Submission by Professor David Peetz to Inquiry by Senate Standing References Committee on Education and Employment into the Government's approach to re-establishing the Australian Building and Construction Commission

The purpose of this submission is to discuss a particular aspect of the construction industry, that of productivity. In particular I focus on a source that is frequently relied upon by proponents of legislative change in this industry, a series of closely related reports undertaken by Econtech Pty Ltd (later known as 'KPMG Econtech' and then 'Independent Economics', a trading name used by Econtech Pty Ltd) and commissioned by the Australian Building and Construction Commission (ABCC) and subsequently Master Builders Australia (MBA). These reports purport to measure the productivity gains associated with building industry 'reforms' from 2002, and in particular the benefits from legislation enabling the exercise of coercive powers by the ABCC. The economic case for coercive legislation in this industry has centred around these reports and their claims of large productivity gains in the industry as a result of industry 'reforms', with consequent large welfare gains to consumers and the economy. Likewise the economic case for abolition of the Fair Work Building Commissioner (FWBC) and re-creation of the ABCC (with more extensive coercive powers than were originally possessed by the ABCC) hangs around estimates of the large welfare losses arising from productivity losses resulting from the existence of the FWBC.

Appended to this submission, as Attachment A and Attachment B, are two articles published in peer-reviewed journals that relate to this topic. Attachment A is an article published in the *Journal of Industrial Relations* on the earlier Econtech reports (Allan, Dungan and Peetz, 2010). Attachment B is an article in the *Australian Bulletin of Labour* on the general xuestion of industrial relations policy and productivity (Peetz, 2012). Some of the material in this submission draws on the analysis in Attachment A, and more details can be found there. However, some of the analysis in the body of this submission has been especially prepared for this Committee. For simplicity and consistency I refer to the company responsible for the various reports as 'Econtech'.

The 2007 report 'found that "industry reforms", consisting of: the Australian Building and Construction Commissioner (ABCC); its predecessor, the Building Industry Taskforce; and industrial relations reforms in the years to 2006, had a positive impact on construction industry productivity' (KPMG Econtech, 2010:1). Its modelling purports to compare the effects of these reforms, a 'reform scenario', with a 'baseline scenario' where reforms are not implemented (ibid:3). Econtech divides time into three periods, the period prior to the Building Industry Taskforce (BIT) and the ABCC 'up to and including 2002' (a baseline or pre-'reform' period); the 'reform' era 'between mid 2002 and mid 2012'; and the FWBC era from mid 2012 onwards (Independent Economics, 2013:i). As discussed later, however, it does not do this consistently through its analysis.

The origins of Econtech's 9.4 per cent productivity gain assumption

In each of its six reports and updates since 2007, Econtech has claimed a 9.4 per cent increase in construction industry productivity arising from building industry 'reform' (the establishment of the BIT and then of the ABCC). The origins of this estimate are in the 'original' 2007 report. (The word 'original' is in quotation marks because the 2007 report built on an earlier, 2003 report commissioned by the then government.) In that 2007 report the only method by which a 9.4 per cent gain is shown is through Econtech's use of Rawlinson's data. Rawlinson's is a quantity surveyor that collects and publishes data annually on construction industry costs, by contacting firms and contractors and asking them the price of a specific task. The 2003 Econtech report compared average costs for selected items in the domestic and commercial construction sectors and claimed to show that 'building tasks such as laying a concrete slab, building a brick wall, painting and carpentry work cost an average of 10 per cent more for commercial buildings than domestic residential housing' (Econtech, 2007a, i; Econtech, 2003). The comparison was made between costs in the largely non-union domestic (housing) construction sector, and the more unionised commercial construction sector. The logic was that costs would be higher in the commercial sector because of its union presence, so the 10 per cent cost difference was said to reflect the union impact in creating inefficient work practices and reducing productivity. Econtech's 2007 report for the ABCC purported to provide an 'up to date assessment of the cost gap', using the same methodology as the 2003 report to DEWR and was said to reveal 'that the activities of the ABCC have dramatically improved the productivity of the building and construction industry' (Office of the Australian Building and Construction Commissioner, 2007). In construction, compared to the average over the 1994-2003 period (also shown in Figure 1), the labour productivity gap between what productivity could be and what it was, allegedly was down to an average of 1.8 percentage points from 11.2 percentage points, a drop of 9.4 percentage points or 84% (Econtech, 2007a, pi). The number of 9.4 per cent was derived solely from the estimated 'closing of the cost gap between commercial building and domestic housing' (Econtech 2007:iv,v,vi,27,28,33,37), which Econtech argued was 'due to improved work practices associated with the activities of the ABCC' (Econtech, 2007b).

As discussed in Attachment A (esp pp 66-67), several years ago some colleagues and I attempted to replicate the Econtech findings. We were unable to do so and discovered that this was because Econtech had made major errors in its calculations, apparently it transpired due to spreadsheet mistakes. Correcting these mistakes meant that the change in the gap identified by Econtech almost disappeared. For example, they meant that, in 2007, the average cost differential between housing and commercial construction was *no lower* that it had been in 2002, before the establishment of the BIT – in fact, it was 0.9 percentage points higher. In a subsequent report Econtech referred simply to 'anomalies' in the data and in a later report again to 'errors', but did not retreat from its estimate of a 9.4 per cent gain in productivity under the ABCC. Despite

the discrediting of the original calculation, Econtech has repeated the number in reports since then.

Econtech has, however, continued to use Rawlinson's data. A difficulty is that the cost differential by Econtech calculations ranged between 12.4 per cent and 19 per cent during the reform period; it has never fallen below the 10 per cent gap it established in 2003. (Although a smaller number of items were used for comparisons in later years, this does not explain the failure to fall below the pre-reform differential.) Possibly to avoid the embarrassment of having to show that the cost differential has been worse in the 'reform' period than in the period that preceded it, Econtech no longer publishes data for the period before 2004. Instead, it uses as the base year 2004 (over a year after the reform period began), which happens to be the year the cost differential peaked (see Figures 2 and 3 in Attachment A). Elsewhere in the Econtech report (for example in the discussion of ABS productivity data or industrial disputes data) 2004 is treated as part of the 'reform' period and compared with the benchmark pre-reform period. But in the analysis of the cost differential, 2004 becomes the benchmark year itself. This selective use of data periods and of data to produce favourable results to the cause one is advancing is referred to in statistics as 'cherry picking'.

The possibility of undertaking comparisons with any part of the pre-2004 period was dismissed by Econtech on the basis of an alleged 'break' in the series. We tested the validity of this excuse (see Attachment A, pp 68-71) and found there was no basis for it, except possibly (but not convincingly) for one of the six (originally eight) items used in the Econtech index, and that using alternative series which omitted this item produced similar results. That is, the cost differential before the 'reform' period was actually no lower than, and was typically *higher* than, the cost differential during the pre-'reform' period.

Econtech's problem with the change in use of coercive powers

Econtech has problems in dealing with the last two years of the ABCC, when there were administrative changes in the ABCC (including its leadership) and hence a change in its policy towards use of its coercive powers. Econtech pointed to 'a sharp decline' in 'the use of these powers' in 2010-11 which was sustained in 2011-12, due, it said, to a 'change of investigative technique' and 'shift in agency emphasis' (Econtech 2013:9-10) and linked, no doubt, to the departure of the preceding head of the ABCC. Indeed, Econtech showed a 90 per cent drop in compulsory 'examinations' of employees between 2009-10 and 2010-11. It used this to help explain that 'restrictions on [its compliance] power would be expected to hinder the effectiveness of the FWBC' (2013:9).

With regard to the Rawlinson's data, for most of the period of operation of both the Building Industry Task Force and the coercive powers of the ABCC, there was no evidence of a reduction in this cost differential below that which could be observed over the 1995-2002 period (which averaged 14 per cent). For example, the narrowest

this gap became, according to Econtech, was 14.2 per cent in 2010. Only in 2011, after the virtual cessation of compulsory examinations, did this gap fall below 14 per cent, and it remained in a range between 12.4 per cent and 13.2 per cent over the 2011 to 2013 period. Econtech argues that the small increase between 2012 and 2013 in the gap (from 12.7 per cent to 13.2 per cent) 'is consistent with the expectation that the introduction of the FWBC is likely to gradually unwind the productivity gains generated in the FWBC era'. Yet it fails to adequately explain why, in that case, the gap was lower after ABCC virtually stopped using its compliance powers; or why the gap in the first year of the FWBC was lower than at any time while coercive powers were extensively used by the ABCC. If changes in this gap can, as Econtech argues, be attributed to changes in construction industry regulation (a highly dubious proposition), then Econtech has failed to demonstrate that the use of coercive powers leads to any gains in relative costs between commercial and domestic residential building.

With regard to some of the other indicators used by Econtech (discussed in more detail below), there was a slight rise in the proportion of all working days lost that took place in the construction industry (from 14 per cent over 2006-07 to 2009-10, to 17 per cent over 2010-11 and 2011-12). But there was also a substantial rise in construction industry labour productivity in 2011-12, to levels much greater than those shown over the preceding years. It was the only time during the ABCC's operation when construction productivity showed a significant increase. While Econtech noted that 'labour productivity data for 2013, which would begin to reflect the operation of the FWBC, is not yet available. So an assessment of the FWBC's impact on this measure of labour productivity is not possible at this time' (p15) it also opined in its model that 'labour in the construction industry has become less productive as a result of replacing the ABCC with the FWBC, and this productivity loss flows through to the wider economy and ultimately to consumers' (p54). Yet contrary to the predictions or assumptions of Econtech, construction industry labour productivity rose again in 2012-13, exceeding the high levels achieved after the ABCC had virtually abandoned its use of compulsory powers.

Perhaps because this coincided with the near cessation of use of the ABCC's coercive powers, Econtech downplays this rise in productivity, saying the 'additional labour productivity outperformance over the last two years is driven by a compositional shift within the building and construction industry towards engineering construction, which is less labour intensive' (Econtech 2013:15). Yet the share of 'Heavy and Civil Engineering Construction' employment in total construction employment was remarkably stable, at 7.0 per cent in 2009-10, 6.8 per cent in 2010-11, 6.7 per cent in 2011-12 and 6.8 per cent in 2012-13 (ABS Cat 6291.0.55.003, Table 06). Thus compositional change in the labour force data is not sufficient to explain away the higher level of construction industry productivity in 2011-12 and 2012-13 after the virtual cessation of use of the coercive examination powers.

'Predicting' and comparing productivity

Econtech made much of the idea that productivity in the construction industry over the period since 2002 has been greater than that which would have been 'predicted' on the basis of changes in national productivity.

This, however, is a spurious argument. There is no particular reason to presume that one can accurately predict what productivity will be in the construction sector on the basis of what productivity is in the rest of the economy. Moreover, according to Econtech, construction industry productivity began to rise above its 'predicted' level back in 1997. By 1999, three years before even the Building Industry Task Force, construction industry productivity was exceeding Econtech's 'predictions' by almost as much as in 2007, making the claim of a 'reform' effect unwarranted. Productivity slumped in 2001 – only to resume its 1999 level in 2003. This has been attributed to a downturn arising from housing construction having been brought forward prior to the goods and services tax (PwC, 2013; Treasury, 2008:45) and the boom and bust cycle associated with the Sydney Olympics (Parham, 2005).

The technique used by Econtech is severely compromised by the fact that national productivity growth in recent years has been dragged down by the effects of productivity slumps, for different reasons, in mining and utilities (electricity, gas and water). These productivity falls are related to high commodity prices making it more economic to extract lower grade ores, hence lowering output per unit of labour input, despite profits increasing; and to heavy investment phases (possibly in some cases over-investment). That means that productivity growth in the 'rest of the economy' (other than mining and utilities) has been higher than growth in 'all industries'. Indeed, if Econtech's method of prediction was applied to other industries (that is, predicting industry productivity post-2002 based on pre-2002 regressions of industry productivity on national 'all industries' productivity) then, setting aside mining and electricity gas and water, 13 of the 17 remaining industry groups would average higher productivity growth over the period 2006-07 to 2012-23 than their predicted productivity growth (based on regression equations undertaken by the author). Eight of those industries had higher than predicted productivity in *every* year in that period. Yet productivity in most of these industries (such as agriculture, retail trade, accommodation cafes & restaurants, professional services, arts & recreation services) could not have been affected by the ABCC. So there is nothing unusual about productivity growth in an industry running above or below some 'predicted' average based on national productivity growth, and it certainly cannot be attributed to the ABCC or construction industry 'reform'.

There is another methodological weakness in the Econtech technique. Construction industry productivity is a component of national productivity, so it is inappropriate to regress construction against a variable of which it is a component itself. If there is to be any validity in this approach at all, it would be necessary to regress construction industry productivity against productivity in industries other than construction that

make up national productivity. With only 17 annual observations before 2002, it is impossible to regress construction against all industries in a single equation (as the resultant equation would have no 'degrees of freedom'). Parsimony is needed. But it is feasible to regress construction productivity against that in two or three industries without reducing the degrees of freedom critically. I have done this by regressing construction industry productivity against productivity in three industries: retail trade, information and communication services, and mining. These three industries are, between them, a very good proxy for national productivity: an equation regressing national productivity growth against these three industries is highly predictive over the 1985-2002 period (r = .993) and is even highly predictive over the 2003-2013 period (r=.936).[1]

The table and charts below show the outcomes of regressing construction industry productivity (i) against 'all industries' productivity, along the lines of Econtech's approach; and (ii) against the three above industries. They also show the effects of using these regressions to predict post-2002 construction industry productivity (as can be seen, the figure in Chart 1 resembles that used by Econtech in their Chart 2.1). Two things stand out. First, the three-industry equation (number 2) more closely tracks construction industry productivity in the pre-2002 period (it has a higher *r* value), so it should be a better indicator (in Econtech terms) in the post-2002 period than the 'all industries' equation (number 1) of what construction industry productivity *'should'* be. Second, in the post-2002 period, construction industry productivity in the post-2002 period is mostly *below,* and often well below, the level predicted by the three-industry equations in chart 2. That is, if one accepts the logic of 'predicting' construction industry productivity, then these equations, which are more robust and theoretically valid than those used by Econtech, show that construction productivity in the 'reform' years has been well below what it should be.

Table 1: Regression equations predicting construction industry productivity

	Equation no (1)	Equation no (2)
Mining		-.146 (0.04)
Retail		.608 (0.03)
Informa		.275 (0.05)
ALL_INDS	.392 (0.00)	
(Constant)	41.995 (0.00)	40.347 (0.00)
R: YEAR <= 2002 (used for prediction)	.739	.837
Adjusted R^2 (whole equation)	.517	.631
F Significance	.001	.001

p-values in brackets under coefficients. Source: Calculated from ABS Cat 5204.0 Australian System of National Accounts, Table 15.

