might add to the perceived cost of investing and make Australia’s agricultural sector a less attractive destination as a result (Schlesinger 2015).

How public preferences over foreign investment in agriculture are determined is the question this paper seeks to answer. It does so using a choice modelling methodology. This approach invites members of the public to choose between a range of foreign investment scenarios that differ according to various attributes such as the dollar value, investor country of origin, and so on. In considering and trading off different investment attributes, those most relevant in determining preferences can be established.

The key finding is that there is a sizeable gap between the attributes of foreign investment that are of greatest concern to the public and the attributes the approvals regime uses to flag investment proposals for scrutiny. This divergence

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2 Exceptions exist for foreign investment from New Zealand, the US and Chile, which have an approvals threshold of \$1.094 billion due to concessions embedded in long-standing Free Trade Agreements (FTAs) (FIRB 2015).

3 This lower threshold will not apply to investors from New Zealand, the US and Chile, who will continue to have a threshold of \$1.094 billion. It will, however, apply to countries that have recently negotiated FTAs with Australia, such as Japan, Korea and China (FIRB 2015).

4 A cumulative threshold means that if a foreign investor has previously bought agricultural land, the value of these past purchases will count towards the \$15 million threshold for new purchases.

5 Exceptions exist for investors from New Zealand, the US and Chile, who will have a \$1.094 billion threshold. Investors from Singapore and Thailand will have a threshold of \$50 million.



may help to explain why the level of Australian public support for foreign investment in agriculture is limited. The most important investment attribute influencing how public preferences are determined is the foreign ownership share of an Australian agribusiness that a proposed investment will bring. Yet the foreign ownership share is not an attribute the approvals regime emphasises. Conversely, while the regime singles out higher dollar-value foreign investments for special attention, the results show that, everything else held constant, the public actually prefers higher dollar-value investments to lower dollar-value ones.

To the best of our knowledge, this paper is the first to consider how public preferences over foreign investment are determined, in Australia or elsewhere. It does, however, sit within a broader body of literature that seeks to provide critical reflection on the state of the foreign investment approvals regime. For example, Drysdale and Findlay (2009) and Drysdale (2011) considered whether investment from government-owned enterprises, particularly those from China, warranted special attention in the approvals process, while Mendelsohn and Fels (2014) examined whether the role and processes of the FIRB matched regulatory best practice.

## **The regulation of foreign investment in agriculture in Australia**

The foundation of Australia's foreign investment approvals regime is the Foreign Acquisitions and Takeovers Act 1975 and the Foreign Acquisitions and Takeovers Regulation 1989. It was the 1975 Act that gave rise to the establishment of the FIRB in 1976. The job of the FIRB is to examine proposed foreign investments in Australia and make a recommendation to the Treasurer as to whether they are in the 'national interest'. The approvals regime is intended '... to reassure the Australian community that foreign investment was being monitored for the benefits that it brought to the Australian community' (Drysdale 2011: 56). The most recent, high-profile instance of proposed foreign investment in agriculture to fail this 'national interest' test was the sale of GrainCorp to American agribusiness Archer Daniels Midland in 2013.

The investment attributes used by the regime to determine which foreign investment proposals are scrutinised by the FIRB have evolved over time. Currently before Parliament is the Foreign Acquisition and Takeovers

Legislation Amendment Bill 2015 which, amongst other things, is intended to enable the lowering of dollar-value screening thresholds for foreign investment in agriculture.<sup>6</sup>

Aside from dollar-value thresholds, the approvals regime also makes a sharp distinction between whether a proposal is coming from a foreign government-owned or privately owned company. All investments from foreign government-owned companies require FIRB scrutiny, irrespective of their dollar value. This distinction was introduced in 2009 and was widely perceived as a response to growing investment interest in Australia by Chinese government-owned companies (Mendelsohn and Fels 2014). Larem (2011) found that these regulations have contributed to perceptions by Chinese investors that Australia was a more difficult place to invest compared with other countries. Nonetheless, such a distinction in the approvals regime may still be worthwhile if it serves to build confidence amongst the Australian public that these proposals are being vetted for the community benefits they will bring. The problem is that it is not known whether the ownership type of a foreign investor is in fact an issue of concern to the public. The same is true for the dollar value of foreign investment.

Rather than the dollar value of foreign investment or the ownership type of a foreign investor, public preferences might instead be more importantly determined by other attributes. For example, amongst others, the public might be more concerned by the ownership share of an Australian agribusiness that a foreign company will acquire through an investment and/or the country of origin of the foreign investor.

## Methodology

To investigate how public preferences are formed, this paper adopts a discrete choice experiment (DCE) approach, which has yet to be applied in this setting but has the potential to offer new insights. When investigating public preferences, traditional polling techniques ask respondents to consider one attribute of an issue without referring to, or trading these off against, other attributes. What this means is that respondents have no real incentive to provide clear direction on what attributes are most important in determining their preferences. A DCE provides a way to disentangle the impact that different attributes have on preferences.

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6 While not directly related to the approvals process, also currently before Parliament is the Register of Foreign Ownership of Agricultural Land Bill 2015. The purpose of this legislation is to better understand the extent to which agricultural land is owned by foreign interests.

DCEs have their roots in random utility theory and have a long history of being applied in transport, economics and marketing (for example, Ben-Akiva and Lerman 1985; Burke et al. 2010; Burke 2013; Louviere et al. 2000; Manski 1977; McFadden 1974; Train 2009). More recently, DCEs have been used in areas as diverse as education (Aubusson et al. 2014; Burke et al. 2015), health (Flynn et al. 2010; Lancsar et al. 2013) and climate change (Carson et al. 2010).

A DCE works by presenting survey respondents with a hypothetical scenario called 'a choice set'. Each choice set presents several alternatives: say, investment profile A, investment profile B and investment profile C. Respondents are asked to nominate which option they believe best matches a given criterion; in this instance, which investment profile option they most and least prefer. By asking respondents to select the most preferred and the least preferred profiles, a full ranking of the three investment profiles in each scenario can be collected. It also allows for testing of whether preference formation differs depending on if the investment choice is framed in terms of acceptance (most preferred) or objection (least preferred).

The investment alternatives are described by various attributes. In turn, each attribute has two or more levels. For example, one attribute of foreign investment could be country of origin. The levels for this attribute could be China, Japan, the US and the UK.

In this study, we considered seven attributes of foreign investment that might be expected to have an impact on public preferences.<sup>7</sup> These comprised:

- **Attribute 1: financial status of the Australian company.** The Australian agribusiness receiving the foreign investment is a) on the verge of bankruptcy; or b) financially sound and looking to grow. That is, this attribute has two levels.
- **Attribute 2: years in operation for the Australian company.** The Australian agribusiness receiving the foreign investment has been in operation for a) five years; b) 10 years; c) 20 years; or d) 50 years. That is, this attribute has four levels.
- **Attribute 3: ownership type of the foreign investor.** The foreign company investing in the Australian agribusiness is a) government-owned; or b) privately owned.

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<sup>7</sup> As theory offers little guidance and there are no previous empirical studies that have considered how public preferences towards foreign investment are determined, these expectations are based on the actual criteria found in the approvals regime, as well as anecdotal evidence found in media sources that deal with the public response to instances of foreign investment.

- **Attribute 4: country of origin of foreign investor.** The foreign company investing in the Australian agribusiness is from a) China; b) Japan; c) the UK; or d) the US.
- **Attribute 5: dollar value of foreign investment.** The amount of the foreign investment is a randomly drawn dollar value from 50 per cent below \$55 million to 50 per cent above \$55 million. Recall that from December 2015, \$55 million is the proposed dollar-value threshold for which foreign investment in an Australian agribusiness will be scrutinised by the FIRB.
- **Attribute 6: local management control.** After the foreign investment, the Australian agribusiness will have Australian citizens in a) a majority of the board and senior management positions; or b) a minority of the board and senior management positions.
- **Attribute 7: foreign ownership share.** After the foreign investment, the foreign company will own a randomly drawn percentage from 10 per cent to 100 per cent of the Australian agribusiness. The 10 per cent lower bound is chosen on the basis that an ownership share above 10 per cent is typically classified as being direct investment and will bring some degree of management control to the foreign investor.

Each respondent was given eight DCE scenarios to complete. An example of the DCE task is presented in Figure 1.<sup>8</sup> Note that each scenario relates to brownfield investment (that is, a foreign investor acquiring equity in an existing company) rather than greenfield investment (that is, a foreign investor establishing a new company). It is the former that typically generates the greatest controversy in media commentary.

The levels for each of the attributes presented to respondents were determined using a completely randomised design in order to detect potential higher-order effects. For example, one specific higher-order interaction that may be of interest is China country of origin and government-owned ownership type. That is, the Australian public may display a particular sensitivity to a foreign investment proposal if it is from a Chinese, government-owned company. However, this interaction term proved statistically insignificant, as did nearly all other interactions. As a result, for brevity and parsimony what follows is a presentation of the main effects only models.

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<sup>8</sup> Other elements of the DCE, such as the introduction given to respondents, is available from the authors upon request.

### Figure 1: Example of Discrete Choice Experiment (DCE)

In this scenario, three cases of foreign investments in Australian agribusiness are shown below. Please examine the details of these investments and select the investment case that you agree with the **MOST**, and the investment case that you agree with the **LEAST**.

Investment attributes	Investment A	Investment B	Investment C
1. The Australian agribusiness receiving the foreign investment is	On the verge of bankruptcy	Financially sound and looking to grow	Financially sound and looking to grow
2. The Australian agribusiness receiving the foreign investment has been in operation for	5 years	50 years	10 years
3. The foreign company investing in the Australian agribusiness is	Government owned	Privately owned	Government owned
4. The foreign company investing in the Australian agribusiness is from	China	Japan	US
5. The amount of the foreign investment is	\$30.3 million	\$69.3 million	\$77.6 million
6. After the foreign investment, the Australian agribusiness will have Australian citizens in a	minority of board and senior management positions	minority of board and senior management positions	minority of board and senior management positions
7. After the foreign investment, the foreign company will own	94% of the Australian agribusiness	28% of the Australian agribusiness	88% of the Australian agribusiness
Q1. Which investment do you agree with the <b>MOST</b> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q2. Which investment do you agree with the <b>LEAST</b> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Data

The sample was drawn from the Australian panel of a global online data panel company proportional to key demographic statistics in census data from the Australian Bureau of Statistics (ABS). All respondents were eligible to vote in the next federal election. In total, data were collected from 1,523 respondents. This means that model estimation was conducted on the basis of preferences exhibited over  $1,523 \times 8 = 12,184$  foreign investment scenarios.

Summary statistics for the sample relating to sex, age, location, ethnic background, household income and education are shown in Table 1. The proportion of the sample holding a Bachelor degree or higher is 42.1 per cent. This compares with the average of the working-age population of 27.9 per cent (ABS 2012). The difference mostly likely arises from the opt-in nature of online data panels. That is, to participate in such a survey, online know-how and savvy is required and this is likely to be positively correlated

with educational attainment. Fortunately, there is little reason to think that this difference will bias our results. The sample still comprises 57.9 per cent, or 592 respondents, who do not have a Bachelor degree qualification, including 10.9 per cent who did not finish Year 12. These varying levels of educational attainment can be interacted with investment attributes to examine whether there are any statistically significant differences in how preferences are determined. These results are discussed below.