[1] The equation is All industries productivity = .494 Retail productivity + .104 Info & Comm productivity - .053 mining productivity. p-values of coefficients = .000, .074 and .072 respectively. F_{sig} = .000; adjusted r^2 = .982.

Chart 1: Predicted and actual construction productivity using equation 1

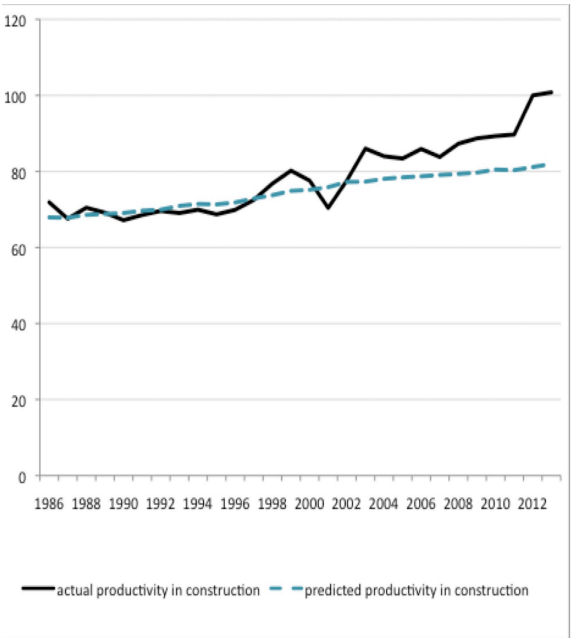
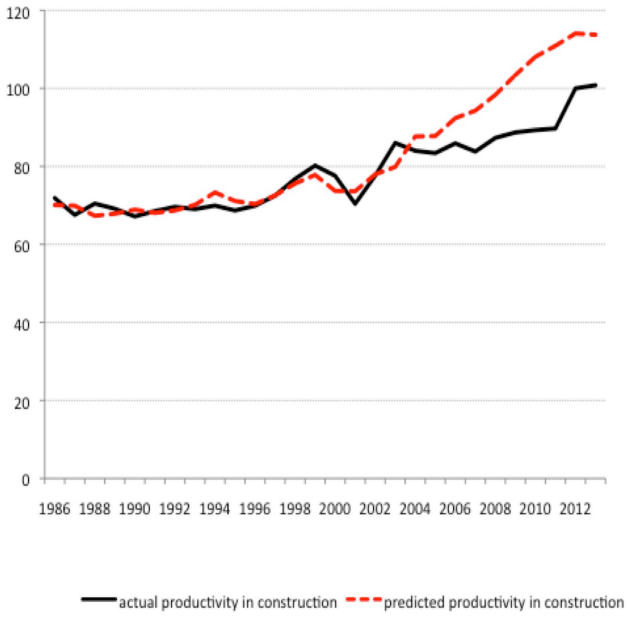


Chart 2: Predicted and actual construction productivity using equation 2

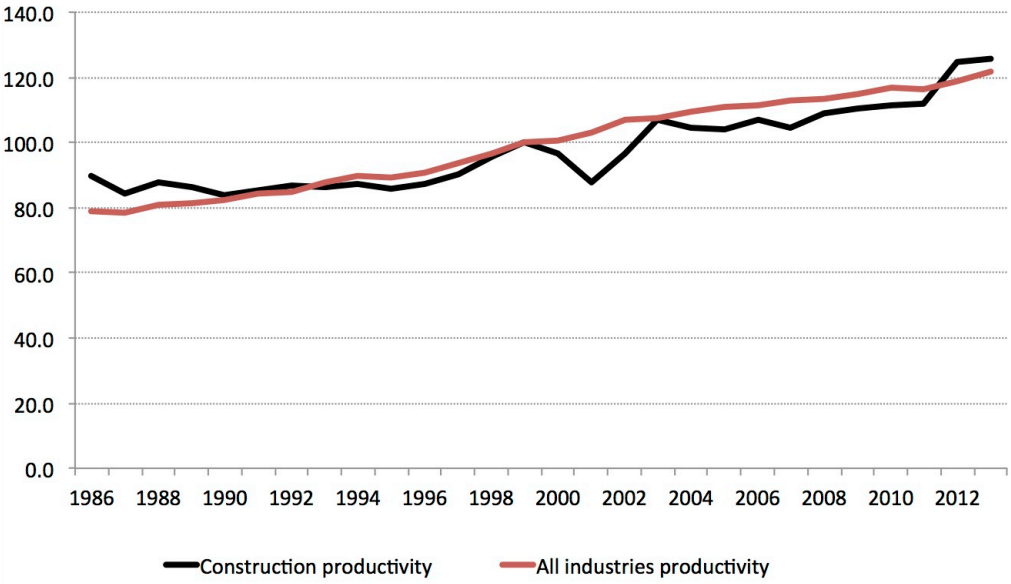


Of course, a much simpler and preferable approach to attempting to 'predict' productivity is to make direct comparisons. This is because a major problem with predicting productivity in any one industry based on regressing it against national productivity is that the coefficient in the equation may well be considerably less than 1 – in the case of equation 1, it is around 0.4 – meaning that a 1 percentage point increase in national productivity would be 'predicted' to be associated with only a 0.4 percentage point increase in construction industry productivity. Thus if national productivity increases by 1 per cent and construction productivity increases by, only say, 0.8 per cent, then this would be considered a huge success for construction in terms of such an equation. Yet this would be a counter-intuitive conclusion. It is more valid simply to compare growth rates in productivity in the construction industry and nationally. This is what chart 3 does.

We see in chart 3 that productivity growth in construction pretty much tracked national productivity growth through the 1990s. There was then a large dip associated with the aftermath of the Sydney Olympics, and a subsequent return to 'normal' by 2003. After that, and through most of the period of 'reform', productivity in construction fell behind national levels. It only reversed this in 2011-12, after the ABCC had virtually ceased using its coercive powers, and maintained this position in 2012-13 after the FWBC had been established. The chart sets 1999=100 for the two indices, ie 1999 is the base year, but, as can be seen from visual inspection of the chart, a similar pattern would be shown

from any base year in the 1990s. 'Predicting' productivity growth against a national trend, when in reality there is little medium- or long-term difference difference in their growth rates, is a brilliant way of torturing the data to get it to give the answer one wishes, but it does not illuminate public debate.

Chart 3 Comparison on construction industry labour productivity and national labour productivity indices



Source: ABS Cat 5204.0 Australian System of National Accounts, Table 15.

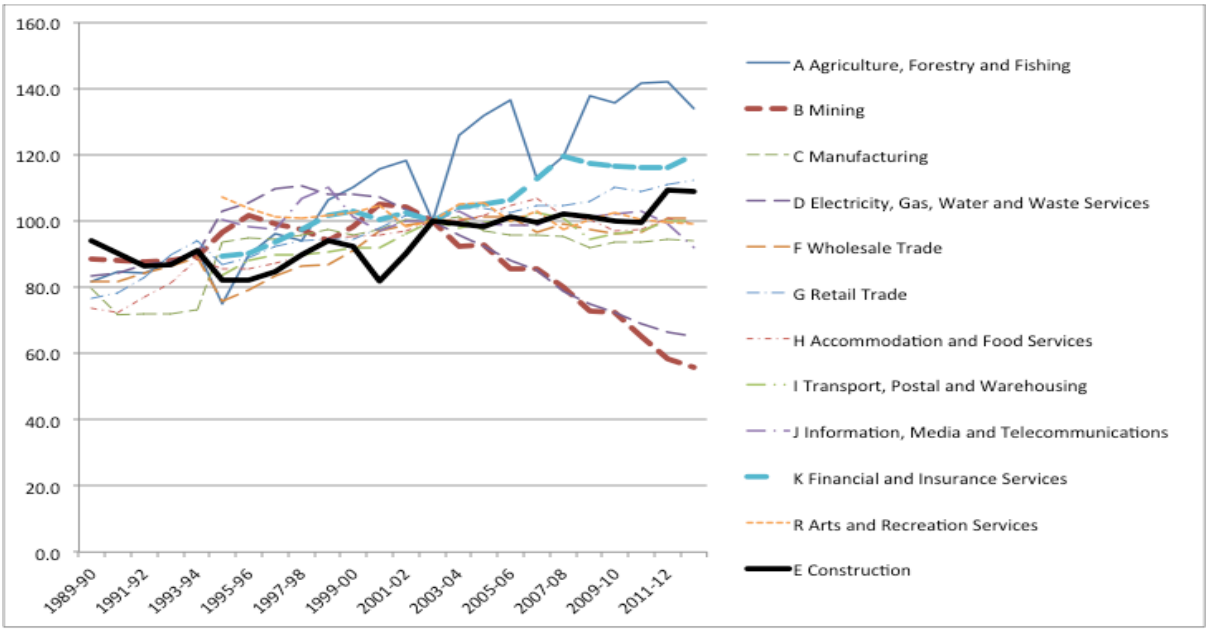
I am not so foolish as to assert that this 'surge' in productivity after the virtual end of the use of the ABCC's coercive powers was *due* to that event. Repeatedly the Econtech reports assume that if something happened at a time when something else happened, then the former must be due to the latter. It repeatedly seeks to find causality when none might be due – a common human failing (Kahneman, 2011). Rather my point is to demonstrate again that it is not feasible to assert that major changes in productivity in the industry are due to regulatory regimes and in particular to the use of coercive authority. As I indicate in the article attached in Attachment B, interest groups will regularly use often spurious claims about productivity to advance the case for a poly that will advance their own interests. In other words, rent-seeking often dresses up as productivity-seeking. In reality, public policy in industrial relations often makes little difference to national or industry productivity, but it makes a substantial difference as to the distribution of resources, income and wealth. This may also be seen in the construction industry (eg Attachment A, pp73-75).

On multifactor productivity, unlike labour productivity, Econtech in a chart compares actual growth rates in construction with the whole of the market sector, rather than using dubious 'predictions'. It observes that construction industry productivity 'strengthened considerably' arguing that

> The data shows construction industry productivity rising by 16.8 per cent in the ten years to 2011/12 (starting from a value of 89.4 in 2001/02 and escalating to 104.5 in 2011/12). Over the same period, multifactor productivity in the market sector fell by 2.1 per cent. This confirms the strong construction industry productivity outperformance of the last decade already seen using labour productivity in Chart 2.1.

Again, however, the poor 'market sector' multifactor productivity figure is heavily influenced by the large decline in productivity in mining and utilities. Moreover, through most of the reform period, construction MFP growth was pretty much in the middle amongst industries. Chart 4 shows TFP in all 12 market sector industries for which there are continuous data from 1989-90. The base year is set to 2002-03 so that it is easier to se how industries compare in growth since then. By 2009-10, construction had the sixth highest growth rate from 2001-02 out of twelve industries, hardly a basis for claiming coercive reforms had led to a major boost in industry productivity. Indeed, TFP in construction was 0.2 per cent *lower* in 2009-10 than it had been in 2002-03. (Econtech's claim about 'escalating' productivity in the quote above is entirely attributable to TFP growth of 11 per cent in 2002-03, not replicated in any future year.) Only after the virtual abandonment of the ABCC's use of its coercive powers did MFP grow substantially in construction, with a 10 per cent increase recorded in 2011-12, almost sustained in 2012-13, so that, under the FWBC, MFP was 9 per cent higher than it had been in 2009-10, the last year of major use of coercive powers. Again, my point is not that the cessation of compulsory interviews led to this increase in MFP, but rather that the evidence refutes the possibility that the use of compulsory interviews led to a huge increase in MFP in construction industry.

Chart 4 Comparison of total factor productivity, all industries



Source: ABS Cat 5260.0.55.002 Estimates of Industry Multifactor Productivity, Table 1. Data are calculated by ABS on a quality-adjusted hours worked basis.

Overall, then, construction industry labour productivity followed a path broadly comparable to that of the rest of the economy. There was no magical 9.4 per cent increase in productivity as a result of the ABCC or other reforms, and no equally magical 7 per cent drop in productivity (75 per cent of 9.4 per cent) evident as a result of the FWBC coming into effect. Hence it is no surprise that, in its recent 'Productivity Scorecard' focused on the construction industry, PricewaterhouseCoopers (PwC) observed that

> Growth in labour productivity in the construction industry has tracked closely with the market sector over the past fifteen years aside from a dip around the introduction of the GST, when housing construction was brought forward…
>
> In relative terms, capital productivity outperformed the market sector between 1994-95 and 2004-05, due to the poor performance of the market sector generally… However, since 2005-06 it has declined at a similar rate as the market sector…
>
> Multifactor productivity for the construction industry has tracked closely with the market sector since 2007-08 (PwC, 2013:3-4).

Econtech (2013:16-17) cited a Grattan Institute report as supportive evidence but a different interpretation was placed on the significance of this by PxC, who made the following observation on the construction industry and the relevance of external research:

> The Grattan Institute notes that at the macro (i.e. economy-wide) level, 'there is no clear link between labour productivity growth and IR laws', and also 'at a firm level there is no obvious link between IR reform and productivity changes'.
>
> Despite these observations, industrial relations (IR) is one of the key productivity battlegrounds in the construction industry.
>
> Much of the focus in recent times has been on the potential reinstatement of the Australian Building and Construction Commission (ABCC).
>
> There has been considerable debate about the degree to which the ABCC is a positive for productivity in the construction industry. A series of benchmarking studies commissioned by the ABCC and the Master Builders Association have sought to portray the ABCC as the driver of improved productivity in the construction industry. These studies have been critiqued and *the analysis found wanting on a number of methodological grounds*. (emphasis added) (PwC, 2013:7-8)

Industrial disputes

Econtech's 2013 update considered industrial disputes data from 1995-96 and claimed that

> With the replacement of the ABCC with the FWBC, working days lost to industrial disputes in the building and construction industry jumped from 24,000 in 2011/12 to an estimated 89,000 in 2012/13. Hence, more than one half of the improvement in lost working days achieved in the first five years of the Taskforce/ABCC era has already been relinquished in the first year of the FWBC era.

This estimate is wildly erroneous. The number of working days lost (WDL) in 2012-13 in construction was only 61,600, so Econtech overestimated WDL in the industry by 44 per cent. Econtech conceded that, at the time, it only had access to data for three quarters instead of a full year, but felt able to estimate the full year 'by assuming that the growth rate for the full financial year is the same as the growth rate in the first three quarters of the financial year'. Like several assumptions, this one was false, Econtech failing to take account of the fact that September quarter 2012 had an unusually high number of WDL but that in subsequent quarters WDL had dropped by over four fifths. Hence Econtech applied applying a wrong extrapolation to the data. It would have got much closer to the mark if it had instead assumed that June quarter would have a similar number of WDL to March quarter.