Table 1: Summary statistics of respondents (n=1,523)

Sex	Percentage	Born in Australia	Percentage
Male	50	Yes	79.8
Female	50	No	20.2

Age	Percentage	Language at home	Percentage
Up to 24	12.3	English only	86.4
25–34	20.9	Other languages	13.6
35–44	19.8		
45–54	19.8		
55–64	15.1		
65–74	8.3		
75+	3.7		

Location	Percentage	Annual household income	Percentage
NSW	33.3	Below \$52K	31.3
VIC	24.8	\$52K–104K	32.4
QLD	19.5	\$104K–156K	15.2
SA	7.6	\$156K–208K	4.7
WA	10.0	\$208K +	3.2
ACT	1.6	Prefer not to answer	13.1
TAS	2.4		
NT	1.0		

Highest non-school qualification	Percentage
Bachelor degree or higher	42.1
University/TAFE diploma or certificate	37.0
None of the above	20.9

## Results

A multinomial choice model (MNL) was used to analyse data collected from the 1,523 respondents. Three models were estimated based on the most preferred investment profile, the least preferred investment profile and an aggregation of the two sets of responses (that is, a combined model). The results are presented in Table 2.

Table 2: Discrete Choice Experiment (DCE) results (n=1,523 respondents; coefficients reported to three decimal places)

Details of Investment	Combined Model		Most preferred		Least preferred	
	b	t-stats	b	t-stats	b	t-stats
Foreign investor government-owned	-0.009	-0.420	-0.004	-0.190	0.013	0.580
Foreign investor privately owned	0	-	0	-	0	-
Australian company on the verge of bankruptcy	-0.204	-7.440	-0.224	-7.220	0.185	6.430
Australian company financially healthy/looking for growth	0	-	0	-	0	-
Investor from Japan	-0.023	-1.270	-0.051	-2.390	-0.003	-0.170
Investor from China	-0.149	-6.950	-0.113	-4.710	0.183	7.920
Investor from US	0.045	2.340	0.041	1.830	-0.049	-2.280
Investor from UK	0.127	6.410	0.123	5.470	-0.130	-5.880
Australian citizens in majority of board/management positions	0.200	8.750	0.239	9.010	-0.161	-6.440
Australian citizens in minority of board/management positions	0	-	0	-	0	-
Australian company in business for 5 years before investment	-0.004	-0.220	-0.016	-0.7800	-0.0085	-0.410
Australian company in business for 10 years before investment	0.009	0.530	-0.010	-0.540	-0.028	-1.420
Australian company in business for 20 years before investment	0.026	1.540	0.0401	2.0900	-0.0118	-0.590
Australian company in business for 50 years before investment	-0.031	-1.750	-0.013	-0.640	0.049	2.400
Percentage of foreign ownership after investment	-0.016	-21.110	-0.016	-19.970	0.0167	20.75
Foreign investment amount (\$ mil)	0.002	4.490	0.004	6.200	-0.001	-1.540

\*/\*\*/\*\*\* – significant at 10%/5%/1% levels, respectively

Each variable was included and excluded from the combined model to assess its statistical significance in improving model fit. The log-likelihoods between the final and each restricted model can be compared against a chi-square distribution, or equivalently the AIC and BIC criterion. These comparisons allow the impact of each variable to be compared by taking into account the difference in degrees of freedom associated with any one set of variables. The attribute most responsible for improvements in model fit was the foreign ownership share. This was followed by the financial status of the Australian company, the extent of local management control, the country of origin of the foreign investor, the dollar value of foreign investment and the number of years the Australian agribusiness had been in operation. The only variable not contributing to a statistically significant improvement in model fit was the ownership type of the foreign investor.

We now discuss the findings for each variable in greater detail in order of their significance.

## Foreign ownership share (attribute 7)

Based on the combined model, the most statistically significant attribute of foreign investment determining public preferences is the foreign ownership share. The coefficient is negative. This means that, everything else held constant (for example, the investment is from the same country, and so on), as the share of foreign ownership increases, the public prefers the investment less. Tests also reveal the relationship between the foreign ownership share and preferences is linear.

Beyond sign and statistical significance, coefficient values can also be interpreted by looking at the marginal changes in outcomes they imply using representative values. By way of illustration, consider foreign ownership shares of 10 per cent (the lower bound) compared with 100 per cent (the upper bound). The coefficient of -0.016 implies that if the public is choosing between these two investment profiles, the probability that the one featuring 10 per cent foreign ownership will be preferred to one featuring 100 per cent foreign ownership is 81 per cent.<sup>9</sup>

What makes this finding potentially instructive for policy formation is that while the foreign ownership share is the attribute of greatest concern to the public, it does not feature prominently in the foreign investment approvals regime. Instead, as noted earlier, the regime focuses on the dollar value of foreign investment. Sometimes the FIRB may include a condition that relates to the foreign ownership share. For example, in 2012 it approved Shandong Ruyi,

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9 The preference associated with foreign ownership at only 10 per cent compared with 100 per cent is based on the function  $(\exp^{(10 \cdot -0.0164)} / (\exp^{(10 \cdot -0.0164)} + \exp^{(100 \cdot -0.0164)}))$ , while holding everything else constant.



a Chinese–Japanese investor, to purchase an 80 per cent share of Cubbie Station, a Queensland cotton and irrigation property. The remaining 20 per cent stake was bought by an Australian company, Lempriere Group. The FIRB's approval required that Shandong Ruyi reduce its holding to 51 per cent within three years. However, if Shandong Ruyi's purchase had been less than the \$252 million value threshold specified in the approvals regime, the foreign ownership share would have been irrelevant as the deal would not have required scrutiny by FIRB in the first place.

## **Financial status of the Australian company (attribute 1)**

The second-most significant determinant of preferences was the financial status of the Australian agribusiness. The coefficient was negative, implying that the public prefer a foreign investment less when it is in an Australian agribusiness on the verge of bankruptcy. A possible interpretation is that the public fears such investment might result in a loss of domestic assets at 'fire sale' prices.

## **Local management control (attribute 6)**

The next-most significant determinant of preferences was whether foreign investment would see a majority or a minority of board and senior management positions being held by Australian citizens. The coefficient is positive, meaning that the public prefers a foreign investment more if Australian citizens occupy a majority of board and senior management positions.

## **Country of origin of the foreign investor (attribute 4)**

The evidence for the country of origin of the foreign investor having a significant impact on preferences was mixed. On the one hand, the coefficient for the UK was positive and statistically significant. That is, if foreign investment is from the UK, the public prefer it more. In contrast, the coefficient for China was negative and statistically significant, meaning the public prefer it less. The coefficients for the US and Japan were positive and negative respectively, but only marginally statistically significant or insignificant.

That said, it is useful to read this finding in conjunction with those above. In particular, while investment from China was preferred less than investment from the UK, this preference appears readily moderated. For example, the coefficient values imply that, everything else held constant, the public would be indifferent between an investment profile featuring investment from the UK that resulted in 70 per cent foreign ownership, and another that featured investment from China that resulted in 53 per cent foreign ownership. Or put another way, the public would prefer an investment profile that featured

investment from China and with Australian citizens in a majority of board and senior management positions, compared to investments from the US or Japan with Australian citizens in a minority.

Aside from the combined model, the results in Table 2 also report on significant effects relating to the decision by respondents to indicate their most preferred investment option and, separately, their least preferred option. In most instances, the effects across these models are not significantly different. However, this is not the case with respect to investor country of origin. Specifically, the results indicate that the opposition to investment from China is significantly stronger when the choice is framed in terms of objection (least preferred) relative to acceptance (most preferred).

## **Dollar value of foreign investment (attribute 5)**

The coefficient to the dollar value of foreign investment is positive, implying that as the dollar value increases the public prefers it *more*. Model tests reveal the impact of the dollar value of foreign investment on preferences is linear. This result is not inconsistent with the finding that the public prefers a lower foreign ownership share: the public may value large capital contributions while at the same time preferring a greater proportion of the equity in a joint venture to be held by local interests.

This result stands out for two reasons. First, the dollar value of foreign investment is shown to be an attribute of foreign investment of only modest statistical significance in determining public preferences. Yet in the approvals regime it is the single most important attribute of investment used to flag whether proposals are scrutinised by the FIRB. Second, the coefficient is positive, which means that recent moves in the approvals regime to reduce dollar-value screening thresholds are unlikely to increase public confidence in the community benefits of foreign investment. This is because the public actually prefers higher dollar-value investments to lower dollar-value ones.

## **Years in operation (attribute 2)**

The years that an Australian agribusiness has been in operation generally has a statistically insignificant impact on preferences. The one exception was if the company had been in operation for 50 years. In this case, the public prefers the foreign investment less. This may indicate that the public has some reluctance seeing foreign investment in Australian companies that might be regarded as iconic.

### Ownership type (attribute 3)

Whether investment was coming from a foreign company that was government-owned or privately owned had a statistically insignificant impact on preferences.

Once again this points to a gap between the attributes of foreign investment that are of greatest concern to the public and the attributes the approvals regime uses to flag proposals for scrutiny by the FIRB. As noted earlier, all investment from foreign government-owned companies require FIRB screening, irrespective of dollar value. What this result means is that the regime is likely to add to perceptions by investors such as Chinese government-owned companies that the approvals process is restrictive, while at the same time not providing the public with greater confidence in the community benefits.

### Socio-demographic heterogeneity in preference formation

The analysis so far has considered how preferences are formed by the average member of the Australian public. The question arises, however, whether different socio-demographic groups might form their preferences differently: for example, city dwellers versus non-metropolitan residents; men versus women; and so on. The most straightforward way to consider these possibilities is to test whether there are any statistically significant differences in interactions between socio-demographic characteristics and foreign investment attributes. In a choice modelling exercise, socio-demographic characteristics can be introduced into the estimation procedure using effects coding. This is akin to a dummy variable approach in regular regression. The difference is that instead of modelling, say, sex using zero and one, the coding takes the form of one and minus one. For attributes with more than two levels, one level is used as the base and is the negative sum of the other levels. In the dummy variable approach, the reference level is coded as zero.

Generally, few differences were found. For example, no differences were revealed with respect to education levels or whether respondents were living in cities versus non-metropolitan areas. However, age and sex did show up differences with respect to increased levels of foreign ownership, reduced levels of local management control and China as a source country of investment. Specifically, older persons and females were found to be significantly more sensitive to investment options along these lines.<sup>10</sup>

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<sup>10</sup> Specific results with respect to the interaction between socio-demographic characteristics and foreign investment attributes are available from the authors upon request.