Indeed, in the most recent 12-month period for which data are available, the number of WDL lost in construction fell to just 23,700, very slightly *below* the 23,800 in the last 12 months of the ABCC. The reality is that disputation data vary substantially from one quarter to the next, and Econtech conveniently overlooked this fact when attempting to justify a major deterioration of construction industrial relations under the FWBC.

Over the longer period covered by Econtech's disputes data, the results are presented as if there is a marked drop in construction disputation in the 'reform' period that goes well beyond that which occurred in other industries. In reality, the fall in WDL in construction is not all that different to the fall in disputes nationally, with construction's average share of disputes falling only a little, from 28 per cent in the 1995-96 to 2001-02 period, to 25 per cent in the 2002-03 to 2011-12 period. Indeed the first comparison is very favourable to the 'reform' period as, despite the ready availability of WDL data by industry back to 1985-86, Econtech chose not to use this when assessing the impact of 'reform' in disputes (unlike on productivity, where it preferred to go back through the 1980s). Had it done so, the data would have implied an increase in the share of disputes in construction, from 14 per cent in the 1985-86 to 2001-02 period, to 25 per cent in the 'reform' period. Dispute levels in the post ABCC period have been fairly stable overall, and construction's share of days lost depends on the period assessed. In the twelve months to June 2013 it was 30 per cent (an increase on the reform average), but in the

12 months to September quarter 2013 it was 23 per cent (a very slight decrease). Table 2 shows the average over the five quarters to date at 30 per cent. Yet for four of the five quarters of the FWBC, WDL in construction have been well below the average during the 'reform' period (between 1,800 and 8,700 days lost per quarter, compared to the previous average of 13,600). Even more than productivity figures, disputes data are highly erratic from one quarter to the next and a much longer period would be needed to assess the impact of any change in policy regime.

Table 2: Construction as a share of all working days lost through industrial disputes, per quarter, 1995-96 to date

	Construction	All industries	Proportion of all days lost, in construction
average 1995/96 - 2001/2	39.8	139.9	28%
average 2002/3 to 2011/12	13.6	54.7	25%
average 2012/13 to date[(a)]	13.7	46.1	30%

(a) Latest data are for September quarter 2013.

Source: ABS Cat 6321.0.55.001 Industrial Disputes, Australia, Table 2a.

Econtech also fails to understand the relationship of industrial action to both labour productivity and labour costs. Days lost through industrial disputes also do not automatically feed directly into labour productivity calculations. Labour productivity is output per unit of labour input. During a strike, for those workers involved labour there is zero labour input and zero output, so there is no change to total output per unit of labour input over the course of that year for those workers. Of course, there may be major impact on labour earnings and profits, but these are not the same as labour productivity. Econtech says in a comparison on the building of two trains cited in another consultant's report:

> Train 5 lost 0.4 per cent of man hours to industrial action, while Train 4 lost 2.3 per cent. As noted in the Allens report, this case study suggests that the move to the ABCC-regime resulted in a two per cent reduction in labour costs.

This misrepresents the original consultancy report (Allens did not say that this showed a two per cent reduction in 'labour costs' – Allen Consulting Group, 2013:33), and suggests a misunderstanding of the practice and law on industrial action. Workers do not get paid for 'man hours' lost through industrial action and so it is not a direct labour cost.

Case studies and modelling

As shown, Econtech cherry-picks data periods and data. Econtech also refers to some case studies it and others undertook several years ago. Case studies lend themselves strongly to cherry-picking of data, as – unlike with analyses of, say, ABS data where

others can obtain access to the data and attempt to verify results – the full data in case studies collected are typically not revealed, rather only those selected by the writer are revealed. If cherry-picking is observed in the use of quantitative data, then there is little reason to believe it has not occurred in the use of qualitative data. Accordingly, I do not bother commenting on the unverifiable case studies Econtech cites.

The modelling that Econtech uses to base its claim of $7.5 billion in consumer gains from 'reform' of the building and construction industry, and $5.5 billion in consumer losses as a result of the introduction of the FWBC, has no solid basis. Rather, these claims are entirely a function of the assumptions fed into Econtech's CGE model, of a 9.4 per cent productivity gain arising from 'reform' and that 75 per cent of this gain is lost as a result of the FWBC (a formula justifying this 75 per cent ratio is never revealed, it is just another assumption). The former number is really just an inflated version of the $3.1 billion gain estimated in its 2007 report, increased by the growth of nominal GDP and some tinkering to the model, which has been renamed as updates to it have been made. Change the assumptions and these outcomes also change proportionately. As discussed above, the 9.4 per cent productivity gain, originally claimed in the 2007 report and repeated in each successive report, despite the discrediting of its estimation, has no basis in fact. Therefore the claims of massive welfare gains and losses from building industry regulatory changes are nonsense.

Closing remarks

The exercise of coercive powers by the ABCC has been justified by reference to claimed gains in productivity and hence national welfare. These claims were erroneous, probably due to incorrect transcription, with the source data indicating no significant relative productivity gains.

The boost to GDP, savings to the CPI and national welfare gains in each of the Econtech reports, estimated as they were 'from the recent closing of the cost gap between commercial building and domestic housing', had no basis as there was no 'closing of the cost gap'. Despite being made aware of this, the ABCC and its consultant, Econtech, stuck to the original claims about the size of productivity and welfare gains from the use of coercive powers. Yet Justice Wilcox's inquiry (cited four times by Econtech in the 2013 report) found that 'The 2007 Econtech report is deeply flawed. It ought to be totally disregarded' (Wilcox, 2009:46). The errors ('anomalies') in the 2007 report might be dismissed as an 'honest mistake', but it is not clear that the later insistence on not revising findings can be so easily. Other critiques (eg Toner 2003; Mitchell 2007; Keane, 2010; Martin, 2013) also appear valid.

Claimed productivity gains from the use of coercive powers are also not discernible in official ABS or Productivity Commission data. If the ABS and Rawlinson's data show anything, it is that productivity improved after the ABCC virtually ceased using its compulsory examination powers. However, it would not be safe to conclude from this that the end of compulsory examinations *caused* the improvement in productivity. A

more appropriate conclusion would be that links between cause and effect are too easily drawn – especially, as in the Econtech reports, when cherry picking occurs. It is likely the public policy in industrial relations often has little impact on productivity in construction or many other industries, but it does have a major impact on the distribution of resources, income and wealth.

On industrial conflict, working days lost fell in construction in line with developments in the rest of the labour market, and that industry's share of disputes was slightly lower in the 'reform' period than beforehand. Since the FWBC came into being the average number of WDL in construction has not changed much from the 'reform' period average, the average share of WDL in the industry has increased but for four of the five quarters WDL are well below the average during the 'reform' period. As a result any conclusions one way or the other about the impact on disputation must be tentative – other than observing that Econtech severely overestimated the level of conflict in the industry under the FWBC.

In short, if 'economic case' refers to productivity gains, there is no economic case for the reinstatement of the ABCC. If, however, the aim is to increase the share of income going to profits, or reduce it going to wages, then that is an 'economic' objective that would be served by the reintroduction of an institution that may more effectively use coercive powers against workers. If this is the aim, however, it should be more clearly stated.

In the conclusion to Attachment A we also drew attention to the implications of our analysis for public debate over these issues, and pointed to the aphorism 'he who pays the piper, calls the tune.' On the basis of its 2003 report, the ABCC could have been confident that Econtech would be able to produce favourable reports. The MBA could have subsequently been equally confident. So it is no surprise that the ABCC and MBA commissioned successive Econtech reports and 'updates'. This does not mandate, however, that they should be given credence. A final remark is worth noting. Highly respected economic journalist, Ross Gittins, has expressed considerable disquiet on general issue of the use of consultants by interest groups in policy and legislative debates. In an article that also made specific reference to a commissioned report on a separate issue, also prepared by Econtech, he made the following remarks:

> To my knowledge there's no statement of ethical principles to which modellers do or don't adhere. If so, on what is the claim of independence based?
>
> My doubts about the credibility of commercially provided modelling exercises rest on the belief that they're essentially a propaganda tool.
>
> They don't - and aren't intended to - inform the policy debate in any real sense. Rather, they're an exercise in dazzling the punters with pseudo-science.

> Anyone can make claims about the economic benefits or costs of a particular policy, but those claims gain an air of authority and false precision when they come out of an econometrician's black box.
>
> The punters are meant to be impressed by the notion that it's all terribly scientific, complex, mathematical, computerised and generally beyond their ken.
>
> The commissioning of special reports, the use of words such as "independent" and "respected", and the quoting of "point estimates" rather than ranges are intended to create an air of certainty and God's truth revealed.
>
> But everyone in the business knows econometric modelling exercises are as ropy as all get-out. In the jargon, they're subject to significant limitations that fellow economists could argue over until the cows come home.
>
> The results from models are based on a mountain of assumptions - assumptions that are built into the model's equations and further assumptions that are fed into the model - and every assumption is open to debate…
>
> The activities of the commercial modellers will eventually discredit the use of economic modelling in the public policy debate. But models are so potentially misleading that this may be no bad thing. (Gittins, 2007)

Griffith Business School
Griffith University
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ATTACHMENT A

ARTICLE

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'Anomalies', Damned 'Anomalies' and Statistics: Construction Industry Productivity in Australia

Cameron Allan
Griffith University, Australia

Andrew Dungan
Department of Employment, Economic Development and Innovation, Australia

David Peetz
Griffith University, Australia

Abstract: The exercise by an Australian state agency of coercive powers against construction industry workers has been justified by reference to claimed gains in productivity and hence national welfare. Yet the literature suggests that a more cooperative approach to union–management relations would offer better opportunities for productivity improvement. This article examines the data behind the productivity claims and finds that they were erroneous, probably due to incorrect transcription, and that the source data indicated no relative productivity gains against the identified benchmark. Despite being made aware of this, the state agency and its consultant maintained the original claims about the size of productivity and welfare gains from the use of coercive powers. Official cross-industry and time series data also showed no productivity gains arising from the use of coercive powers. However, there is some evidence that there has been a shift of income shares in the industry from labour to capital. The findings have

Contact address: David Peetz, Department of Employment Relations, Griffith Business School, Nathan Campus, Griffith University, Brisbane, QLD 4111, Australia. [email: d.peetz@griffith.edu.au]

implications for understanding the role of commissioned studies in public debate, and for regulation of the construction industry.

Keywords: *building and construction industry; productivity; trade unions*

Introduction

The Australian Building and Construction Commission (ABCC) was established by the Howard government under special legislation enabling the use of coercive powers to regulate union activity. The *Building and Construction Industry Improvement Act (2005)* (BCII Act) provided for six months jail for people refusing to cooperate with ABCC inquiries (section 52). Only the Australian Security Intelligence Organisation (ASIO), responsible for ensuring national security, has similar coercive powers regarding the questioning of persons who assist in relation to a terrorism offence. The ABCC, by contrast, could apply these ASIO-style powers to investigate an employee's breach of an award. Unlike hearings by public tribunals, such as Fair Work Australia, the ABCC conducted its interrogations in secret. Detailing the nature and implications of the extraordinary coercive powers of the ABCC is beyond the scope of this article, but they have been extensively analysed elsewhere (Williams and McGarrity, 2008). At the time of writing, the legislation was still in place but with proposed amendments before the Senate, after an inquiry by Hon Murray Wilcox QC (Wilcox, 2008, 2009). The Labor government's Building and Construction Industry Improvement Amendment (Fair Work) Bill proposed to abolish the ABCC but transfer most of its coercive powers to a new Fair Work – Building Industry Inspectorate, albeit with some additional, limited safeguards (Gillard, 2009).

Arguments to retain the use of state coercive powers in the industry were based on data suggesting economic welfare benefits from maintaining a separate regulatory regime in the industry. In 2007, the ABCC released a report by private consultants, Econtech (2007a), which claimed that the BCII Act had resulted in major improvements in labour productivity. That report remained the basis on which claims about industry productivity gains were made (e.g. Australian Chamber of Commerce and Industry, 2009). This article aims to assess the merits of the data on which this debate was cast from 2007, and its implications for the interpretation of commissioned modelling and the future of regulation of the building and construction industry.

Productivity and Construction Unions

The 2007 report followed an earlier report by Econtech (2003) that had been undertaken for the then Department of Employment and Workplace Relations (DEWR). That earlier report compared average costs in the domestic and commercial construction sectors and claimed to show that 'building tasks such as laying a concrete slab, building a brick wall, painting and carpentry work cost

an average of 10% more for commercial buildings than domestic residential housing' (Econtech, 2003, 2007a: i). The claim was based on analysis of data from Rawlinson's, a quantity surveyor that collects and publishes data annually on such costs, by contacting firms and contractors and asking them the price of a specific task. The comparison was made between costs in the largely non-union domestic (housing) construction sector, and the more unionized commercial construction sector. The logic was that costs would be higher in the commercial sector because of its union presence, so the 10 percent cost difference reflected the union impact in creating inefficient work practices and reducing productivity.

This methodology was criticized by Toner (2003) as naively assuming unions were the only potential source of cost differences. Other structural factors could also explain them, including greater on-site complexity (it costs more to affix a plasterboard wall on the 10th floor of a high rise than on a ground floor cottage), higher capital intensity and higher profit margins in the commercial sector. Econtech countered that if the gap declined then it would reflect not structural explanations but changes in work practices associated with the activities of the ABCC (Econtech, 2007a: i), and claimed 'Toner's theory was disproved by Econtech's 2007 update of the cost gap analysis' (Econtech, 2007c). Toner argued that ABS data (Australian Bureau of Statistics, 2008a) showed that labour productivity was markedly *higher* in engineering and non-residential construction than in residential construction. Toner also pointed out that 'in three out of four studies of [construction industry] labour productivity, Australia is on par with the US and generally performing better than Japan, Singapore, Germany and France' (Toner, 2003).