## Conclusion

This paper began by observing that the Australian public has reservations over foreign investment in agriculture. A model of how public preferences over foreign investment are determined was then estimated. The results highlight one possible reason why public support may be limited. There is a gap between the attributes of foreign investment that are of greatest concern to the public and the attributes used by the approvals regime to flag proposals for scrutiny. Moreover, recent changes to the approvals regime, such as lowering the dollar-value threshold that triggers FIRB review and instigating a different approvals process for proposals from foreign government-owned investors, fail to close the gap. This divergence may have implications for how the Australian government forms policy in this domain.

Another implication of the findings is that they may provide insight for foreign investors and their Australian partners into how cooperation can be structured to gain better public acceptance. For example, while investment proposals from China do suffer from a negative country-of-origin effect, this effect is readily moderated by other attributes of the investment, such as placing Australian citizens in a majority of the board and senior management positions. A survey of Chinese investors in Australia in 2014 found that negative media coverage was one of the key challenges they faced. Only 16 per cent 'agreed' with the statement that 'Australian media are supportive of Chinese investment'. None 'strongly agreed' (KPMG 2014). To the extent that media coverage both reflects and informs public preferences, the findings of this study could act to overcome this barrier.

Whether the public preferences over foreign investment modelled in this paper also hold for proposals outside of the agribusiness sector in Australia, or in other countries, remains to be verified. Nonetheless, the methodology adopted in this paper could readily be used to answer these questions.

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# *ARGUMENT*

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# Whither Business History? Memory, Message and Meaning

David Merrett<sup>1</sup>

## Introduction

I started my Bachelor of Economics at Monash University in 1963. My arrival intersected the publications of Noel Butlin's two seminal pioneering works, *Australian Domestic Product* (1962) and *Investment in Australian Economic Development, 1861–1900* (1964). Of course, I had no idea at the time how Noel's work, and the discipline of Australian economic history he created almost single-handedly, would shape my professional life. I was one of the lucky ones who found gainful employment in the burgeoning departments of economic history that sprang up in so many universities. While I never worked at ANU, I met Noel on many occasions. All of us in the field were drawn to Canberra for conferences and seminars, and to use the wonderful collection of records at the Noel Butlin Archives Centre (NBAC).

The question I want to explore is the future of archives, such as the NBAC and the one at my own university. My broad point is that the supply of business history and the demand for it by corporates have changed significantly in the past few decades. The most pessimistic interpretation is that the changing practice of business history within universities and the increasing reluctance of business to permit independent 'outsiders' access to their records bodes ill for specialist archives.

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Let me start with a paradox. More and more is being written about 'business', but the work of researchers, whom we might describe as business historians drawing on archival material, is situated on the margins of this avalanche. What scholars write tends, with some notable exceptions, to be read only by other business historians. Telling stories about business that reaches a mass audience is done by others, most notably by journalists and critics of various hues, and this information reaches its audience through a variety of media. Archives holding extensive records relating to individual firms will be less useful to those current and future scholars working in a shifting paradigm of 'business history'. A recent paper by de Jong, Higgins and van Driel in *Business History* showed that only around 20 per cent of the articles published in the leading business history journals from 1970 to 2012 were written about a firm! Moreover, I fear that in the current climate and foreseeable future it will be harder to persuade companies to donate their records to archives that mandate the independence of scholars using them.

My argument progresses in a number of steps. First, I want to discuss the changes in what I call the 'practice' of business history that lessen the demand from academic practitioners for access to comprehensive archival material. Second, I want to suggest that firms today are less likely to make over their records for scholarly analysis than they were a generation or so ago. I will conclude by suggesting that the tide may yet turn back to the commissioning of full-blown histories.

## The practice of business history

The practice of business history – the questions raised, the methodologies employed by authors, and type of records used – has changed over time in several significant ways. These changes have equally important implications for the fate of specialist archives holding 'whole of firm' records. The first dramatic shift could be placed shortly after the Second World War when Charles Wilson, a Fellow of Jesus College, Cambridge, produced his seminal *The History of Unilever: A Study in Economic Growth & Social Change* (1954), which broke away from the interpretations of an earlier generation of largely amateur authors, family members and long-serving employees whose work he rather condescendingly described as 'heroic mythology'. In one sense Wilson was right, as these authors lacked the technical skills of the professional historians and, most likely, employed a good deal of self-censorship in the construction of their narratives. We learnt more about successful firms than the much larger group of those that had failed.

Business history written by professional scholars boomed after the Second World War, feeding on a growing willingness of leading companies to tell their stories, opening their own archives to researchers or by donating records to external archives. Universities trained and employed scholars working in the field, primarily in economic history departments. Business history emerged as a vigorous sub-discipline, with its specialist journals and professional organisations. It is worth reminding ourselves that the *Australian Economic History Review* began life as *Business Archives and History* (1962–66).

The practice of professional business history, as described by Geoff Jones and Jonathon Zeitlin in their edited volume *The Oxford Handbook of Business History* (2003), rested on two fundamental foundations: first, that the author has access to the firm's confidential archives; and, second, that the author has complete independence in the construction of the narrative. Stories about the progress of a firm shifted beyond genealogy and hagiography. Scholars drew upon a wide range of records: correspondence, minutes of meetings, financial accounts, technical drawings, patent applications, court records, personnel records, and so on, to observe entrepreneurship and decision-making in real time, and also to place these businesses in a wider economic and social context. Business history was the weft to the warp of the fabric of economic history.

The work of one man, Alfred Chandler, recast the agenda for business history by taking us away from the study of individual firms. Chandler's big questions shifted the discipline. He provided an explanation for the rise of the large industrial enterprise in the United States, and later extended his research to Europe and Japan. He also showed that large firms tended to grow in a series of sequential steps: becoming large through vertical and horizontal integration, followed by diversification of product and market, from regional to national and multinational. The progress of growth required corresponding changes in the firm's organisational structures.

Chandler's work was a major conceptual breakthrough that captured the attention of scholars in other academic disciplines, most notably 'management'. Chandler demonstrated how teams of professional managers, rather than the founding families, determined a firm's long-term success. These ideas resonated with those being developed in the 'strategy' literature – the resource-based view in which firms are described in terms of their resources and capabilities. Moreover, management consultants leapt into the breach by showing firms how to reorganise their administrations as they recast strategies.

The scale, complexity and dynamism of firms has made writing business history more challenging. More recently, the ownership of all or part of an organisation is often impacted by mergers and acquisitions, and by divestment of parts of the firm. The portfolio of products and activities was regularly rebalanced.

The countries and towns in which firms produced, undertook R&D and sold their wares differed from decade to decade as firms internationalised in response to globalisation. The ethnicity of management and the workforce shifted accordingly, as operations spread across the globe.

Consider the case of BHP Billiton, an iconic Australian firm: it has not had an Australian national as CEO since 1998; just half of its workers are in Australia; two of its divisions, petroleum and copper, have their headquarters outside Australia; over 80 per cent of its shares are held by footloose institutional investors; it operates with many foreign partners in joint-ventures; and it is said not to pay much tax in this country. The original name of the company was linked to a place; its lead, silver and zinc mines at Broken Hill in western New South Wales. The nature of the company's business altered, from miner to steelmaker around 1912, but it still called Broken Hill home. The connection between place of origin and what it did was broken as BHP became a global resources company, having merged with Billiton in 2001. Billiton began life in 1860 as a Dutch mining house operating in Indonesia. It was acquired by Royal Dutch Shell in 1970 and then sold to the South African miner Gencor in 1994 who listed its subsidiary on the London Stock Exchange before divesting it in 1997. Its locally based Australian steel business was spun off as BlueScope in 2002. A further reshaping of the global portfolio of activities led to another demerger in 2015, spinning off a host of what are described as 'assets' bundled together in a free-standing operation called South 32, not a place but a latitude.

Business historians have been faced by another challenge. As the specialist fields within management expanded, drawing on the core disciplines of sociology, psychology and economics, generalist historians have struggled to develop mastery of them all. The numerous histories commissioned by Unilever demonstrate the point: Wilson's first book took two volumes to cover the period from 1851 to 1945. It is organised chronologically. The second volume, *Unilever 1945–1965: Challenge and response in the Post-War Industrial Revolution* (1968), covers a shorter period, 20 years, and is divided into an examination of a chronology and, perhaps anticipating Chandler, examined the organisational response to changing strategies. Unilever's foreign operations were so diverse and important that they required a separate telling: by David Fieldhouse in *Unilever Overseas; the Anatomy of a Multinational* (1978). In 2005, Geoffrey Jones published his version – *Renewing Unilever: Transformation and Tradition* – which took the story up to 1990. Like Wilson, he combines narrative and a series of examinations about particular issues such as branding and marketing, innovation, acquisitions and divestments. These topics are pursued in greater depth than attempted by his predecessors. Advances in management and marketing theory have increased our understanding of how business operates,

but few authors would possess the requisite knowledge of a diverse range of topics to satisfy a professional readership. Jones produced an exceptional history, aided by a team of assistants whose research was focused on specialist areas.

A new genus of business historian subsequently entered the field who greatly outnumber the previous occupants. These were employed in business schools rather than departments of economic history. Jones and Zeitlin describe them as scholars who study the historical development of businesses but who may or may not use archival records. Their contribution has been to transfer new theoretical perspectives and conceptual frameworks into the field. Business history, especially in its leading journals, now borrows heavily from other social sciences for its questions and solutions. Narratives without a theoretical compass are out of favour.

The contemporary needs of those studying business, and of business schools teaching fee-paying students how to run successful businesses, meant that business history assumed a new purpose: to instruct best practice from the 'lessons' of history. The lens of the authors catering for this market differed sharply from the grand histories of single firms. Teachers and students want up-to-date business cases. Understanding the present matters more than a whole-of-life narrative of a firm. Moreover, most cases cover only a 'fragment' of a firm's history. They are usually brief, and few seek access to confidential archival material. Many use interviews with current staff. Nearly all rely heavily on publicly available information, the press and analysts' reports. Moreover, many of these teaching cases are 'theory confirming', providing a single illustration to verify what the management literature currently believes; for example, that most M&As destroy shareholder value, or most joint ventures fail.

Chandler's single unifying idea has been replaced by multiple research agendas that increase the options available to authors in deciding what type of stories to tell. The most recent issue of *Business History* has a special issue entitled 'new business history' that calls on the discipline to adopt the research methodologies of the social sciences by 'develop[ing] theory and test[ing] hypotheses'. Scholars have already turned their attention to topics beyond the firm: studying industrial districts and clusters, trade associations and business groups. Moreover, the developing world has different business structures, family-owned conglomerates and state-owned firms, which challenged Western ideas about the conduct of business. Globalisation, in particular the shift of manufacturing to lower-wage-cost economies, led to a transformation of many Western firms. The boundaries of the firms became porous as they outsourced activities overseas and worked with local providers. More and more firms became multinationals, including service firms, and/or worked as partners in global supply chains. Operating in challenging foreign environments stimulated

study of firm–host government relations. The diversity of national environments and types of business organisations fractured the US-centric version of what a modern firm was and how it behaved.