The studies cited would seem contrary to the adversarial philosophy behind the ABCC approach of suppressing union activity. Neither does the existing economic literature offer strong support to that philosophy. The once accepted wisdom that unions necessarily harmed productivity has been overturned. Freeman and Medoff's (1984) seminal study, *What Do Unions Do?*, demonstrated that unions may enhance productivity through both 'monopoly response' (higher union wages force firms to introduce more productive technology) and 'voice' effects (unions reduce quits and increase tenure by enabling employees to seek workplace improvements). There was empirical support for Freeman and Medoff's claims in subsequent US data (Allen, 1985; Ben-Ner and Estrin, 1986; Phipps and Sheen, 1994), along with some critics (Addison and Barnett, 1982; Drago and Wooden, 1992). The British evidence was initially of a negative unions–productivity relationship (Edwards, 1987), but empirical evidence from the 1990s onwards suggested no systematic relationship (Addison and Belfield, 2004). The evidence that unions reduce quits and increase job tenure is more consistent (Addison and Belfield, 2004; Freeman, 2005). Twenty years on, the general consensus among those who reviewed the literature was of no consistent relationship evident between unions and productivity, with a wide variety of results but the average impact tending towards zero (Addison and Belfield, 2004; Freeman, 2005; Hirsch, 2004; Kaufman, 2005). Similarly,

studies that effectively contrasted union collective bargaining with non-union individual contracting showed no advantage for individual contracting (Fry et al., 2002; Gilson and Wagar, 1997; Hull and Read, 2003; Peetz, 2005).

There is one consistent positive relationship that comes through in the literature: 'what matters is not unionism *per se* but the interaction of unions with management' (Freeman, 2005: 657), as 'union plants with cooperative labor relations and high-performance HRM practices have above-average productivity, whereas union plants with adversarial relations and traditional "job control" HRM practices have below-average productivity' (Kaufman, 2005 citing Hirsch, 2004). Black and Lynch (2001) showed that among workplaces promoting joint decision-making and incentive-based pay, unionized workplaces had higher productivity than non-union workplaces, whereas among workplaces without any innovations, the reverse was the case. In Australia, the intensity of collaboration between management and workers (via unions) has a positive effect on workplace performance (Alexander and Green, 1992).

The Release of the 2007 Report

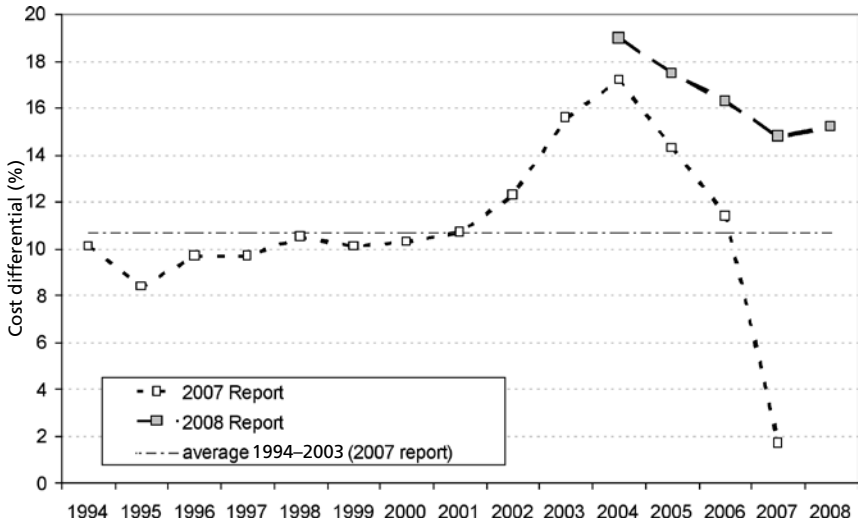
Econtech was an economic consultancy based in Canberra.[1] It most visibly entered the debate on industrial relations reform in July 2007 (Econtech, 2007b) when it produced a report for major employers, that was used in advertising even before it was released (*Workplace Express*, 2007), to support a campaign against abolition of the Work Choices legislation. That report received considerable positive media coverage, but there was also scepticism and criticism because of major problems with the report itself (e.g. Coorey, 2007a,b; Gittins, 2007; Peetz, 2007; Streketee, 2007).

Around the same time, Econtech produced a report for the ABCC, which purported to provide an 'up to date assessment of the cost gap', using the same methodology as the 2003 report to the DEWR. This was depicted as demonstrating economic gains resulting from the BCII Act (e.g. Lewis, 2007). An ABCC media release stated the report 'reveals that the activities of the ABCC have dramatically improved the productivity of the building and construction industry' (Office of the Australian Building and Construction Commissioner, 2007). As mentioned, the 2007 findings were primarily based on an analysis of cost data from Rawlinson's. The report claimed:

> After averaging 10.7 per cent in the 10 years to the end of 2002, the cost gap has recently closed dramatically to be only 1.7 per cent at 1 January 2007. This is not consistent with claims that the cost gap was due to structural factors. Rather, closing of the cost gap has coincided with the operation of the ABCC and its predecessor the Taskforce. (Econtech, 2007a: ii)

Across construction as a whole, compared to the average over the 1994–2003 period (also shown in Figure 1), the labour productivity gap between what productivity could be and what it was, allegedly was down to an average of 1.8 percentage points from 11.2 percentage points, a drop of 9.4 percentage points or 84 percent (Econtech, 2007a: i). The number of 9.4 percent was derived

Figure 1 *Information in charts purporting to depict average cost differences between commercial building and domestic residential building for the same tasks for five states*



Source: Econtech Reports (2007, 2008).

solely from the estimated 'closing of the cost gap between commercial building and domestic housing',[2] which Econtech argued was 'due to improved work practices associated with the activities of the ABCC' (Econtech, 2007c). This was depicted in a chart, the features of which are shown by the dotted line in Figure 1. The numbers behind it were, said Econtech, 'dramatic'.

Econtech then plugged its estimated productivity gains into its MM600+ economic model. This modelling led it to summarize the 'economy wide effects of the impact of ABCC' by unequivocally asserting that:

> consumer prices are lower (by 1.2 per cent), and Australian GDP is higher (by 1.5 per cent) than would have been *if the ABCC had not existed*. (Econtech, 2007c: emphasis added; also Econtech, 2007a: i)

In addition, 'the higher construction productivity leads to an increase in consumer living standards (the annual economic welfare gain) of about $3.1 billion' (Econtech, 2007a: 46).

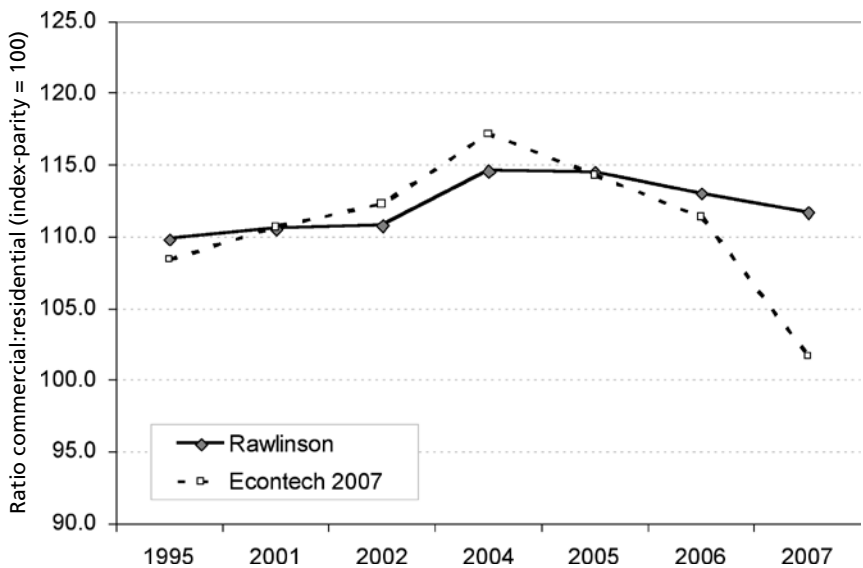
A month later, the methodology was critiqued by Mitchell (2007). He argued Econtech 'provides no transparency in their published work and replication of their results is impossible'. Using ABS implicit price deflator data he found non-residential construction prices grew at a slightly slower rate than residential and non-residential building and 'found no evidence to support the hypothesis that a sudden "event" . . . has altered the time series behaviour of the . . . data' (Mitchell, 2007). Econtech (2007c) challenged this. However, another reason Mitchell was unable to replicate Econtech's findings was that Econtech had not accurately used Rawlinson's data.

Problems with the 2007 Report

In an attempt to verify the Econtech report, we went back to the original source data of Rawlinson's. We obtained data for January in the years 1993, 1995, 2001, 2002 and 2004 to 2008. We replicated the stated Econtech methodology, obtaining data on the following eight tasks in domestic residential and commercial construction: reinforced concrete 25 Mpa suspended slab NE 150mm thick; class 3 formwork sofit of suspended slab 100/200mm thick; clay brickwork wall or skin of hollow wall 110mm thick; carpentry wall framing plates 75 × 38mm; doors, timber, hollow core, std 2040 × 820 x35 hardboard for painting; steel roofing corrugated, zinc coated 0.42mm; plasterboard flush finished, 10mm thick to timber wall framing; and painting, woodwork, acrylic, primer, one undercoat, two gloss coats.

We identified the ratio of commercial to domestic costs for each item for each year in each mainland capital city (Sydney, Melbourne, Brisbane, Perth, Adelaide). There are, it appears, what Econtech describe as 'slight differences in the precise definitions' of tasks used by us and Econtech, but Econtech advise that these differences 'are not material' and led to a discrepancy of merely 0.1 percent in estimates of movements in the cost differential in 2008 (email communication, 31 October 2008). So, for all practical purposes, we used the same data as Econtech. We calculated an average cost differential for each capital, and a national weighted average that used the weights Econtech provided, based on each state's 'average contribution to national contribution activity'.[3]

Figure 2 *Comparison of Econtech data and state-weighted original Rawlinson data, eight items, Australia, 1995–2007*



Source: Econtech Report (2007); Rawlinson's data.

Our results based on the original Rawlinson's data were vastly different to those of Econtech. National level comparisons are shown in Figure 2. For the eight tasks selected by Econtech, we found only a small drop of 1.3 percentage points in the cost differential between 2006 and 2007. (Between 1994 and 2005, the average absolute movement on Econtech's estimates was 1.3 percent, so a movement of that size was entirely unremarkable.) This fall was only one seventh the size of the movement claimed by Econtech.

For 2006, we detected a fall of just 1.5 points, barely half the 2.9 point fall claimed by Econtech and, again, within a fairly normal range. So, over the period January 2005–January 2007, the actual fall in the cost differential was not 12.6 percentage points, but 2.8 points.

Notably, the cost differential in 2007 was still 11.7 percent. This was actually slightly higher than the gap of 10.8 percent in January 2002, before even the establishment of the Building Industry Task Force. In fact, the cost differential was higher in 2007 than in each of the early years for which we had collected data.

Presenting the 2008 and 2009 Revisions

On 1 July 2008, the ABCC requested Econtech to 'update' its report (Lloyd, 2008). It was released one month later. By then, the ABCC had been made aware of the 2007 report's inaccuracies rendering invalid the key conclusions about major changes in the cost differential. Indeed, the data in Econtech's 2008 report were totally different to the data in the 2007 report. The extent of the difference can be seen by comparing the dotted and dashed lines in Figure 1. The huge drop in the cost differential in 2007, apparent in the 2007 report, no longer appeared in the 2008 report. Instead, the reported cost differential fell slightly by 2007 but then, without comment, rose by 0.4 points to 2008.

The ABCC issued a media release similar in tone to the previous year, claiming that the 2008 report 'reaffirms the ABCC's role in improving productivity in the construction industry' (Office of the Australian Building and Construction Commissioner, 2008). Commissioner John Lloyd said 'It is encouraging to find that *all* indicators are pointing to increased productivity across the construction industry' (*emphasis added*).

Despite the refutation of the cost comparisons data that formed the basis for the 2007 report, exactly the same conclusions were reached about the impact on GDP and consumer prices as in the 2007 report. Econtech estimated that the 'economy-wide impacts of the ABCC activities' were that: 'GDP is 1.5% higher than it otherwise would be; the CPI is 1.2% lower than it otherwise would be . . . and improved consumer living standards [are] reflected in an annual economic welfare gain of $5.1 billion'[4] (Office of the Australian Building and Construction Commissioner, 2008; see also Econtech, 2008: 27).

Econtech was able to produce the same macroeconomic outcomes from the 2008 analysis as in the 2007 analysis because 'this report also assumes an ABCC-related gain in construction industry labour productivity of 9.4 per cent

for the purposes of the economy-wide modelling' (Econtech, 2008: 18), despite the new evidence. Recall that in 2007 the 9.4 percent productivity assumption was based on the now discredited 'closing of the cost gap between commercial building and domestic housing' (Econtech, 2007a: 37).

Econtech dealt with the major revisions in the 2008 report simply by describing them as 'anomalies':

> Econtech has reviewed its previous use of the Rawlinson's data to remove anomalies. For the original 2007 Econtech Report, some data was inadvertently juxtaposed in manually extracting it from Rawlinson's annual hard copy publications. The use of all Rawlinson's data has been carefully checked and is now correct. (Econtech, 2008: 8)

There was no mention anywhere of the magnitude of the impact of these 'anomalies'. Media reports were uncritical (e.g. Norington, 2008).

Justice Murray Wilcox was not so kind. Issuing his March 2009 report to the Labor government on implementation of its commitment to retain a 'strong cop on the beat' in the industry (Rudd and Gillard, 2007), Wilcox said Econtech's 2007 report was 'deeply flawed . . . It ought to be totally disregarded' (Wilcox, 2009: 46).

In May 2009, a third Econtech report was produced, commissioned this time by Master Builders Australia. The 2009 report bore striking resemblance to the 2008 version. A majority of the 2009 executive summary was identical to that from 2008, and many of the changes were simply differences in tense or rewriting 'the ABCC' as 'industrial relations reform'. For the first time, however, Econtech admitted that the 2007 report 'contained an error in compiling a single data series'. This was an advance from its 2008 concession of 'anomalies', although 'an error' actually comprised mistakes in data for all states, and in most years, with the exception of 2001 and, to a lesser extent, 2005.

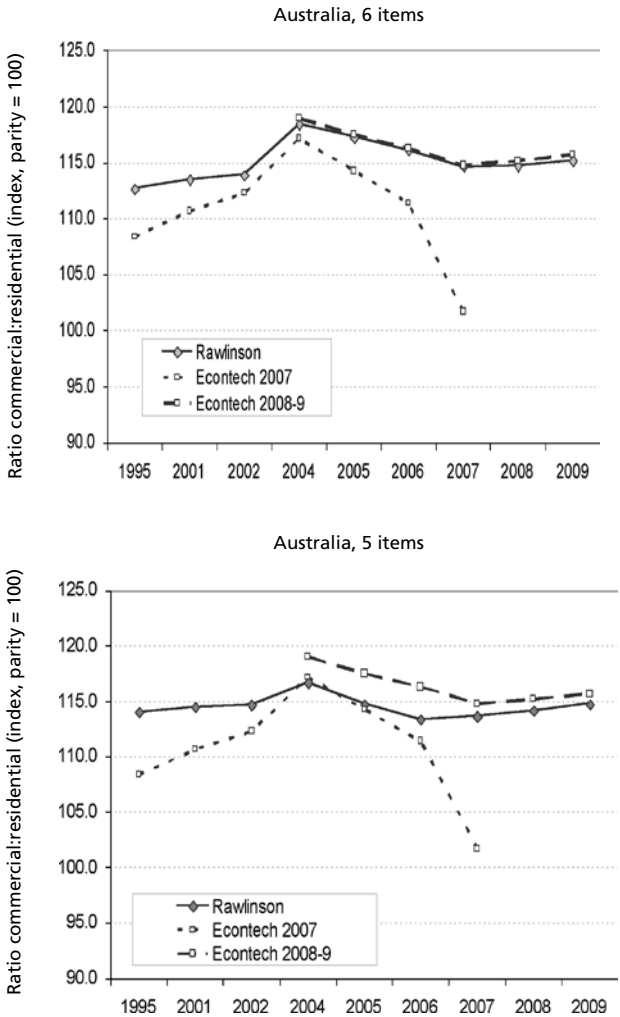
Again, the Rawlinson's data were less supportive of the Econtech claims than previously, showing a 0.5 percentage point deterioration in the cost differential between commercial and domestic residential building by January 2009, making a total 0.9 point deterioration over two years. Again, Econtech modelled the economic effects of 'industrial relations reform' as deriving from a 9.4 percent boost in productivity in the building and construction industry, though nowhere in the 2009 report was there any number, or mathematical combination of numbers, that produced a 9.4 percent productivity gain. The economic 'benefits' of industrial relations reform were again identical to those in 2007 when the erroneous data were used.

Narrowing the Tasks and Time Period

Econtech made other adjustments to methodology after 2007. One involved removing two of the eight tasks from the Rawlinson's dataset. In its only concession to a major critic, it said 'we agree with Mitchell (2007) that corrugated zinc roof and single skin face brick walls are best excluded from the estimation'.

In Panel 1 of Figure 3, we plot new estimates of the cost differential, based on just the six items chosen by Econtech for their 2008 and 2009 reports. The

Figure 3 *Comparison of Econtech data and state-weighted original Rawlinson data, six items (excluding zinc roofs and brick walls) and five items (also excluding formwork), Australia, 1995–2009. Panel 1: six items. Panel 2: five items*



Source: Econtech Reports 2007–9; Rawlinson's data.

Econtech estimates in these latter reports closely track our own figures based on Rawlinsons. This is also the case in state level data. The discrepancies are very small and likely explained by the slight differences in definitions. The six items used by Econtech indicated an average cost difference by 2009 that was 1.6 percent *worse* than the pre-2004 average benchmark, providing no evidence of any gains from the BCII Act.

More notably, Econtech data no longer went back to this earlier period. In the 2007 report, the crucial comparison was between the most recent cost differential and the average over the decade to 2002, yet data before 2004 were omitted from the later reports.

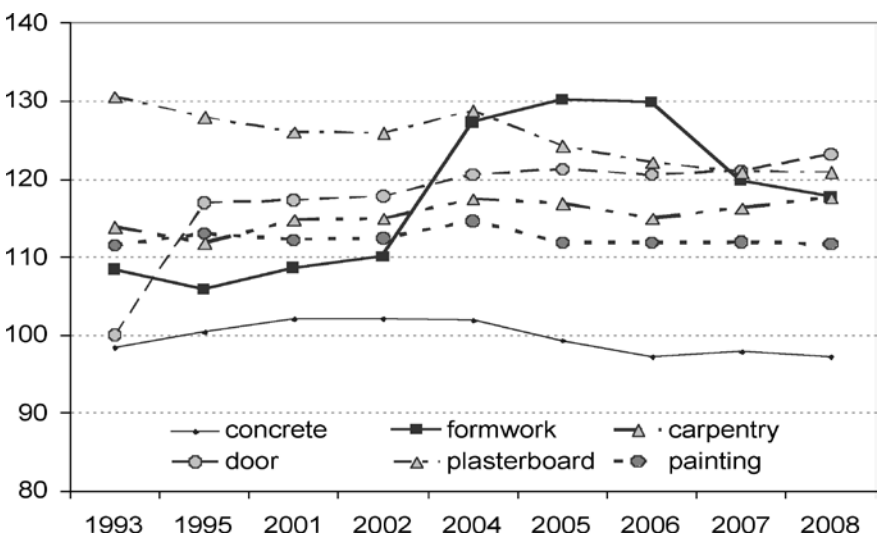
The exclusion of the pre-2004 data was explained as being to 'remove the effects of an apparent break in some of the data series from 2003 to 2004' (Econtech, 2008: 8). The term 'series break' by convention refers to situations where the way something was measured changes, so that an observation one year cannot be directly compared to an observation in the previous year. A 'spike' might signify a break in the series – or a genuine increase in the price. That said, let us accept at face value that a spike means a change in measurement. For how many series did this apply? Figure 4 shows the cost differentials for each task. There was only one series for which any spike is apparent in 2004, that for formwork. So we developed a five-task index using the same principles as previously. The result is in Panel 2 of Figure 3.

The data showed a slightly less adverse picture post-2002 than did the index with six tasks. Still, the national cost differential by January 2009 was some 0.3 percent worse than in the average pre-2004 period indicating, again, no gains from the BCII Act.

Despite this, Econtech claimed:

> significant improvements in labour productivity since the introduction of the ABCC (in conjunction with the supporting regulatory framework) . . . Using Rawlinson's

Figure 4 *Testing for series breaks in cost differentials by task, 1993–2008*



Source: Rawlinson's data.

> data to 2008 on the evolution of the cost gap between non-residential and residential building for the same building tasks, the relative productivity gain for non-residential construction is conservatively estimated at 7.3 per cent. (Econtech, 2008: 9)

Identical words were used in the 2009 report, except that '2008' was replaced by '2009' and '7.3' by '6.2' (KPMG Econtech, 2009: 23). The latter estimate was made by comparing the estimated cost differential in 2009 (15.7 percent) with that in the peak year, 2004 (19.0 percent). This change of 3.3 percent was then roughly doubled, on the intriguing assumption that the only possible source of these alleged gains is labour costs, which make up just 53 percent of total costs for the tasks. The base year selected produces the best result: the very poor performance during the period of the BCII Act is ignored, and data from prior to 2004 are suppressed, avoiding disclosure of the fact that the cost differential was not significantly less than it had been five or 10 years earlier.

Long-term Patterns and the Productivity Crystal Ball

With the discrediting of the earlier cost comparisons, the main basis for continued boasting of productivity improvements were some 'case studies', a comparison between actual and predicted productivity in the construction industry and a chart using Productivity Commission data on multi-factor productivity. The 'case studies' (which were identical in the 2007 and 2008 reports) comprised one undertaken by the Institute of Public Affairs, a conservative lobbyist and 'think tank' (Murray, 2004), and two by Econtech, which boiled down to the qualitative claims of two leading construction companies and data on reduced working days lost due to industrial action, supported in 2009 by extracts from three submissions by advocates of coercive powers. Here and elsewhere, Econtech appeared to confuse reduced industrial action with higher labour productivity. Labour productivity is the amount of real output per unit of labour input (such as the number of houses built per hour worked). Strikes normally mean no output is produced during a period in which no labour is used or paid for, and so have no direct relationship with output per unit of labour input. If reduced industrial action has led to increased productivity, this should be visible in the productivity data.

The second basis for the productivity claim was a comparison between actual and 'predicted' productivity in the construction industry (using national productivity growth as the sole predictor for construction productivity growth). Yet there is no particular reason to presume that one can accurately predict what productivity will be in the construction sector on the basis of what productivity is in the rest of the economy. In fact, over the period from 1986 to 2002 (the period covering the data that are used to generate the prediction), only 20 percent of the variance in annual construction industry productivity growth can be explained by variations in national productivity growth. For a time series this is a very low r^2 and would not normally be used by econometricians as the basis for making accurate predictions about future productivity growth.

Moreover, according to Econtech, construction industry productivity began to rise above its 'predicted' level back in 1997. By 1999, three years before even the Building Industry Task Force, construction industry productivity was exceeding Econtech's 'predictions' by almost as much as in 2007, making the claim of a 'reform' effect unwarranted. Productivity slumped in 2001 – only to resume its 1999 level in 2003 – because of a major downturn in the construction industry. It is no coincidence that labour productivity falls during such a downturn – it is almost an arithmetic inevitability, given the way that productivity is calculated, and the well known tendency towards labour hoarding during a downturn (Addison and Siebert, 1979; Norris, 2000). Likewise productivity rises during boom phases of the business cycle.[5] But the close relationship between GDP growth and productivity highlights the dangers involved in using national accounts aggregates to draw conclusions about the magnitude of effects on labour productivity in particular industries.

Finally, in each report, Econtech referred to a Productivity Commission (PC) report containing data on multi-factor productivity (MFP) from 1974–5 to 2005–6. Econtech said:

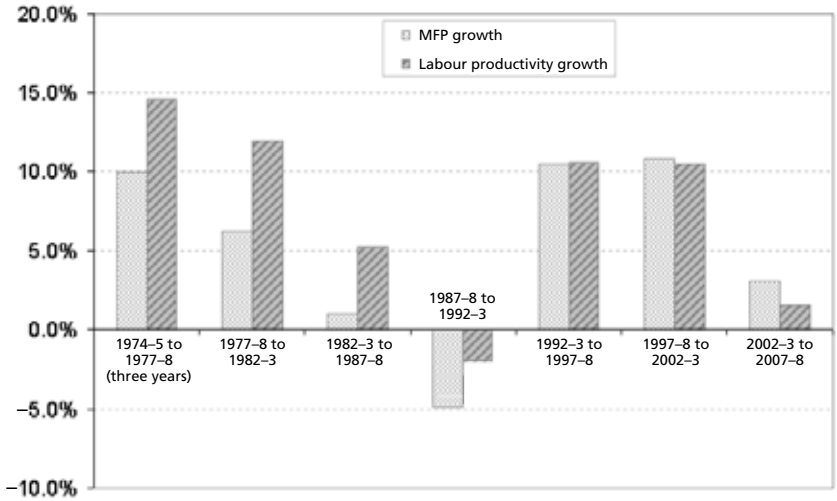
> productivity in the construction industry was fairly flat through the 1980s and 1990s . . . However, construction industry productivity then strengthened considerably to achieve a higher level for the four years from 2002–03 to 2005–06. The Productivity Commission data shows construction industry productivity rose by 13.6 per cent in the four years to 2005/06. This confirms the strong construction industry productivity performance of recent years. (Econtech, 2008: 5; KPMG Econtech, 2009: 12)

These data were never updated by Econtech despite being twice updated by the Productivity Commission (PC, 2009). If four years to 2005–6 was a suitable comparator in the first Econtech report, then by 2009 the relevant period was the six years to 2007–8, in which MFP growth was 14.8 percent. However, this was not uniquely strong, as MFP growth over the six-year period ending 2002–3 was higher – at 18.0 percent – and it was higher over other six-year periods, including to 1998–9 and 1980–1 (PC, 2009).

More importantly, including 2002–3 within the calculations is itself debatable, given that, as Econtech repeatedly said, 'the Taskforce was established in October 2002 but it is reasonable to expect a lag before its activities started to make an impact' (Econtech, 2007a: 23, 2008: 9; KPMG Econtech, 2009: 15). Over the more relevant five years to 2007–8, MFP growth totalled a mere 3.1 percent. This compared with 10.8 percent over the immediately preceding five years to 2002–3, and 10.5 percent in the period to 1997–8.

Similarly, over the five years to 2007–08, growth of *labour* productivity (the focus of Econtech's conclusions) in construction totalled 1.6 percent, compared to 10.5 percent over the preceding period to 2002–3, and 10.6 percent to 1997–8. These data are shown in Figure 5. Among the seven mostly five-year periods shown, the current 'reform' period had the second *lowest* labour productivity growth and the third lowest MFP growth. There is certainly no evidence here of a 9.4 percent boost to productivity arising from the BCII Act.

Figure 5 *Growth in labour productivity and multi-factor productivity (MFP), construction industry, five year periods, 1974–5 to 2007–8*



Source: Productivity Commission (2009).

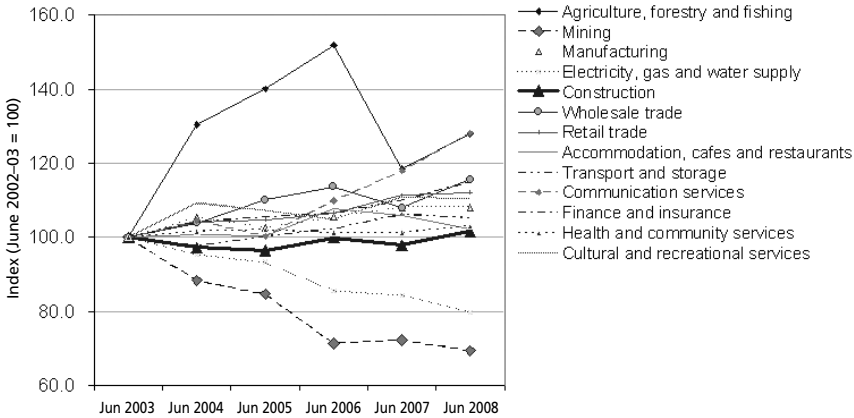
Cross-industry Productivity and Profit Comparisons

It is instructive to consider what ABS labour productivity data show for the building and construction industry, in comparison to other industries (Australian Bureau of Statistics, 2008a). If there has been a 9.4 percent increase in productivity attributable to the BCII Act, it should be clearly evident in the ABS data, which should show construction industry productivity growth well above that in other industries.

Figure 6 depicts annual national accounts data on developments in value added per hour worked by industry. In the period since 2003, labour productivity in construction has fluctuated (as is normally the case), but by June 2008 it was *only 1.7 percent higher* than in June 2003. Moreover, labour productivity growth per hour worked in construction was the third lowest of the 13 industries for which productivity data are published. This is not what one would expect if the BCII Act had led to a 9.4 percent boost in productivity above what would have happened in the industry anyway.