Academic business historians have responded to the changing pattern of demand for their services. Teaching the increasing numbers of business school students has fuelled a bonanza for case writing. As I shall discuss in a moment, firms are less willing to commission histories. Learned monographs tracing the history of a firm over the whole of its life, or at least a substantial length of time, have fallen from favour, not the least because universities give greater rewards to publication in A\* journals. The expanding disciplines of management and marketing have provided new tools for business historians who are deployed in writing papers for specialist journals. Theory trumps empiricism in those pieces published in journals such as *Business History*, *Business History Review* and *Enterprise & Society*.

## Disclosure: Memory and message

Why have some firms kept or handed their complete records to an archive and then asked or permitted someone to write their history?

Many of the classic studies in business history were commissioned by firms. Charles Wilson's book referred to earlier is one of the best examples of this genre. In his preface, Wilson tells us that the directors of Unilever had decided that:

... it would be useful to have an objective history showing how their particular business came to be what it is today. Besides serving as a reference work for the Company, itself, such an account might (they felt) contribute towards a better understanding of the nature of business in the academic world and elsewhere.

Unilever threw open its comprehensive records to an independent scholar, confident that the resulting story would reflect well upon itself.

Will today's business historians have the same access and freedom to write about the transformative companies of the twenty-first century: the Apples, Googles, Walmarts, Facebooks, and so on? What of Australia's leading companies? As importantly, will those firms keep sufficient records – hard copy and digital – that will permit an author to unravel or construct the 'story' in any depth?

My intuition is that the answer to both questions is 'No'. Let me argue my case with reference to Australia. Around the middle of the twentieth century, Australian firms had very different connections with the community in which they operated than do the shareholder-value driven firms of today. Geoffrey Blainey marvelled in the preface to his *Gold and Paper: A History of the*

*National Bank of Australasia* (1958) that ‘it is no light matter for a bank to open its records to an outsider and ask for a history which is “fairly and truly presented”’. The publication of this admirable book coincided with the bank’s centenary. We can guess at the motivation. There was real sense of pride in lasting so long and having built a large business. The bank’s balance sheet and its sense of importance grew hand in hand as it drew on an internal narrative of having been a pioneering business that helped ‘build’ the country and survived through the challenges of the 1890s banking crisis and bank nationalisation. Like the directors of Unilever who wanted the public to see how this ‘particular business came to be what it is today’, those at the National felt that such a story would reflect well upon them.

We should not gild the lily about the willingness of Australian firms to share their secret past with the world. While firms did contribute to ‘development’, they were also engaged in conflict with their workers over wages and conditions and with their consumers as anti-competitive behaviours pushed up prices. Some firms drew back from having their commissioned histories published. Imperial Chemical Industries of Australia and New Zealand (ICIANZ) did not publish Blainey’s history of the company when it received his manuscript in 1959. Neither did Dalgety publish Max Hartwell’s history of that firm, the manuscript of which can be found in the Noel Butlin Archives Centre.

Despite the point made above, my sense is that those firms operating over the century before the 1960s and 1970s may have been more anxious to have had their histories written by an independent author than those in the twenty-first century. It was an era when relations between business and what are now referred to as ‘stakeholders’ were less complicated. There was a stronger sense of connection with community. Firms grew by opening new factories, mines and shops rather than closing them or divesting some operations, or taking others overseas. In such an environment, firms, confident of their success, would be more prepared to open their records so that their achievements could be shared with a wider audience, an internal and external readership both of which had a connection with the firm.

For all its wealth and power, the Big End of Town in Australia has been in a defensive mindset since the 1970s. It has felt more threatened and under challenge over the past generation than throughout our history. To that end it employs lobbyists, consultants and PR firms to manage its image and defuse crises. Moreover, it relies on lawyers to advise on the possibility of litigation following disclosure of sensitive issues.

Before the 1960s and 1970s, business was firmly linked to our shared understanding of our past. The unifying story about Australian experience in the nineteenth century and much of the twentieth century has been one of 'progress', 'nation building' and 'national development'; this last including notions of modernity and national security.

Relations between business and the community shifted in fairly profound ways from the 1970s onwards. The postwar economic miracle (1945–72) came to an end in the recessions and high inflation of the 1970s. The old model of doing business supported by tariffs and subsidies, and operating with regulated finance and labour markets, could no longer generate full employment and/or stable prices. Faith in the Keynesian intervention ebbed away, to be replaced by a new model – the market – that offered both choice and efficient resource allocation. The gift that business now gave to the community was to be shareholder value.

Business could no longer appeal to the old national narrative of 'development' and 'progress'. The lack of international competitiveness of manufacturing was cruelly exposed as tariffs fell. Firms cut local employment; some moved operations offshore to take advantage of lower wage costs elsewhere. Many of the foreign manufacturing firms that had made hay behind the tariff wall also closed their factories and, as tariffs fell, sent in goods made elsewhere. The mining boom of the late 1960s and the stock market and property boom of the late 1980s and early 1990s changed perceptions about business. These episodes revealed serious weaknesses in the operations of our securities markets, an ineffectual form of corporate governance and staggering incompetence and some illegality from firms large and small. Journalists had a field day exposing the follies of all involved.

In this changing environment, business sees less value to itself in permitting outsiders – business historians – access to its records. 'Memory' was the overriding impulse for the first wave of commissioned business histories: a pride in past achievements, an acknowledgement of the role of individuals and families in creating firms that served their communities and nation, a testament to ethical leadership and kind employers, and the importance of science and technology as handmaidens to a story of progress.

Firms currently are more concerned with managing the 'message'; a company history is a matter for the marketing or PR department. For many firms (and the consultants who advise them and, in many cases, write the volumes), the object of the exercise is image management. I know of books commissioned by two of Australia's largest corporations that have been abandoned in the past few years. Many more companies may have decided not to undertake such an exercise, especially if there is a risk that an independent author might uncover a skeleton in a closet. We have the current example of Qantas preventing the publication



of *Fighting Words* by a former employee, Lucinda Holdforth. Firms simply want to manage what the world knows about them. From personal experience, I can attest that the contracts offered to independent researchers/authors are far more restrictive now than was the case 30 years ago.

The shareholder-value corporation is a different animal compared to the National Bank of Australasia in the 1950s. The influence of founding families in major corporations, with some notable exceptions such as the Murdochs, Packers, Pratts and Lowys, is reduced. Compared to a generation earlier, today's firms' directors and 'top management teams' have far shorter tenure than their predecessors. Senior managers may work for many different firms during their careers. Top executives and boards do not have the same emotional connection with the firm as the managers of yesteryear. Memory stretching back into the past matters less to such people.

Firms can refuse to commission histories, deny access to their information, and publish carefully managed 'messages' about themselves. However, they cannot stop people writing about them. Bridget Griffen-Foley's *The House of Packer: The Making of a Media Empire* (2000) shows that a work of great scholarship can be written without access to the subject's records or access to its people. It is unlikely that other authors will have such persistence or be able to find a subject whose activities produced such a rich set of documents from third parties, government inquiries, the courts, trade unions and so on.

Over the past three decades most of the books published about Australian business have exposed failure and folly, and most of them have been written by journalists. Books about the near-death experiences of banks, badly behaved insurance, timber and asbestos companies, and tales of failed and dishonest entrepreneurs fill the shelves of bookshops.

We recognise celebrity business people by their Christian names: Twiggy, Kerry, Gina, James, Clive and Nathan from the current crop; Bondy and Skase from an earlier age of excess. They are the subjects of best-selling biographies; you can choose between authorised and unauthorised versions. Some business stories become TV series, and the domestic lives of our billionaires and their warring children are fodder for the pages of daily newspapers and gossip magazines. James Packer, son of the colourful Kerry, has been filmed fighting one of his friends in a suburban street. The latest round of litigation over inheritances and exposure of murky deals between politicians and businessmen by the ICAC in New South Wales promises a bonanza for what Charles Wilson calls the 'economic crime club' genre.

## Conclusion

My gloomy story has important consequences for the managers of specialist archives holding business records. I am sure that they are well aware of the trends I have described. It is difficult to get firms to donate material and/or to permit open access. The preoccupation with image management has reduced the flow of commissioned histories and, in some cases, the independence of those authors. My fear is that firms may be less inclined to invest in preserving and maintaining their own records. There is more interest in the here and now than the past from an academic audience, the business schools and the wider public. An archive whose records connect to a world of over half a century ago, as does the University of Melbourne Archive, may suffer from increasing irrelevancy from those wanting the up to date.

I promised you at least a glimmer of hope. Nearly a decade ago, I addressed an audience of those people whose job it was to manage what the public knew about the workings and image of firms. I provided my explanation of why their clients felt so threatened, why these firms had lost faith in the power of 'memory' to deliver a positive message. Business had been increasingly seen as the bad guy from the 1970s onwards. At present, the media is full of reports of self-serving financial advisers and supermarket chains mistreating suppliers. We might imagine that the firms involved might not want to commission a full-blown history. However, firms can be persuaded that telling their story is of greater value than trivialising the message or retreating into silence. The world in which business now operates has been transformed by globalisation. There have been many losers and a new breed of winners. Firms have had to adapt to survive, often shedding activities and moving to new locations. It is better for Australia that many firms have survived and prospered than had they gone to the wall. The wider public might want to know how this was achieved.

Can business recapture the position it held for so long as a valued and trusted partner within the community? That it once did so resulted from its inclusion in powerful stories and myths about national identity. The challenge for business today is to tell a story about what it does that fits into a wider national story.

I suggested to my audience of PR gatekeepers that a better way forward would be to use the pioneering metaphor to describe their adaptation of the shock of globalisation, an extension beyond 'memory' to something redolent with 'meaning'. The old powerful story is about the taming of a continent, a story of going inland. What we need now is a story to make sense of Australia's place in a globalising world, a story of going out as exporters, partners in supply chains and as multinationals. Globalisation poses challenges to business and the community as great as those in the first stage of 'pioneering'. Then, we struggled to come to

an understanding of a new continent, to cope with its distance, heat and lack of water – a story superbly retold in Don Watson’s *The Bush*. Now, the challenges come from having to find ways to compete in the wider world. All the virtues of the old story are required now: determination, resilience, the ingenuity to make do with little, and an optimism that you will eventually succeed. Immigrants, individuals and multinationals play their part in developing the capabilities of domestic firms and industries. Venture capital and incubators are the new version of old stories of start-ups. Collaboration between government, scientific research institutions and business-building hubs, clusters and networks is another form of community building. The outcome of this engagement with the wider world matters to all Australians. The stories of national development and business can still be interwoven.

Am I hopelessly optimistic about business changing its mind about the value of business history? Possibly so. However, self-interest is a strong motivator. In a special report on family business in its 18 April 2015 issue, *The Economist* argued that one reason family firms have a competitive advantage over their public corporation rivals was because they ‘have a better story to tell about themselves’. Customers connect more with long-lived family companies with whom they shared strands of personal memory of family and place. *The Economist* piece argued that ‘the more companies compete to sell “meaning” as well as mere products, the better family companies will do’. All firms can play this game. What better way to do it than to replicate the motivation of the directors of Unilever, to provide ‘an objective history showing how their particular business came to be what it is today’? Full disclosure would pay higher returns than managing the ‘message’ into oblivion.



# Wider Economic Impacts in Transport Infrastructure Cost-Benefit Analysis – A Bridge Too Far?

Leo Dobes and Joanne Leung<sup>1</sup>

## Abstract

*Proponents of transport infrastructure have in recent decades sought to augment the estimated benefit of major projects beyond conventional cost-benefit analysis. Improved transport links are claimed to increase Marshallian external economies of scale; to reduce transport costs experienced by imperfectly competitive industries, and so induce them to increase their output; and to increase supply of labour, in response to lower transport costs, and thereby increase GDP and tax receipts. Estimates of the value of these three additional effects have resulted in multipliers and 'uprate factors' that appear to be applied by some government agencies to transport sector benefits calculated using conventional CBA. However, empirical estimates of these effects are likely to be exaggerated.*

## Introduction

A conventional cost-benefit analysis (CBA) of transport projects invariably focuses on items such as savings in travel time and fuel costs, as well as on changes in any externalities such as negative environmental outcomes or vehicle

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crashes. Aggregated, they provide a measure of the change in the 'generalised cost' of travel attributable to the provision of new or enhanced transport infrastructure such as a road, a railway or a bridge. The underlying assumption is that all markets, including transport-using ones, are perfectly competitive.

Conventional CBA nevertheless requires examination of secondary, transport-using markets that are distorted due to factors such as taxes or imperfect competition (see, for example, Boardman et al. 2011: ch. 5). On the basis that market economies are in fact subject to various distortions, policymakers in the United Kingdom in the 1990s began to explore the implications for the evaluation of transport projects.<sup>2</sup>

In recent years, the so-called wider economic impacts (WEI)<sup>3</sup> of transport have been addressed in three separate categories: agglomeration effects, imperfect markets, and tax revenues from increased economic growth.<sup>4</sup> Agglomeration effects were discussed by Alfred Marshall in the context of external economies that firms and workers can reap in larger markets. Firms benefit from interactions with 'correlated branches of industry', workers more easily find jobs suited to their particular skills, and employers better match available skills to jobs (Marshall 1948: book IV, chs X, XIII). The new economic geography and WEI literature have built on these concepts.

A second category of benefits is attributed to users of transport services working in industries that exhibit imperfect competition. Lower transport costs are assumed to translate into increased production and lower prices, thus benefitting society. Lower transport costs can be expected to increase production in both imperfectly competitive sectors and in more competitive industries. Part of this additional production (GDP) will flow to the government in the form of taxes and will be spent on other projects or programs of benefit to the community. Conventional transport CBA does not include this effect because it considers only the primary, transport market, so a WEI perspective adds it as an additional benefit.

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2 The seminal work was carried out by SACTRA (1999), with a series of subsequent publications under the auspices of the UK Department for Transport (DfT). A selection of publications in the UK and elsewhere includes DfT (2005); Venables (2007); Vickerman (2007a, 2007b); Elhorst and Oosterhaven (2008); Mare and Graham (2009); Laird and Mackie (2010); Worsley (2011); Abelson (2011); Hensher et al. (2012); SGS Economics and Planning (2012a, 2012b); DfT (2014); and Byett et al. (2015).

3 Initially referred to as 'wider economic benefits' (for example, DfT 2005), some of the literature has since adopted the more appropriate term 'wider economic impacts', in recognition of the fact that many of the posited impacts relate to changes in GDP and employment levels, rather than to the social welfare measures used in CBA.

4 A fourth category – increased competition as a result of improved transport links between different markets – was posited in DfT (2005), but abandoned in DfT (2014: 1, fn 3) because it was not considered to be relevant in countries such as the UK, where transport links were already well developed, so that existing transport networks were 'unlikely to be a significant constraint on competition'. DfT (2010) applies WEI concepts to the appraisal of isolated housing developments, but this category is not examined separately below.

Adjustment of standard CBAs using WEI concepts can increase the estimated benefits of a project substantially. In the case of the proposed light-rail link in Canberra, Capital Metro (2014: table 29) includes WEI effects that constitute 20 per cent of total benefits. There is some risk that multipliers or so-called uprate factors will be applied routinely to estimated benefits of transport projects.

Given the increased focus by Australian governments in recent times on transport infrastructure projects, it is important to ensure that the estimated WEI benefits are not exaggerated. In a budget-constrained world, any bias in the estimation of transport sector benefits would be at the expense of potentially meritorious projects in other sectors such as health or education. Aspects of WEIs are therefore examined below from both a theoretical and an empirical perspective.

## Wider economic impacts of transport infrastructure: Some theoretical considerations

The standard analysis of the benefits of a transport-related project can be represented diagrammatically, as in Figure 1.<sup>5</sup> The vertical axis shows the generalised cost of transport: typically the cost paid for a trip, including travel time, fuel and any change in externalities such as vehicle crashes. The horizontal axis typically shows the number of trips. The demand curve therefore indicates the maximum willingness to pay for particular numbers of trips made. Figure 1 does not show the capital cost of the project, which is estimated separately.

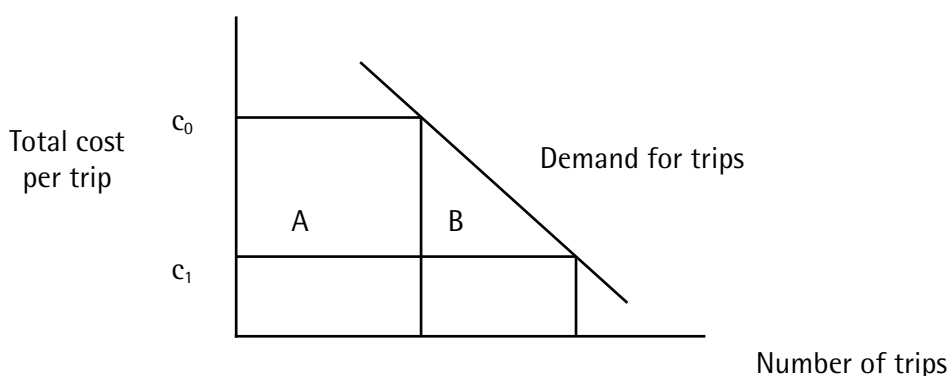


Figure 1: Change in consumer surplus for a transport-related project

<sup>5</sup> A more realistic diagram could include an upward-sloping supply curve. As generated trips require estimation of consumer surplus on the basis of perceived cost, the diagram in ATC (2006: vol 5, p. 55) would be a more appropriate representation in the presence of a tax levied on fuel.

Area A in Figure 1 represents the gain in consumer surplus to existing users; those already making trips but who experience lower costs because of improved infrastructure. Area B represents the gain in consumer surplus for additional trips or for new (induced or generated) travel.

A change in generalised cost as a result of a transport project yields a change in social surplus, and hence its benefit to the community. In a perfectly competitive economy, an increase in social surplus due to a reduction in the generalised cost of transport from  $c_0$  to  $c_1$  is mirrored in consumer surplus changes due to lower prices of goods and services in other sectors of the economy. As transport-using producers experience lower costs, their surpluses, and those of other factors of production (for example, workers' wages), also increase. Because the change in transport social surplus fully reflects changes in a competitive economy, it is not necessary to estimate welfare effects in individual secondary factor or product markets (Luskin and Dobes 1999: chs 2, 3).

In practice, secondary markets are not perfectly competitive. They may be distorted by any combination of external economies of scale, imperfect competition among firms, and taxation imposed by governments. A more sophisticated estimate of the benefits of a transport-related project needs to take into account the effects of such distortions.

## Agglomeration economies

Alfred Marshall examined various aspects and examples of so-called technological external economies in his *Principles of Economics*. Regions and cities with a larger number of firms and range of industries were considered by him to benefit from specialisation: firms can more easily find workers with relevant skills, and workers can more easily find work that matches their skills. Steam transport, the printing press (for printing trade journals) and the telegraph were responsible for removing obstacles to specialisation and hence for engendering external economies of scale reaped by individual firms in an industry through enhanced communication (Marshall 1948: ch. X, book IV, 321).

An increase in the aggregate scale of production in an industry will increase the extent of external economies, allowing individual firms within that industry to produce at lower cost. Provided that an adequate supply of materials is available, and provided that increased density will not result in 'want of fresh air and light', Marshall considered that an increase in population would be 'likely to lead to a more than proportionate increase' in social welfare (Marshall 1948: book IV, ch. XIII).



Many of Marshall's ideas have been taken up in the modern literature<sup>6</sup> on agglomeration (economic mass) and spatial economics. The term 'economies of agglomeration' refers to the additional benefits that firms and individuals gain by moving to areas where the density of economic activity is higher. As Marshall indicated, however, the positive economies of agglomeration may be reduced or offset by negative externalities such as congestion and environmental degradation.

Firms operating in denser markets gain from lower-cost access to both their customers and their suppliers. They also gain from the positive spillover of better access to information about conditions in their industry; knowledge is gained about innovations generally if they are 'clustered' physically close to each other, especially because of face-to-face interaction between employees, and their movement between jobs.<sup>7</sup> There may also be opportunities to reduce costs by sharing costly manufacturing equipment and infrastructure within an industry. Firms are also able to draw on a wider pool of labour and to increase their access to specialised skills.

Workers benefit from a larger agglomeration of firms because they can more easily find other jobs if their firm ceases production. By finding jobs that better match their skills, workers can also increase their wages, reflecting their higher productivity in a more appropriate position. Employment in a larger city may also offer greater recreational opportunities.

It is not necessary for a worker to actually move to a large town or city. Construction of transport infrastructure that reduces the generalised cost of travel (travel time, fuel, externalities) will effectively bring workers closer to firms and to each other. The 'effective density' of the area where production occurs will increase because workers can more easily reach it, even if they do not relocate their residence.

If more workers are willing to commute because transport costs have been reduced, firms gain access to a larger pool of workers and their particular skills. It is recognised, however, that reduced generalised costs of transport may also result in some countervailing reduction of effective density if workers or firms relocate further away from the central business district.

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6 Krugman (1991a, 1991b) is generally credited with revitalising the study of economic geography by incorporating spatial factors and increasing returns into economic analysis.

7 Jaffe et al. (1993) show that new patent applications are 5 to 10 times more likely to cite patents from the same metropolitan area compared to patents from outside it, a reflection of greater exchange of information by firms and workers located in proximity to each other. However, extensive debate took place in the first half of the twentieth century on the exact nature of economies of scale, with their existence initially being portrayed as 'empty boxes' by Clapham (1922) and others.

## Increased output in imperfectly competitive product markets

Conventional transport CBAs implicitly assume a situation of perfect competition throughout the economy, including in sectors that use transport services to obtain inputs and deliver outputs. In a perfectly competitive situation, users of transport services for commuting and for freight will pay a price that matches the value to them of the services. Because transport services are a derived demand, conventionally estimated consumer surplus provides a satisfactory measure of social surplus gained throughout the economy.