Although those arguing that the BCII Act has generated great productivity gains often referred to data over such a five year period, in fact the ABCC has only been in existence since October 2005. Unfortunately the national accounts productivity data are only published by reference to June. Bearing in mind, as Econtech (2007a: 23) acknowledges the delayed onset of any BCII effects, we note that since June 2006 labour productivity growth in construction has totalled 1.8 percent (an annual rate of 0.9 percent), ranking construction eighth

Figure 6 *Gross value added per hour worked, by industry, 2002–3 to 2007–8*



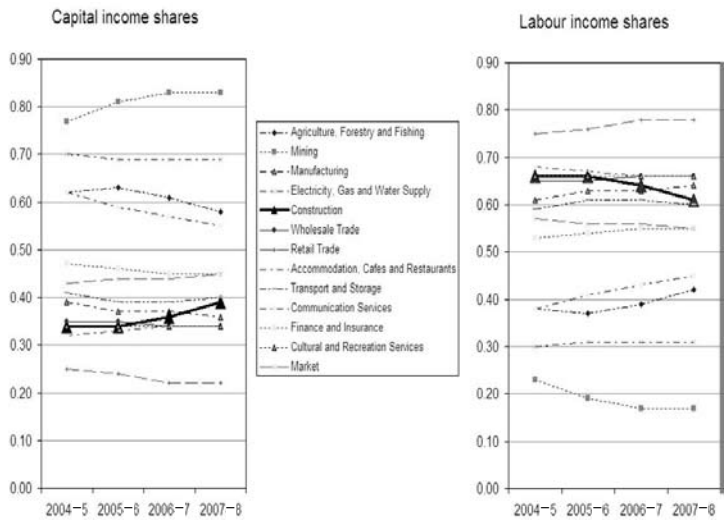
Source: ABS (2008a: Table 15).

out of 13 industries, just below the middle one. There are significant variations from year to year in industry labour productivity growth. If the BCII Act had created a 9.4 percent boost to labour productivity above what would otherwise have occurred, it would be large enough to be reflected in a major spike of that magnitude above and beyond normal year to year movements. There is no evidence of such a spike and hence of any 9.4 percent construction industry labour productivity boost attributable to the BCII Act.

Figure 7 looks at recently released experimental ABS data on capital and labour income shares by industry (Australian Bureau of Statistics, 2008b). It shows, from 2004–5 to 2007–8, a distinct increase in the share of industry income going to capital. The five percentage point increase in capital's share was the second highest growth of all industries (behind mining). Equally, labour's share of industry income in construction fell by five percentage points. The shift of income accelerated as the ABCC became more active. By 2007–8 labour's share of construction industry income was the lowest recorded.

This is not to attribute all the shift in factor shares to the BCII Act. The construction industry was going through a major boom, which would have added to the share of income going to capital, just as it added to productivity in the industry. However, the performance of the construction industry was exceptional. At least part of the boost to the profit share was likely due to a reduction in industrial disputes and a reduction in the bargaining power of labour associated with the use of coercive powers against workers. A shifting balance of power is also suggested by the doubling of construction industry notified fatalities between 2004–5 and 2007–8 (Australian Safety and Compensation Council, 2008), as observance with occupational safety requirements and injury rates tend to be lower where unions are weaker (Reilly et al., 1995; Weil, 1992).

Figure 7 *Labour and capital shares in construction and other industries, 2004–5 to 2007–8*



Source: ABS (2008b: Table 10).

Conclusion

The exercise by an Australian state agency of coercive powers against construction industry workers has been justified by reference to claimed gains in productivity and hence national welfare. We have examined the data behind the productivity claims and found that they were erroneous, probably due to incorrect transcription, and that the source data indicated no relative productivity gains. The boost to GDP, savings to the CPI and national welfare gains in each of the Econtech reports, estimated as they were 'from the recent closing of the cost gap between commercial building and domestic housing', had no basis as there was no 'closing of the cost gap'. Despite being made aware of this, the ABCC and its consultant, Econtech, stuck to the original claims about the size of productivity and welfare gains from the use of coercive powers. The errors ('anomalies') in the 2007 report might be dismissed as an 'honest mistake', but can the later insistence on not revising findings be so easily dismissed? Claimed productivity gains from the use of coercive powers are also not discernible in official ABS or Productivity Commission data. The critiques of Toner (2003) and Mitchell (2007) stand. The literature suggests that the unionized building and construction industry would benefit from more cooperative union-management relations. The role of the ABCC has been to penalize cooperative relations, and so it might come as no surprise that previous policy makers' productivity expectations have not been met. However, there is some evidence that there has been

a shift of income shares in the industry from labour to capital, with coercive powers reducing strikes and labour's bargaining power.

We also draw attention to weaknesses in public debate over these issues. Little critical thought was given in the media to the Econtech reports on the building and construction industry, even though its similarly timed report on industrial relations reform policies was received with considerable scepticism. While some union officials in the industry have clearly harmed their own cause, the responsibility also lies with the media, with commentators and with policy makers to examine the evidence put before them and assess it on its merits. Attaching numbers to something does not make it true. The Econtech experience should be illustrative of a wider lesson for the media and commentators: to treat with extreme scepticism commissioned 'modelling' or like reports prepared by commercial consultancy firms for interest groups, especially when the findings advance that group's political interests. There is good reason for the adage, 'he who pays the piper, calls the tune'.

This close analysis of the data relied upon by the ABCC also raises serious questions about the nature of regulation in the building and construction industry. The alleged economic benefits have been used to justify the denial of basic rights to employees in the industry, rights that everybody else is, at least at present, entitled to enjoy. In short, there do not appear to be any significant economic benefits that warrant the loss of rights involved in coercive arrangements. A more cooperative, less punitive approach by policy makers to the industry would not only be consistent with better human rights, it might even be consistent with better productivity.

Acknowledgement

The views in this article are those of the authors and do not necessarily reflect the views of their employers or the Queensland government. Our thanks to Paul Grieve for assistance with 2009 data and David Hurley for editorial assistance.

Notes

1 It has more recently been taken over by KPMG, and is now known as KPMG Econtech, but for consistency it is referred to here as Econtech throughout.

2 Noted in nine places in the 2007 Econtech Report: Table 1, iv, v, vi, Table 5.3, 27, 28, 33 para.1–2, 37.

3 The weights provided by Econtech were: NSW – 34 percent, VIC – 24 percent, QLD – 23 percent, WA – 13 percent, SA – 5 percent. As these only added to 99 percent we then made a pro-rata adjustment to each.

4 The reason the last figure was higher than previously claimed was because a later base year, with higher nominal GDP, was used.

5 In itself, the boom of recent years could have artificially added to productivity growth, just as the anticipated downturn in the industry would be expected to artificially reduce productivity growth: predicted movements in construction employment and output (Access Economics [2009] imply falls of 5.6 percent and 0.7 percent in construction industry productivity in 2009–10 and 2010–11 respectively).

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ATTACHMENT B

Contributed Article ABL Vol 38 No 4 2012 pp. 268-292

Does Industrial Relations Policy Affect Productivity?

David Peetz*

Abstract

This article considers the link between productivity, fairness, and industrial relations (IR) policy at workplace, national, and international levels using data from micro- and macro-level empirical studies as well as data from the Australian Bureau of Statistics (ABS), the OECD, and other sources. There is some evidence that policies that enhance fairness enhance economic performance. But the effects are conditional; they are neither consistent nor universal. Government policies to encourage or discourage unions, to restrict the extent or scope of collective bargaining or related action, or to encourage or discourage non-unionism or individual contracting, will not do a great deal in net terms to improve economic performance. However, in any specific workplace, industrial relations and the decisions management makes can have a notable effect on productivity. While welfare and industrial relations systems do not make a large inherent difference to economic efficiency, they make a very large difference to social outcomes.

1. Introduction

A thread through much economic policy discourse in the late 20th century was the alleged trade-off between equity and efficiency (Okun 1975). In the labour market, this is typically underpinned by the idea that the optimal allocation of resources will be achieved by the operation of a totally free labour market (Manning, 2004). Any divergence from that ideal in the interests of promoting 'equity' would be seen as harming efficiency. Yet the idea that efficiency and equity are opposed has been challenged by more recent developments in economics, which have led to the argument that more equal societies grow faster than less equal ones (Osberg 1995; Wilkinson and Pickett 2009).

*Department of Employment Relations and Human Resources, Griffith University. My thanks are offered to Heather Peetz for editing the manuscript.

In debate on industrial relations (IR), in Australia and elsewhere, this conflict is manifested as arguments that policies should, and can, focus on productivity improvement, rather than equity. In recent times, a campaign to make fundamental changes to the *Fair Work Act*, on the grounds of improving productivity, has been pursued (Hewett 2011; Ridout 2011; Business Council of Australia 2012). This article questions the extent to which industrial relations policy affects productivity. Productivity is the *quantity* of output per *unit* of input. *Labour* productivity is output per hour worked. It is *not* measured by the value of that output, or the cost of that input, or the amount of output not produced when there are no hours worked due to strikes. Debate is often complicated by confusion over the meaning of productivity.

Proponents of particular IR policies often *portray* their preferred systems as being designed to enhance economic performance. The reason for that is straightforward. Almost everyone agrees that, other things being equal, people are better off in an economy with high productivity, high employment, and low inflation than the opposite. It is not possible to obtain the same sort of consensus about the distribution of income and power. So arguments about the allocation of resources and power will tend to be couched in terms of its benefits for the economy.

IR policy often appears aimed at more objectives than it can meet. With few exceptions, it has much more of an impact in the long run on fairness, however defined, than on economic performance. If claims are made that a particular industrial relations policy is going to have very large (positive or negative) consequences for economic performance, such claims should be examined sceptically, as there is a reasonable probability that the effects may be small, even non-existent, or perhaps the opposite of what is claimed. The rest of this article considers the link between productivity, fairness, and IR policy at (in order) workplace, national, and international levels.

2. Micro-level evidence

The major policy questions in IR focus around the extent to which policies advantage or disadvantage unionism, individual contracting or collective bargaining, and the taking of industrial action by unionised workers as part of collective bargaining, or the protection of employment. These are what contemporary debate on the *Fair Work Act*, and much of the debate on WorkChoices, has been about.

There is a long history of studies in Australia and especially internationally that looked at the impact of unions on economic performance. There is a much smaller group of studies that look specifically at individual contracting.

First, we refer to the studies on union effects. The ways in which unions can impede economic performance of a firm are by imposing restrictive work practices or by impeding the introduction of innovations such as new technology. I set aside the question of defining just what a restrictive work practice is. (Is it something that tempers unfettered managerial prerogative or a practice that management was willing to accept in the past but which it is no longer willing to accept?) There is some international evidence from the 1970s showing that restrictive practices had harmful effects (Elbaum and Wilkinson 1979; Lazonick 1979; Pencavel 1977). Such practices were common in Australia in that period up until the mid and late 1980s, but were mostly removed by the two-tier wage system, and then award restructuring and nearly two decades of enterprise bargaining. Restrictive practices were typically associated with demarcations arising from multiple unionism, but union amalgamations, single bargaining units, and the processes mentioned above substantially diminished or ended the impact of demarcations. As to whether unions restrict the introduction of new technology, while there were some cases of this, the evidence even from the 1980s was that, in general, unions did not substantially restrict new technology (for example Batstone and Gourlay 1986; Daniel 1987 McLaughlin 1979; Nichols 1986, p. 232).

Still, it was generally thought amongst conventional economists that unions had a negative impact on economic variables until the emergence in the 1980s of a new literature, based principally around Richard Freeman and James Medoff's book *What Do Unions Do?* (Freeman and Medoff 1984). This showed that unions could have a *positive* effect on productivity through two mechanisms. One was through what they called the union 'monopoly' effect: unions raise wages and the higher wages lead employers to invest in labour-saving technology. This leads to higher labour productivity—though not necessarily higher multi-factor productivity. The second mechanism was the 'voice' effect: employees express their voice through unions and this leads to lower covert conflict at work and to improved techniques of production. In *non-union* workplaces, dissatisfied workers leave, causing turnover costs for employers; in *union* workplaces, they stay and seek to change the problems they identify. There is a body of evidence collected over the years that shows benefits from employee *voice* for economic performance. Direct and indirect participation by employees in decision making—preferably in combination—on average lead to lower absenteeism, lower labour turnover, higher morale and employee satisfaction, and higher productivity, though this may be conditional upon favourable workplace and institutional circumstances (Jones and Svejnar 1982; Strauss 1992; Zwick 2004; Grimsrud and Kvinge 2006).

Whether unionism increases productivity is really a question of how far these competing factors offset each other. It is an empirical question that is likely to produce different results at different times and in different places. After Freeman and Medoff's book came out, there was mixed evidence from the United States. Some were in support of their argument (Allen 1985; Ben-Ner and Estrin 1986; Phipps and Sheen 1994) some were counter to it (Addison, John, and Barnett 1982; Drago and Wooden 1992). Initial British evidence was adverse (Edwards 1987), but by the 1990s negative productivity effects from unionism appeared to have disappeared (Addison, John, and Belfield 2004). There *was* consistent evidence that unions reduced quits and increased job tenure (Freeman 1980; Addison, John, and Belfield 2004).

More recently, three studies in Australia published in the last decade provide some evidence to support Freeman and Medoff. A *positive* relationship was found between unionism and productivity at workplaces where unions are active (Wooden 2000, p. 173). Collective bargaining coverage was associated with *higher* levels of self-claimed productivity (Fry, Jarvis, and Loundes 2002). Firms with high rates of union membership were more productive than firms with no union members (Tseng and Wooden 2001). Another study from the 1990s showed that the intensity of *collaboration* between management and workers (through unions) had a positive effect on workplace performance (Alexander and Green 1992). More recently again, and in contrast, a consultant's report was commissioned to show that reform of the building industry achieved 10 per cent productivity gains through reducing union influence (Econtech 2007). Its core data have since been discredited, as either false or subject to selective or inappropriate interpretation (Allan, Dungan, and Peetz 2010).

Two decades after the publication of *What Do Unions Do?*, the general consensus amongst those who reviewed the literature was that there was no *consistent relationship* evident between unions and productivity, with a wide variety of results; but the direct impact of unions on productivity tended towards *zero*. The impact, it appears, depends on circumstances (Addison, John, and Belfield 2004; Hirsch 2004; Freeman 2005; Kaufman 2005). Overall, studies from Australia and internationally suggest that unionised workplaces with good union-management relations and high employee participation or involvement will probably have *higher* average productivity than non-union workplaces. However, for those with adversarial and non-participatory union-management relations, the *reverse* is probably the case. Probably the most influential study is that of Black and Lynch, which found that:

> Unionized establishments that have adopted human resource practices that promote joint decision making, coupled with incentive-based compensation, have higher productivity than other similar non-union plants; whereas unionized businesses that maintain more traditional labor management relations have lower productivity. (Black and Lynch 2001)

With respect to the evidence specifically on individual contracting, several studies are relevant. New Zealand workplace researchers (Gilson and Wagar 1997, p. 230) reported that they could find no 'significant or reliable relationship between organisations pursuing individual contracts and [their] exhaustive measures of firm performance'. This helps to explain why the *Employment Contracts* Act, often perceived at the time as unlocking productivity gains, was associated with no higher growth in labour productivity than occurred in Australia over the same period (Dalziel 2002; Dalziel and Peetz 2008). A British study found that firms that derecognised unions and pursued individualisation 'did not gain any flexibility advantage over those that retained collective bargaining' (Brown et al. 1998, p. ii). A study of 'excellent workplaces' by researchers from the University of New South Wales found that whether employee representation was collective, or whether individual arrangements were in place, had no impact on whether workplaces could achieve excellent performance (Hull and Read 2003, p. 8).

One reason that non-unionism and individual contracting seldom work out as predicted is that they are often associated with problems of fairness. If workers perceive unfairness, they will sense relative deprivation and feel the wage-effort bargain has been breached; and they will then respond with absenteeism, exit, reduced effort, or direct conflict (Baldamus 1961; Walker and Pettigrew 1984). Six decades of research demonstrate a phenomenon called 'dual commitment' (Dean 1954; Purcell 1954; Gallagher 1984; Fukami and Larson 1984; Angle and Perry 1986; Magenau, Martin, and Peterson 1988; Bamburger, Kluger, and Suchard 1999; Snape and Chan 2000). It means that, on average, workers who are more committed to their union are also *more committed* to their *employer*. So effort that goes into breaking employees' commitment to their union is often counterproductive.

On the other hand, the evidence that individual contracting and non-unionism have an adverse effect on fairness is strong (for example Elton et al. 2007; Bertone, Marshall, and Zuhair 2008; Peetz and Preston 2009). The earnings distribution is more equal when union density is higher (Card 2001; Charlwood 2007; Gittleman and Pierce 2007). In most Australian

industries, union members receive higher wages than non-members, more so when membership density is higher or unions are more active (Wooden 2000; Baarth, Raaum, and Naylor 1998); and workers on union collective agreements received higher wages than workers on registered individual contracts under WorkChoices. The exceptions are where individual contracts are used as a union-avoidance device or are in those mostly professional and managerial occupations where workers have lots of individual bargaining power anyway (Peetz and Preston 2009). Especially, but not exclusively, when the no-disadvantage test was removed from registered individual contracts, they were used to remove penalty rates, overtime pay, shift premiums, redundancy benefits, and job security from employees, especially from those without strong labour market power. So even though only a small minority of workers were ever employed on registered individual contracts under WorkChoices, surveys indicated that 30 to 40 per cent of people personally knew someone who had been made worse off (Silmalis 2006; Farr 2007). Individual contracts had a substantial impact on fairness, but very little impact, and not necessarily positive, on productivity.

3. National Level

Claims have been made that the changes made by the *Fair Work Act*, compared to the industrial relations framework of WorkChoices, have damaged productivity growth. So a key question to examine is how bad the damage is, how consistent is it across industries, and can the country sustain it? The left-hand panel of Table 1 looks at which industries experienced productivity growth in the WorkChoices period from 2005–06 to 2007–08. It shows that during WorkChoices eight market-sector industries had growth in productivity, eight had productivity falls, the mean was 2.2 per cent growth, and the median was a decline of 0.1 per cent. (There followed a transition year, during which most provisions of WorkChoices remained but the core features of individual contracting had been removed). The right-hand panel of Table 1 shows which industries sustained productivity growth under the first two years of the *Fair Work Act*, from 2008–09 to 2010–11. In that period, nine industries had productivity growth, seven had falls, the mean growth rate was slightly higher at 2.4 per cent and the median was substantially higher than WorkChoices at 2.3 per cent. The most noteworthy drop was in the expanding mining sector, where high commodity prices have made it worthwhile to extract lower-grade ores with more waste rock to remove and therefore lower productivity (ore produced per worker hour).

Table 1: Labour Productivity Growth in 16 Market-sector Industries: WorkChoices (2005–06 to 2007–08) and *Fair Work Act* (2008–09 to 2010–11)

Industry	2005–06 to 2007–08 %	Industry	2008-09 to 2010-11 %
J Information, Media and Telecommunications	16.3	A Agriculture, Forestry and Fishing	13.6
N Administrative and Support Services	14.4	J Information, Media and Telecommunications	8.2
K Financial and Insurance Services	13.6	I Transport, Postal and Warehousing	7.9
G Retail Trade	4.2	M Professional, Scientific and Technical Services	6.4
C Manufacturing	2.8	C Manufacturing	4.8
I Transport, Postal and Warehousing	1.8	G Retail Trade	4.6
F Wholesale Trade	1.7	E Construction	3.7
E Construction	1.3	R Arts and Recreation Services	2.6
H Accommodation and Food Services	-1.6	K Financial and Insurance Services	2.0
B Mining	-2.1	F Wholesale Trade	-0.1
R Arts and Recreation Services	-2.3	S Other Services	-5.3
M Professional, Scientific and Technical Services	-3.4	L Rental, Hiring and Real Estate Services	-6.4
S Other Services	-5.4	H Accommodation and Food Services	-6.7
D Electricity, Gas, Water and Waste Services	-8.8	N Administrative and Support Services	-9.0
L Rental, Hiring and Real Estate Services	-11.4	D Electricity, Gas, Water and Waste Services	-9.6
A Agriculture, Forestry and Fishing	-14.7	B Mining	-13.8
median	-0.1	median	2.3
mean	2.2	mean	2.4

Source: ABS cat. 5204.0.

The productivity 'crisis' of the *Fair Work Act*, then, is no worse than the productivity crisis of WorkChoices. Yet the voices expressing concern over the alleged productivity costs of the *Fair Work Act* were not concerned about productivity under WorkChoices.

That said, the above is not the whole story. This is because productivity is very sensitive to the stage of the business cycle and needs to be placed in historical context. The ABS considers that the relevant comparisons are of productivity over whole growth cycles, each of which lasts for several years. Growth cycles are shown in Figure 1.[1] The current growth cycle (growth cycle 10), which started in 2008–09 and includes the *Fair Work Act*, is not complete. However, in the previous growth cycle (growth cycle 9) trend labour productivity growth was also low. Indeed, it was one of the two weakest cycles since records began—nearly half a century ago—in the mid-1960s. The gap between productivity growth in that cycle and previous ones started to widen at the time Work Choices commenced.

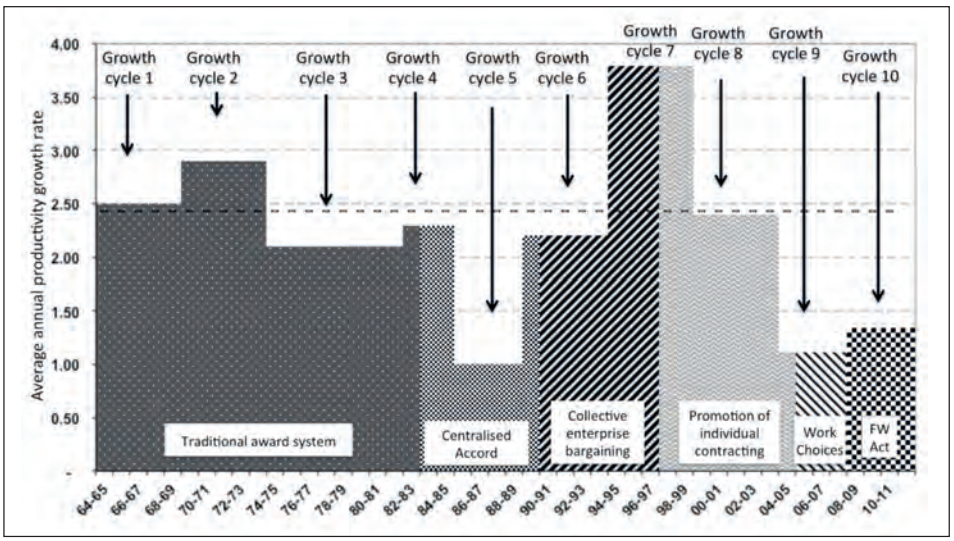
Some argued that poor productivity growth under WorkChoices was because 'the statute allowed marginal workers to contract into the labour market, which reduced the observed growth of labour productivity' (Sloan 2011; also Pearson 2007). However, the ABS also produces a measure of labour productivity that takes account of changes in the aggregate quality of labour due to changes in average educational attainment and experience. If labour productivity growth had been dragged down by the entry of low-skilled, low-productivity workers, this 'quality-adjusted' measure of labour productivity would have shown a greater increase than the conventional measure. In reality, this quality-adjusted measure of productivity grew even more slowly in growth cycle 9 than the conventional measure—at only 0.7 per cent over that cycle, compared to 1.1 per cent for the conventional measure, and down by more than half from the recorded 1.9 per cent in the previous growth cycle.

WorkChoices was not the only factor influencing productivity in this cycle, if it had any influence at all. But it is noteworthy that, in the first complete growth cycle under the *Workplace Relations Act* (growth cycle 8), labour productivity growth was merely 2.4 per cent per year, across the 12 market-sector industries for which data go back more than a few years. In the whole *Workplace Relations Act* period, which extends across two and a half growth cycles and encompasses the tail end of the strongest cycle, labour productivity growth averaged 2.5 per cent annually. Those numbers are in effect no tangible improvement on the 2.4 per cent a year averaged during

[1] Figure 1 refers to 12 industries, whereas Table 1 refers to 16 industries. This is because the data for the 16 industries are not available over the whole of the period from the mid-1960s.

the antiquated, 'inefficient', traditional *award* system of the 1960s and 1970s. The traditional award system was associated with restrictive work practices and demarcations, and it operated at a time when Australian industry was protected by high tariffs, with many important enterprises in the public sector, and many highly regulated industries. The award system was associated with productivity growth rates of similar magnitude to the years of the *Workplace Relations Act*, and considerably better than the WorkChoices era of the *Workplace Relations Act*.

Figure 1: Labour Productivity Growth over Productivity Cycles, 12 Market-sector Industries, 1964–65 to 2010–11



Source: ABS cat. 5204.0; 5206.0, various years

This is not to say that the *Fair Work Act* has necessarily delivered a markedly better outcome. So far, the current growth cycle has produced only slightly higher labour productivity growth than the growth cycle that preceded it—even though the IR policy regime is said to be vastly different. This suggests that industrial relations policy has made little difference to productivity growth.

Indeed overall, looking back at the growth cycles over nearly half a century, there are not many occasions on which in can be said that IR policy had a notable impact. One was probably the centralised period of the Accord, when real wages dropped significantly (growth cycle 5). That meant there was no longer much incentive for firms to invest in labour-saving technology, as labour was cheap, and so labour productivity growth appeared to stall. The other was one cycle in the mid-1990s (growth cycle 7) which showed accelerated growth, coinciding with the consolidation of enterprise bargaining over the latter part of the *Industrial Relations Reform Act* and the early part

of the *Workplace Relations Act*, before the shift to individual contracting gathered momentum. But the acceleration of productivity was only for one cycle, it did not have a lasting impact, and there were a number of other economic reforms going on at the time. If the move to enterprise bargaining had an effect, it was small, one-off, perhaps removing most of the remaining inefficiencies in the IR system, but that was all. This is probably about all that can be expected. Whatever 'surge' in productivity growth occurred in that one cycle was not sustainable and not sustained. Indeed Hancock (2012), analysing productivity growth across industries as well as nationally, found no evidence of any effect from enterprise bargaining. Earlier, Quiggin (2006) had argued that the higher productivity growth rate achieved in just that one cycle in the mid-1990s (cycle 7 in Figure 1) was a statistical illusion anyway—not a signal that reforms had delivered a 'new economy' that could deliver permanently higher productivity growth rates, but rather, a blip caused by overestimation and, most importantly, an unsustainable increase in work intensity that was subsequently wound back, at least partly. Evidence in support of this included the very ordinary productivity growth in the subsequent period, growth cycle 8. Six years later, with the hindsight benefit of observing the even weaker productivity growth rates of cycles 9 and 10 that followed the WorkChoices reforms, the weight of evidence supports Quiggin even more strongly.

Indeed, the data do not suggest that the long period of 'liberal market' or 'neoliberal' economic reforms that Australia has experienced since the early 1980s has really done anything to boost productivity growth. Starting with the deregulation of financial markets in December 1983, these included the deregulating of product markets and the privatising of public assets. Rather, productivity growth has been slightly lower under 'neoliberalism'.

However, there have been some fairly significant changes in the distribution of income. In the early 1980s, there was a popular idea of a 'real wage overhang': the notion that the wages share of national income had risen above its long-term average after 1972, and the profits share had fallen below its long-term average. This was squeezing profits and a major cause of the economic problems of the time. One of the implicit ideas behind the Accord was to return those factor shares to their previous levels. Figure 2 shows the share of trend national income going to profits, and the share going to wages. They do not add to 100 per cent because some also goes to government, so the key line is that which shows the ratio of total profits to total wages. Until 1972, the long-term average profit-to-wages ratio

was 38 per cent. The centralised Accord brought it back up from its 1970s trough and then some more.

The move to collective enterprise bargaining led to a slight shift in favour of wages, but from 1997 onwards there was a relatively sustained increase in the profit share. It reached a record of slightly under 50 per cent in 2005–06 under WorkChoices, dropped back slightly, then reached another record through 2010—under the *Fair Work Act*—of just under 55 per cent, before dropping more recently to below 52 per cent in 2011–12. (To use the parlance of the late 1970s and early 1980s, it represented a 'profit overhang', though less so now than three years ago.)