The situation is different in the case of business users operating in imperfectly competitive markets. Where businesses have market power, a reduction in transport costs is likely to have two separate effects. One effect, already captured in conventional CBA, is an increase in consumer surplus accruing to business users of transport services from additional (generated or induced) trips: triangle B in Figure 1.

The other, additional effect represents an increase in social welfare, if lower costs induce transport-using imperfectly competitive industries to increase their output, because the quantity of goods and services available to society is increased. This is most easily illustrated in the extreme case of a monopoly in Figure 2.

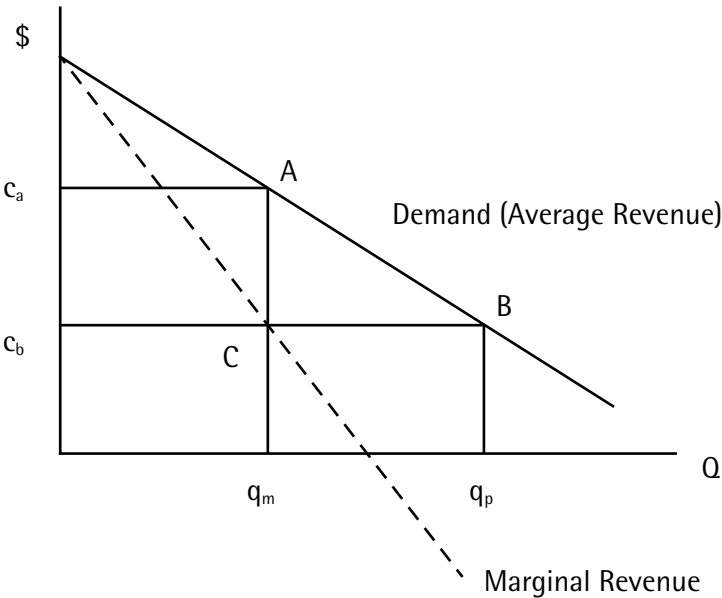


Figure 2: Welfare gain from increased output by monopolist

In Figure 2, the monopolist has a constant short-run marginal cost supply curve at  $c_b$ . Equating marginal cost with marginal revenue, the monopolist produces  $q_m$  while charging a price of  $c_a$ , which customers are willing to pay, given their demand curve. The monopoly profit made by the firm is equal to the rectangle  $c_a c_b CA$ . The monopoly profit is not in itself an economically inefficient result because both the monopolist and customers are members of society. What one part of society loses, the other gains, so there is no net welfare loss; merely a redistribution of income. Society does, however, lose the consumer surplus triangle ABC because the monopolist has restricted profit-maximising production to  $q_m$ , whereas a perfectly competitive market would have produced an output of  $q_p$ . Social welfare can thus be enhanced by increasing output in the direction of the competitive market level of  $q_p$ .

Figure 2 can be extended to illustrate the less extreme examples of imperfect competition for duopoly and oligopoly (see, for example, McCloskey 1985: ch. 21). As long as they produce identical products and are otherwise indistinguishable, two Cournot duopolists would end up producing equal shares of output and charge the same prices. A Cournot solution for three or more oligopolists would similarly produce equal shares of output at equal prices. A Bertrand solution would provide a similar outcome, but a Stackelberg equilibrium will result in unequal shares of overall output.

The Cournot, Bertrand and Stackelberg approaches result in higher-than-monopoly outputs, with prices below the monopoly price. As the number of oligopolists increases, increasing proportions of the triangle ABC that was a deadweight loss under monopoly conditions are reclaimed by society. The outcome in the case of a large number of firms approaches point B in Figure 2, the perfectly competitive outcome where society reclaims the whole of the triangle.

The WEI literature assumes Cournot competition and calculates an 'uprate' factor by which benefits accruing to business travellers in a standard CBA are multiplied. The 'uprate factor' is based on the Ramsey (1927) uniform pricing model which provides a social welfare maximising rule for a monopoly price level.<sup>8</sup> It is a combination of the percentage markup of the monopoly price above marginal cost ( $(c_a - c_b) / c_b$ ) and the price elasticity of demand. Kernahan and Rognlien (2011: 116–21) provide a detailed mathematical exposition.

8 Originally developed by Ramsey (1927) for efficient taxation, the method is also applicable to natural monopolies (Sharkey 1982) and utility pricing. Brown and Sibley (1986: 198–9) summarise use of the model to identify efficient prices in the presence of network externalities in telecommunications services.

## Changes in the labour market

DfT (2005: paras 109, 118) summarises the effect of improved labour supply as follows:

If a transport improvement facilitates increased GDP, there will be tax consequences, whether the additional work involves more people in employment, additional hours, or moving to more productive jobs. The welfare effects of small changes in time savings will be marginal for individuals, but the GDP effects can be more substantial for the minority of people affected ... in some cases, relatively small welfare benefits from time or cost savings can lead to significant GDP effects. There is no theoretical reason to be certain whether the welfare effect of such savings will be smaller or larger than the GDP effect ... [It is] likely to be significant only where a transport scheme relieves a significant transport constraint, and then only for a minority of individuals (insofar as transport cost changes lead to a change in employment or in employment patterns).

That is, a reduction in the cost of travel due to a transport improvement may have a positive effect on the supply of labour in the following three ways (DfT 2005: section 3.4):

- More people may choose to work because commuting time, and hence the generalised cost of travel, is reduced.
- Some may elect to work longer hours because less time is spent on commuting.
- Relocation of firms and workers to higher-productivity (and hence higher-wage) areas because better transport makes the area more attractive and accessible to firms and workers.

The additional output made possible by an increased supply of labour is reflected in an increase in GDP or its sub-national equivalent.

The benefit to the additional people who now travel to work due to lower transport costs is captured in conventional cost-benefit analysis in the 'generated demand' triangle (B in Figure 1). Worker-travellers take their decision to increase travel (or not) on the basis of after-tax earnings. However, the wage paid to the worker by the employer includes payroll and income taxes, because it is the total before-tax wage that reflects the worker's contribution to the value of the additional output gained by the employer.

The tax component forms part of the additional value of production attributable to the willingness of workers to undertake additional employment and to the higher wages earned by some in more productive jobs. Additional tax revenues can be used to fund other socially desirable projects that would otherwise not

have been funded, or they can be used to reduce taxes imposed elsewhere in the economy. They therefore constitute a social benefit, an additional impact that should be captured in a transport-related CBA.

## Wider economic impacts of transport infrastructure: Some empirical doubts

Estimation of posited WEIs is largely an empirical issue. Because time-constrained jurisdictions will be tempted to apply plug-in ‘uplift’ or ‘uprate’ factors on an almost automatic basis, the empirical aspects are important. In particular, routine or automatic application of WEI values for transport infrastructure risk exaggerating the estimated net benefits.

### Agglomeration economies

Conceptually, agglomeration benefits are measured as the increase in output (GDP) due to the implementation of the transport project. A key variable that requires estimation is therefore the elasticity of total productivity with respect to the effective density of employment for industry  $i$  in area  $j$ .

However, the Achilles heel of empirically estimated agglomeration economies is the need to demonstrate causality. In particular, it is necessary to establish that changes in productivity or GDP are due to an increase in effective density generated by a specific transport project. This condition is rarely, if ever, provided in transport CBAs that include WEI benefits.

Paucity of relevant data and the analytical effort required to estimate agglomeration benefits can thus encourage unwarranted use of ‘uplift’ factors. Such factors may be derived from large cities like London, whether or not they are appropriate to local project circumstances. Mare and Graham (2009: 4) add that confounding effects in correlations may also bias estimated productivity impacts upwards.

Another concern is that changes in productivity may be attributed solely to transport projects, potentially risking a form of confirmation bias. While supporting infrastructure – such as the availability of high-speed internet – may not be as conspicuous as a major highway or rail upgrade, it may play an important role in increasing urban productivity. Some (for example, Florida 2003) might similarly argue that entertainment, high-level educational facilities and lifestyle ambience are also essential to attracting the ‘creative class’ of high

productivity individuals to jobs in cities. The contribution of this 'reactive class' to productivity may also be wrongly attributed to transport infrastructure due to the difficulty of isolating different effects.

On a broader level, use of GDP or its sub-national equivalents is not compatible with the measures of welfare used in CBA. GDP is compiled on the basis of market transactions that do not include externalities or non-marketed benefits such as the value of travel time or the value of statistical life. Further, Laird and Mackie (2010: 1–2, para 5.1.3) warn in a report on British studies that estimates of the growth in gross value added (GVA) appear to be exaggerated because they:

... are significantly in excess of the Present Value of Benefits used in conventional cost benefit appraisal ... Clearly these GVA estimates are large and, on the basis that they also exceed welfare benefit estimates, give rise to questions of consistency with the methods used to appraise transport projects ... the methods available to estimate the potential GVA impact of a region post a transport investment are still in their infancy and need work to ensure they pass internal consistency and robustness tests.

Even the fundamental issue of 'standing' – an elemental concept in any CBA – appears to have been largely neglected in the literature on WEIs. Reporting studies of transport projects in Germany and China (para 2.2.4) that do not address the issue explicitly, Laird and Mackie (2010: para 2.1.5) comment that:

An improvement in transport supply in one region will make that region more accessible to other regions and potentially result in the displacement of economic activity to the 'other' regions. This is known as the two-way road effect. Thus an improvement in transport supply in one region may increase the size of the economy at the national level but reduce it at a sub-national level.

In sum, empirical analysis of agglomeration economies can be problematic, if not misleading, due to deficiencies in available transport models, the paucity of relevant data for specific projects, absence of demonstrated causality, and neglect of established principles of CBA. Detailed critiques are provided by DfT (2014); Worsley (2011); Laird and Mackie (2010); Graham et al. (2009); and Byett et al. (2015), among others.

## **Output change in imperfectly competitive product markets**

Drawing on a number of price-cost studies for UK manufacturing industries and economy-wide elasticities, DfT (2005) recommended an uprate factor of 0.1, based on a price-cost margin of about 0.2 and a price elasticity of demand of 0.5. That is, for imperfectly competitive firms, any welfare gain due to business

travel time savings, as well as transport reliability gains, should be increased by 10 per cent above values estimated using the conventional analysis in CBA. DfT (2014) confirmed this recommendation.

However, adjusting benefits estimated in standard transport CBA for the welfare effects of increased production in imperfectly competitive industry is questionable on both theoretical and empirical grounds.

For all its elegance, the Cournot description of oligopolistic behaviour is flawed. Its assumption of the production and sale of perfectly homogenous goods by all the oligopolists is unrealistic. An equally unrealistic assumption is that competitor oligopolists will not change their behaviour in response to an initial move by one of them. This is particularly so for a small number of oligopolists where the actions of one will have a non-trivial effect on the market available to the others. The countervailing assumption of a large number of oligopolists raises the lack of realism in assuming homogeneity of all goods and services sold.

A second limitation of the WEI approach is that there is no general economic theory of oligopoly. The perspectives offered by Bertrand and Stackelberg are variants on the Cournot theme, but Hotelling's (1929) analysis of spatial oligopoly where competitors form clusters, illicit cartel arrangements such as tacit collusion, and game theoretical approaches offers alternative descriptions of oligopoly behaviour.<sup>9</sup> A popular alternative representation of oligopolistic behaviour is the kinked demand curve<sup>10</sup> shown in Figure 3.

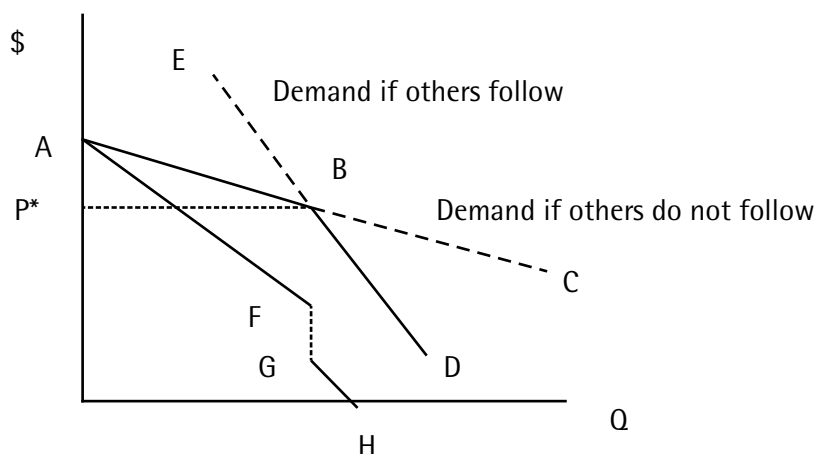


Figure 3: The kinked demand curve interpretation of oligopoly

<sup>9</sup> Monopolistic competition is another form of imperfect competition (see, for example, Chamberlin 1932) but generally offers indeterminate solutions. It does not appear to feature in the WEI literature.

<sup>10</sup> Various attributed to Sweezy (1939) and Hall and Hitch (1939) who apparently published essentially the same model independently, but at much the same time.

There are two demand curves in Figure 3. Demand curve ABC assumes that competitor oligopolists will not follow if one of them changes the price charged for a good or service. Demand curve EBD makes the opposite assumption, that competitors will set similar prices to changes made by one of their number. The composite demand curve is ABD, and the corresponding marginal revenue curve AFGH is discontinuous between F and G to reflect the kink at B.

Assume that an initial equilibrium price for heterogeneous products has been established around  $P^*$ , perhaps due to some form of weak collusion. One of the oligopolists may try to reduce their price to increase sales, acting in the belief that others will not follow (the BC segment of demand curve ABC). In fact, it is likely that others will try to match the lower price, so the first-mover oligopolist will end up increasing sales only along the BD segment of demand curve EBD. In contrast, a price increase by the first mover in the belief that other oligopolists will follow along segment EB is likely to be resisted; the first mover will simply lose sales as it follows segment AB. It is therefore likely that the market price will hover<sup>11</sup> around  $P^*$ .

The kinked demand curve scenario therefore posits sticky prices and quantities in oligopoly industries. Were this approach to be preferred to the Cournot solution, then reductions in transport costs for business travellers from imperfectly competitive industries could not result in increased social surplus. Determining which approach is the more realistic representation of imperfect competition in any particular industry would require detailed analytical effort.

However, the WEI literature typically adopts a Cournot approach without justification, raising the suspicion that it offers a convenient means of calculating additional benefits using a plausible theoretical basis. One can only conclude that the automatic application of 'uprate factors' based on the (typically unjustified) Cournot perspective results in overestimation bias when calculating the benefits of transport projects.

Even identifying imperfectly competitive firms may be empirically difficult. Increasingly sophisticated use of the internet by producers and distributors (*The Economist*, 2 May 2015) is likely to increase the degree of competition in a range of other industries. Companies like Uber and Lyft, for example, are pressuring governments to allow individuals to offer passenger transport services in competition with taxis. And according to Tyers (2014: 6), 'the precise extent of imperfect competition in Australia's service industries is difficult to quantify'.

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11 Expositions of the kinked demand curve typically show changes in marginal cost (MC) as shifts in the MC curve within the FG discontinuity to assert indeterminacy of price formation even with changes in cost of production, and hence some rigidity in the overall quantity produced (point H in Figure 3). The main drawback of the approach is that it does not explain how the initial price  $P^*$  was determined.



Finally, the WEI literature appears to have adopted a constrained, linear approach to the issue of imperfectly competitive industries. In Australia, at least, some such industries (chemists, newsagents, some postal services, etc) are imperfectly competitive due to legislated rigidities. Even if transport costs were to fall, there might be little reason for firms to decrease prices and increase sales. Moreover, institutional rigidities, such as after-hours penalty rates, and Occupational Health standards, such as truck driver hours, are likely to limit any price reductions.

## Changes in the labour market

A transport intervention that reduces the generalised cost of transport to a commuter can be thought of as an increase in the effective wage. It is therefore possible to estimate an elasticity of labour supply with respect to effective wages, and to use it to estimate a change in the level of employment. The product of the change in employment and GDP per worker (average labour productivity) yields the overall change in GDP.

In theory, the addition of increased labour income tax receipts should be added to the benefits estimated in a conventional transport CBA. However, the approach proposed in the WEI literature is one-sided with regard to the effect of transport projects on taxation receipts and is therefore likely to result in overestimation of benefits.

It is – or should be – good practice in CBA to include the social cost of the deadweight loss resulting from the increased taxation or borrowing that is needed to fund a large project. Part of the reason for the deadweight loss is the reduced level of economic activity due to the depressive effect of the increased taxation. In other words, funding a large project, other than by reducing other government expenditures, will reduce GDP.

Infrastructure projects that can raise significant amounts of additional taxation receipts due to the postulated increase in labour supply and hence GDP, would arguably also be significant enough to require substantial financial resources. Raising the requisite finance would have some offsetting negative effect on GDP and hence taxation receipts.

However, this latter aspect of a negative effect on GDP due to financing of projects is ignored in the WEI literature. Failure to include both the positive and negative GDP/taxation effects of an infrastructure project can only result in a less-than-impartial analytical approach that will bias upward any estimate of the benefit.

A further problem that may arise is inconsistency in the analysis itself. Unless the 'tax collected' effect is consistent with the 'standing' adopted for the underlying cost-benefit analysis, estimated benefit levels may be exaggerated. This is particularly true in cases where labour income tax is collected at the national level, but the analysis is carried out from a sub-national perspective such as that of a state or region.

A case in point is the Capital Metro (2014: table 28) analysis of a proposed light-rail link for Canberra. The standing adopted is not stated, but is implicitly that of Canberra. However, the estimated benefits of the project include Federal income tax, presumably because of an automatic application of the WEI approach. The present value of the estimated tax receipts is more than 15 per cent of the WEI amount included in the overall CBA result.

Obviously, labour income tax collected at the national level cannot constitute a benefit to residents of Canberra unless the Australian government hypothecates the tax receipts to the Australian Capital Territory. Thoughtless, automatic application of WEI effects can therefore also lead to exaggerated estimates.

## **The treatment of wider economic impacts in Australia and New Zealand**

A report to the Council of Australian Governments Reform Council by the consultants SGS (2012a) reviewed the literature on agglomeration economies and provided estimates of projected changes to metropolitan GDP. It was based on case studies of proposed transport projects in Melbourne and Adelaide, and greenfield housing development in urban fringe areas of Sydney.

The SGS (2012a) report adopts an approach similar to overseas studies by estimating changes in state gross value added (GVA) based on the correlation between effective job density (EJD) and labour productivity by statistical local area (SLA). EJD is derived using travel time rather than the generalised cost of travel.

However, SGS (2012a) also proposes a different approach to estimating 'uplift' in GVA, based on elasticities of changes in human capital due to changes in EJD. This new approach is based on the hypothesis (p.2) that households are 'knowledge intensive enterprises' in their own right, and that transport projects will open more opportunities to learn and acquire skills. It is not entirely clear from the report whether the acquisition of additional human capital is hypothesised as being due to better access to educational centres or to on-the-job training, but the calculated elasticities are based on the incidence of formal tertiary qualifications in each SLA.

With regard to productivity effects of agglomeration, the points made by SGS (2012a) appear to confirm the critique offered by DfT (2014); Worsley (2011); Laird and Mackie (2010); and Graham et al. (2009), among others. For example, ‘rather than firms being more productive because they are in a central location, firms that are more productive can command central locations’, so that the direction of causality runs in the opposite direction to the one usually hypothesised. A further problem is that researchers are not able to obtain access to detailed firm-level productivity data in Australia, whereas overseas studies have been able to do so. Indexes of EJD also do not distinguish between ‘jobs’ and their relevance to a particular sector in terms of their contribution to GVA; for example, a bank teller and an investment banker will be treated as equivalent occupations. SGS (2012a) also acknowledges that the use of cross-sectional data at a particular point in time to estimate elasticities may not be appropriate for projecting changes in future productivity due to a transport intervention or land use strategy.

Given all these uncertainties, it seems incongruous that SGS (2007: table 14) should attribute over \$17 million out of a total of \$85 million in present value benefits to urban consolidation benefits as a result of replacing a railway level crossing with an underpass in suburban Springvale in Melbourne. Capital Metro (2014: table 18) attributes a similarly high proportion of about 20 per cent in WEIs in its estimate of the total benefits for a 13-kilometre light-rail connection between one suburb already served by a rapid bus service, and one out of the four existing Canberra town centres.<sup>12</sup>

Studies have also been undertaken in New Zealand. Mare and Graham (2009) used more detailed data than those available to researchers in Australia to estimate agglomeration elasticities. Kernohan et al. (2011: table 8.2) analysed imperfect competition through the prism of a Cournot model using the price-cost differences of New Zealand firms. They recommend an ‘uplift factor’ of 10.7 per cent be applied to business user benefits.

Agglomeration impacts or externalities are included in the NZ Transport Agency’s (2013: 5-406–5-411) *Economic Evaluation Manual*. It includes weighted average agglomeration elasticities for New Zealand by industry, as well as the procedure to apply the agglomeration elasticities to estimate productivity gains by location. The uplift factor for imperfect competition is specified as 10.7 per cent of business user benefits, and an increased labour supply is considered to be capable of adding up to ‘10% of wider economic benefits over conventional benefits’.

12 Other reports on WEIs commissioned by Australian jurisdictions include SGS (2012b), KPMG (2012), and Hensher et al. (2012). At the time of writing, a detailed study of elasticities of productivity with respect to employment density was being undertaken by SGS under the aegis of the Australian Government’s Bureau of Infrastructure and Transport Economics on behalf of Austroads.

Face-to-face discussions with transport agencies in Australia and New Zealand in late 2014 revealed a general acceptance of the need to include WEIs in evaluations of transport projects. Central agencies were typically more guarded, emphasising the need to avoid the application of elasticity and other values obtained from overseas studies or from other projects, although current methodologies are broadly supported. Most of those interviewed recognised the potential pitfalls of double-counting impacts, the need to demonstrate causality, and the limitations imposed by data availability.

Infrastructure Australia (2013: 11) notes that WEIs may not always be positive and that 'the availability of Australian specific data needed to calculate WEIs is currently sub-optimal'. It states that it will treat estimates of WEIs 'separately to the traditional CBA', but is nevertheless broadly supportive of their inclusion in proposals for infrastructure spending.

## **Is routine application of WEI factors going too far?**

Vickerman (2007b: 4) provides a comprehensive review of the debate regarding the existence of wider economic benefits, distinguishing between macro-level and micro-level approaches, and noting the difficulty of 'knowing whether an elasticity obtained from the macro-study is in any way applicable to a single investment decision'. After reviewing differences in approach in the estimation of elasticities in macro-studies (output, productivity, or employment), the issue of direction of causality, and use of land-use transport interaction (LUTI) models versus computable general equilibrium (CGE) models, he points out that most of the empirical evidence he has reviewed relates to ex-ante studies. He cites 'one of the relatively few ex post studies' by Hay et al. (2004) to the effect that '... a very significant project, the Channel Tunnel, has not produced significant wider benefits over its first ten years of operation, at least on the regional economies close to the tunnel'.

Reviewing the effects of a number of TGV (Train à Grande Vitesse) projects between pairs of major French cities, Vickerman (2007b: 14) finds that traffic levels generally increased in both directions, but that there was no overall net impact on these major cities, although there was a tendency for increased concentration of economic activity towards them from their regional hinterlands. Vickerman (2007b: 16) concludes that 'what is clear is that there is little evidence of there being standard transferable [wider economic benefit] multipliers region to region or project to project' that can be applied to estimated benefits in individual ex-ante analyses.

DfT (2014: section 5.2) reviews a number of data and modelling issues in the UK that can affect the robustness of estimates of WEIs. Lack of modelling of intra-zonal travel in transport models is considered likely to produce inaccurate estimates of agglomeration effects. Where transport models do not employ generalised cost matrices, there is likely to be bias in WEI assessments because changes in agglomeration effects depend on costs. Insufficient segmentation of modes in transport models may affect estimates of effective density; for example, if the model does not include a public transport mode. Finally, models may not cover the geographic area under consideration exactly, leading to unreliable results.

In a detailed review of using the UK GVA approach, rather than GDP, Byett et al. (2015: 94) noted that:

One issue that was not fully resolved was whether the benefits measured are additional or inclusive of the rule-of-half benefits measured within the standard transport appraisal ... Hence at this stage it is recommended that the GVA approach be used alongside the EEM [Economic Evaluation Manual, NZ Transport Agency], rather than as an additive effect.

More particularly from the perspective of this publication, in a summary table of pros and cons of the GVA methodology, Byett et al. (2015: 95, table 10.1) also conclude: 'The GVA approach is not consistently defined across different studies. Likewise density measures also differ across studies. These inconsistencies reduce the ability to compare model outcomes and calibrate model parameters.'

Abelson (2011) sums up his own review of the issues by concluding that 'searching for wider economic benefits is something of a holy grail in transport economics'.

## Conclusion

Just as there is sometimes unjustified aversion to new ideas, it can also be the case that a new idea or approach is adopted without sufficient critical review. In the case of WEIs, enough caveats have become apparent to signal that a thorough review of the approach is desirable before its acceptance and automatic application to transport projects in Australia and New Zealand.

To ensure transparency, consistency and robustness in CBA studies of transport infrastructure projects, it would be highly desirable for all jurisdictions to undertake the following:

- A thorough review of the basic methodological principles used in the WEI approach, particularly from the perspective of its application to cost-benefit

analysis. This should include ex-post assessments and their comparison with ex-ante evaluations.

- Peer-review by statisticians and econometricians of the reliability of available data in all jurisdictions, as well as the methodology used to estimate WEI parameters.
- Rigorous data collection and analysis to estimate the relative contributions of external economies of scale to productivity by transport, the internet, etc.
- Data collection to permit estimation of the number of business travellers from imperfectly competitive industries, as well as the output responses of those firms to improvements in transport services.

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# *REVIEW*

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# *Macroeconomics and the Phillips Curve Myth* by James Forder

(Oxford: Oxford University Press, 2014)

Reviewed by Selwyn Cornish<sup>1</sup>

In 1958 A.W.H. (Bill) Phillips, professor of economics at the London School of Economics, published a highly influential paper in *Economica* entitled 'The Relation between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861–1957' (Phillips 1958). A graph depicting the relation between the level of unemployment and the rate of change of wages (and given some basic assumptions, the rate of change in prices) was soon referred to as the 'Phillips Curve'. What appeared to be remarkable – bearing in mind the structural changes that occurred in the economy, including the labour market, over such a prolonged period – was the stability of the relationship between unemployment and wages/prices.

It appeared to some – Phillips himself was not one of them – that the Phillips Curve provided a menu from which policymakers would be able to choose from various combinations of unemployment and inflation. An article published two years later by Paul Samuelson and Robert Solow seemed to support that idea. Soon it was claimed that policymakers were using the Phillips Curve to implement policies favouring lower rates of unemployment even at the expense of faster rates of inflation. Next were a number of econometric studies which sought to establish whether a Phillips Curve existed in different countries and at different times. Towards the end of the 1960s, Milton Friedman and Edmund Phelps, in separate papers, argued that expectations of increased wages and prices would lead ultimately to the failure of any attempt to trade off higher inflation for lower unemployment; continuous inflation would alter expectations and consequently shift the Phillips curve – perhaps to a vertical position – confounding thereby the possibility of a long-run trade-off. Following Friedman and Phelps, it was

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claimed that a patch-up job was undertaken on the Phillips Curve, including the incorporation of special factors such as changes in trade union behaviour. This subsequent work, however, seemed to confirm that expansionary macroeconomic policy would have little lasting effect on unemployment.

Forder contends that most of this story – what he calls the ‘Phillips Curve story’ – is based on a number of myths. For a start, he asserts that Phillips’s ‘finding of a negative relation between wage change and unemployment was not original, and, in any case, his work impressed few’. Further, Samuelson and Solow ‘were not advocating inflation and practically no one thought they were. The idea that they had been highly influential in promoting an inflationist view is a later invention.’ As to the econometric work of the 1960s, Forder concludes that it ‘was hardly influenced by Phillips at all and certainly was not an attempt to refine his work. With few exceptions, the authors concerned showed no hint of believing their work indicated that inflation would be a sensible policy, and the few who were exceptions mostly had sensible reasons for favouring inflation.’ Forder argues, furthermore, that the ‘expectations argument was very widely known before Friedman or Phelps stated it. There is virtually nothing in the literature of the period to suggest it was ever doubted.’ Finally, he claims that ‘to describe the literature of the 1970s as an attempt to “patch up” Phillips’s work is quite mistaken’.

How did these myths become so widely accepted? While Forder does not attribute ‘the Phillips Curve’ story to any individual, Milton Friedman receives a disproportionate amount of his attention. Thus Forder states that ‘the best-known early statement of it is found in Friedman (1977) – that author’s Nobel Lecture’. What was Friedman’s motivation for propagating the story? Forder’s answer is that, in the Nobel Lecture, Friedman pursued one of his favourite themes, namely, the scientific nature of economics. The ‘Phillips Curve story’, Forder contends, is a ‘story of how the errors that led to policy failure have been put behind us, and how the dissent for which economists were once so notorious was ended. It is a story of how economics became the science it is today. The whole story revolves around the Phillips Curve.’ In short, writes Forder (pp. 216–7), in economics the ‘1970s saw a great war of truth against falsehood; our society against the primitives; or reason, logic, and rationality against superstition, ad hocery, and the denial of market forces ... this story is told, as Friedman ... intended and claimed, as a demonstration of scientific credentials’.

As to how Forder sees his own contribution to economic understanding, he dismisses the idea that it should be regarded simply as a historical curiosity. Rather there are important lessons to be learned from his critique of the Phillips Curve story, including the virtues of accuracy, modesty and humility. Economists, he argues (p. 218):

... should not be telling themselves that the progress of their understanding exhibits the best and most powerful aspects of the scientific approach, they also should not be telling themselves that their modern understanding was forged in professional humiliation. The great failure to understand economic behaviour which supposedly blights our history did not occur ... What the historical record offers as an alternative to a long-run vertical Phillips curve is not an exploitable curve, but doubts about the connection of inflation and unemployment.

This last point raises the question of what Keynes said in *The General Theory of Employment, Interest and Money* about the relation between unemployment and inflation. Here, it could be argued that Friedman was responsible for yet another myth. For according to Friedman (1977: 3), 'the hypothesis that there is a stable relation between the level of unemployment and the rate of inflation was adopted by the economics profession with alacrity. It filled a gap in Keynes's theoretical structure.' There is, in fact, no such gap in Keynes's 'theoretical structure'. To quote from *The General Theory* (Keynes 1936: 296):

... [an] increase in effective demand will, *generally speaking*, spend itself *partly* in increasing the quantity of employment and *partly* in raising the level of prices. Thus instead of constant prices in conditions of unemployment, and of prices rising in proportion to the quantity of money in conditions of full employment, *we have in fact a condition of prices rising gradually as employment increases.* [Italics added]

In other words, the relation between prices and unemployment is not stable. Having made that point, Keynes (p. 297) added:

the object of our analysis is *not to provide a machine, or a method of blind manipulation*, which will furnish an *infallible answer*, but to provide ourselves with an *organized and orderly method of thinking out particular problems*; and, *after we have reached a provisional conclusion* by isolating the complicating factors one by one, we then have to go back on ourselves and allow, as well as we can, for *the probable interactions of the factors amongst themselves. This is the nature of economic thinking. Any other way of applying our formal principles of thought ... will lead us into error.* [Italics added]

*Macroeconomics and the Phillips Curve Myth* is a significant contribution to our understanding of an important issue in modern macroeconomics. It is, in fact, a work of considerable scholarship, based on an exhaustive examination of the literature. Forder appears to have read nearly everything on the subject. The book reveals what hard work historical research can be; wading through hundreds of articles and books, summarising different arguments and weighing up the relative merits of each of the arguments – it is not a matter of simply asserting that someone said something without checking the literature to verify whether that was the case. As a result of his labours, Forder has done the

discipline a great favour by emphasising the point that, when it comes to the various elements of the Phillips Curve story, there is very little that is entirely original and not much that is true.

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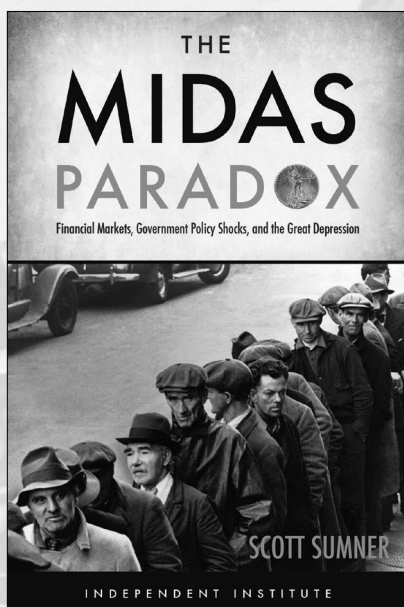
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