Figure 2: Wages and Profit Shares in Factor Incomes and Profit-to-wages Ratio, Australia, 1959–60 to 2011–12

Source: ABS cat. 5206.0

Of course, industrial relations policies like the Accord were not the only thing going on over that long period. As mentioned, there was also a series of liberal market economic reforms from December 1983, and since then (and probably in consequence) there has been an underlying upwards movement in the ratio of profits to wages. This was also the time that the boom in salaries of chief executive officers (CEO's) commenced. Through the 1970s and into the early 1980s, the ratio between CEO pay and average earnings had been fairly stable. However, from the mid-1980s, CEO salaries started to grow much faster than average earnings. Indeed, the growth in

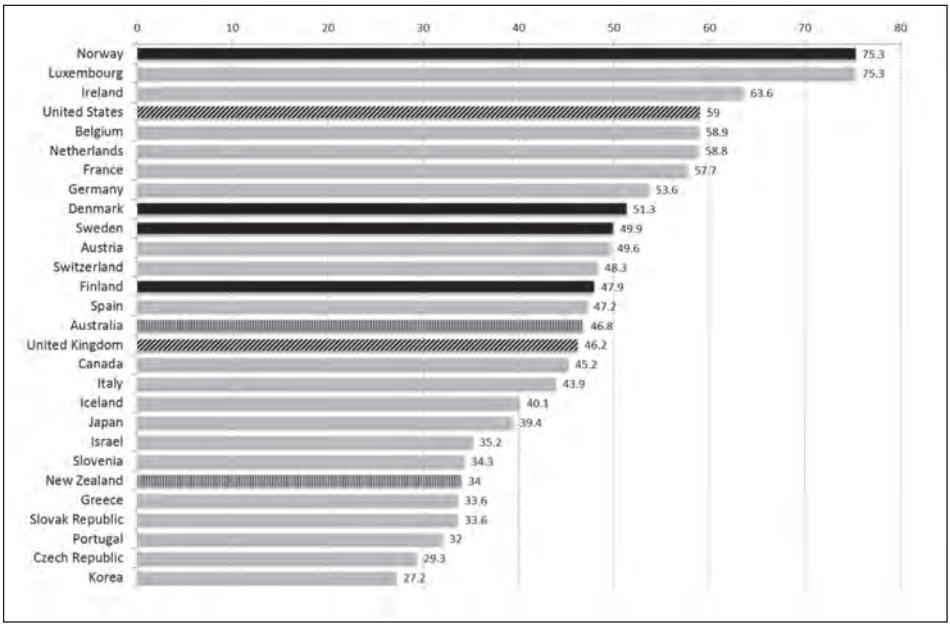
CEO earnings relative to wages was much greater than the growth in the ratio of profits to wages. It was also substantially greater than the increase in national productivity (Peetz 2009). This has been a major contributor to the widening gap between very high-income earners and the rest of the workforce from the mid-1980s. By contrast, the level of inequality between very high-income earners and the rest had actually declined across a period well over half a century before the 1980s (Atkinson and Leigh 2007). This suggests that there has been nothing natural or inevitable about widening inequality post-1980.

4. International Level

Some interesting and insightful patterns emerge through cross-national comparisons. In this respect, the 'varieties of capitalism' literature is quite useful in the contrasts it draws between different types of governance systems for developed capitalist economies (Hall and Soskice 2001). For our purposes it is not so important whether there are two 'varieties' of capitalism, as Hall and Soskice originally suggested, or several varieties, or a continuum with many nuances, as some critics have argued (for example Crouch 2005). My interest is in comparing the more extreme ends of the continuum, those with a high commitment to equality—a subset of what Hall and Soskice called the 'coordinated market economies'—and those with a high commitment to the market—a group of the 'liberal market economies'. The latter, liberal market economies, rely to a high degree on market forces, and have low protections for workers and a low welfare safety net. At the other end, to varying degrees the coordinated market countries are characterised by markets constrained through government intervention, a stronger welfare net, workers having higher protections, and the labour force being more unionised. The United States and to a lesser extent the United Kingdom epitomise the liberal market economies (while New Zealand has had several of their characteristics since the late 1980s). The Scandinavian countries of Norway, Sweden, Finland, and Denmark epitomise the egalitarian end of the coordinated market countries.

Figure 3 compares labour productivity *levels* across countries. It is apparent that there was no consistent, uniform pattern. The highest productivity (at 75.3 USD per hour) was achieved by Norway, a coordinated market country (solid black in Figure 3). There was quite a gap to the United States (59), a liberal market economy (diagonal stripes in Figure 3), then Denmark (51), Sweden (50), and Finland (48), all coordinated market countries, and then the liberal market United Kingdom (47). (Also shown, in vertical stripes, are: Australia (46) with similar productivity to the United Kingdom; and New Zealand (34), well below the others.)

Figure 3: Labour Productivity Levels (USD PPP), 28 OECD countries, 2010



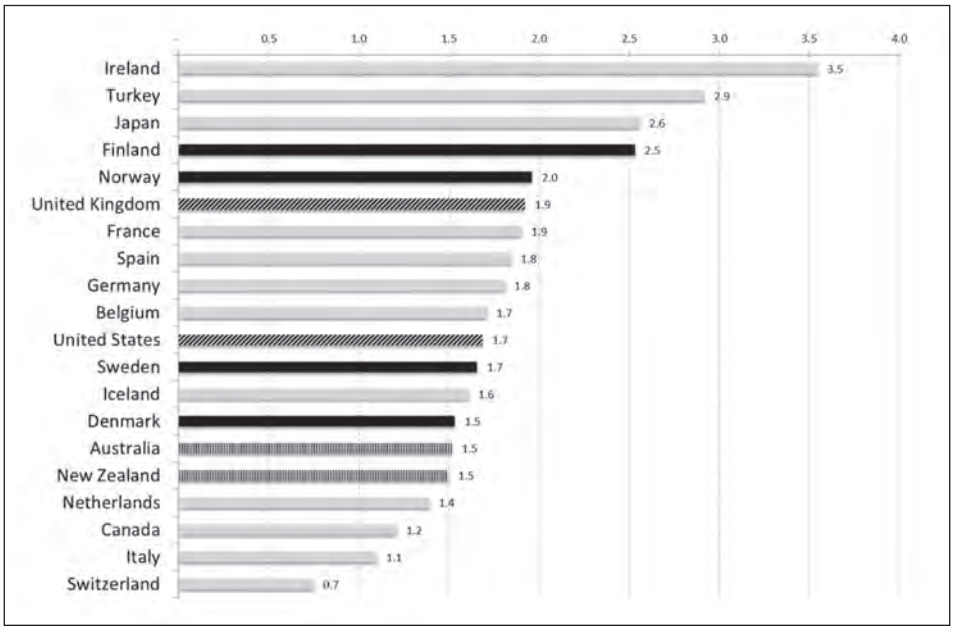
Source: Organisation for Economic Cooperation and Development (OECD) productivity database (data extracted on 17 February 2012 from OECD.Stat)

Another way to look at the question is to consider productivity *growth rates* over a 30-year period, 1980–2010, rather than levels (Figure 4).[2] By this criterion, the coordinated market countries Finland (2.5 per cent annual labour productivity growth) and Norway (2.0 per cent) did best, followed by the liberal market United Kingdom (1.9 per cent). Then the liberal market United States (1.7 per cent) is in a group with the coordinated markets Sweden (1.7 per cent) and Denmark (1.6 per cent). Australia and New Zealand are in a comparable cluster (with 1.5 per cent each), suggesting that the 'gap' between US and Australian productivity levels has not narrowed over that period. The latter is especially disappointing for advocates of industrial relations reform as the basis for productivity growth, since the Business Council of Australia (BCA) had claimed in the 1980s that the productivity of Australian workplaces 'was between 20 and 50 per cent below their overseas competitors' and a 25 per cent productivity improvement could be achieved through reform of the industrial relations system (Business Council of Australia 1989a, p. 25; Business Council of Australia 1989b). This reform has subsequently occurred without its promised impact. Over two decades later the BCA claimed that project productivity was 30 per cent or more lower in Australia than the United States, without any reference to the failure of its previously sponsored productivity reforms (Business Council of Australia 2012).

[2] For some countries, data this far back are not available. Figure 4 covers 20 countries compared to the 28 countries in Figure 3.

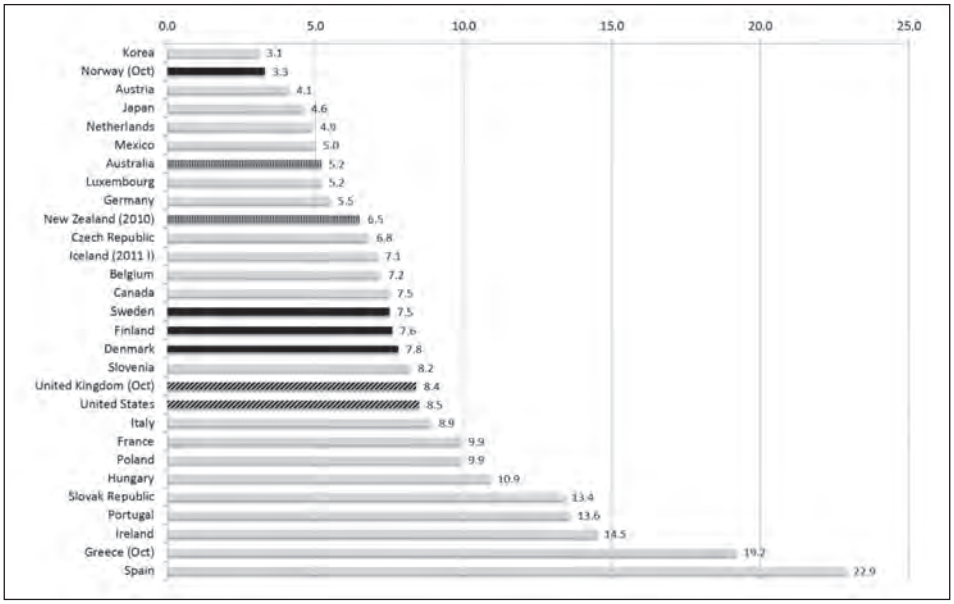
While unemployment is not necessarily reduced in the short term through higher productivity, it is nonetheless often used as an indicator of economic performance. Though outcomes here are heavily influenced by responses to the global financial crisis, it is worth referring to these data simply because the topic is often incorporated into debate about IR systems and economic performance. Unemployment rates at the end of 2011 are shown in Figure 5. Norway performed considerably better than the other countries that have been discussed, while Sweden, Denmark, and Finland were ahead of liberal market United Kingdom and United States. However, unemployment rates are influenced by labour force participation, so many consider the employment rate to be a better indicator of labour market performance. Employment rates (the ratio of employment to population in the 15-64 age group) are shown in Figure 6. Here the three major coordinated market countries, Norway (with an employment rate of 75per cent), Denmark, and Sweden (both 73 per cent), all performed best, though Finland (68 per cent), while ahead of liberal market United States (67 per cent) was behind the United Kingdom (70 per cent).

Figure 4: Labour Productivity Growth Rates (USD PPP), 20 OECD Countries, 2010



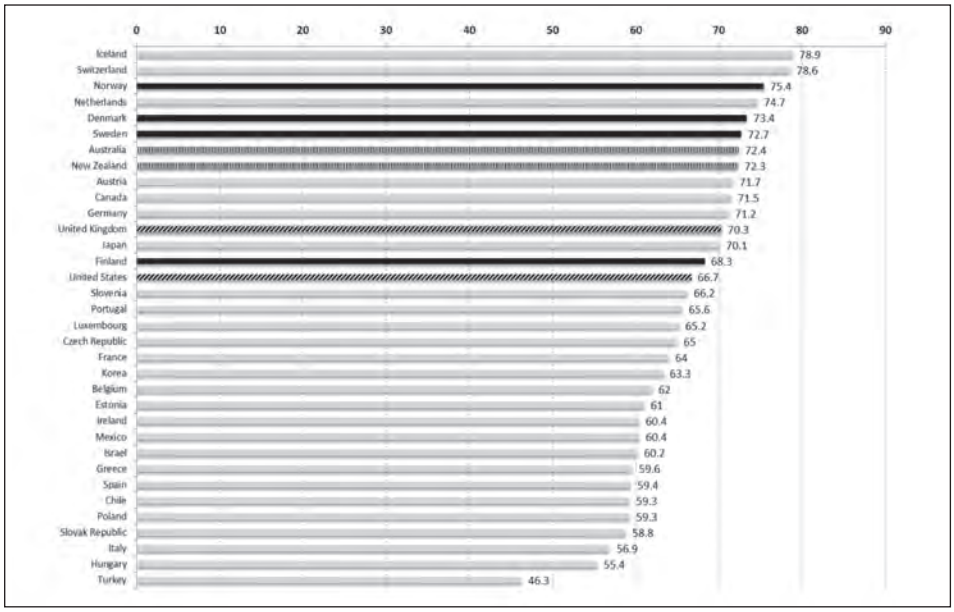
Source: OECD productivity database (data extracted on 17 February 2012 from OECD.Stat)

Figure 5: Unemployment Rates, OECD Countries, 2011



Source: OECD, Labour Force Statistics, Main Economic Indicators (database) accessed 23 Feb 2012

Figure 6: Employment Rates, OECD Countries, 2010

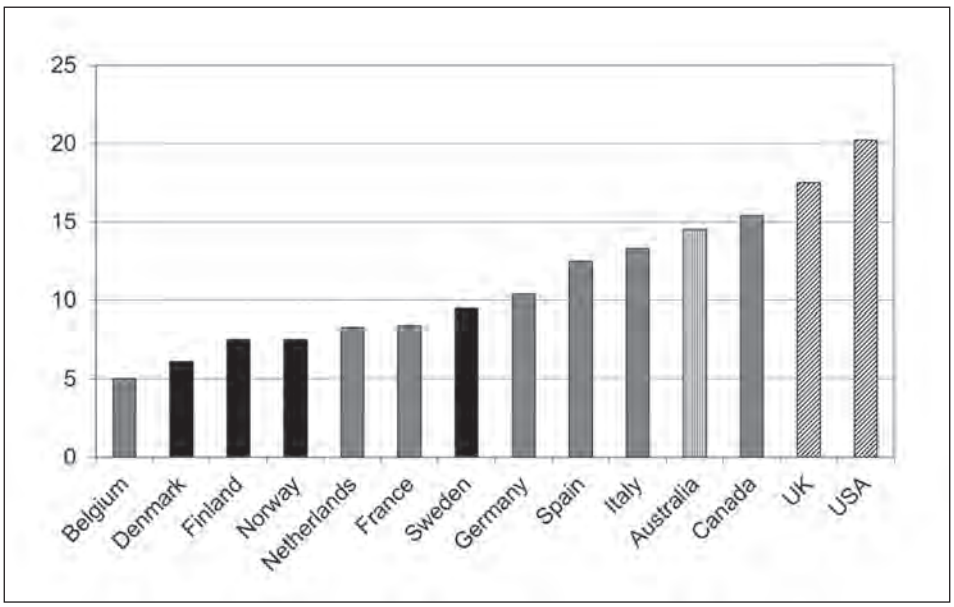


Source: OECD StatExtracts database, accessed 17 February 2012

Overall, what does it mean? It would be possible to make an argument that on average the *coordinated market countries* perform better. But on productivity there is not an overwhelming pattern—there is quite a lot of diversity between countries and indicators. It may be preferable to take the cautious conclusion that there is not a massive difference: that one cannot say categorically that coordinated market economies perform better or worse than liberal market ones in terms of productivity and employment. Productivity is driven more by technology, innovation, skills, and education (Engelbrecht 1997; Greenwood, Hercowitz, and Krusell 1997)—and in Australia's case, even geographical isolation (Battersby 2006)—than by industrial relations or welfare policy arrangements.

However, a quite different pattern emerges when consideration is given to indicators of social cohesion. I focus here on just one: poverty rates. This is the proportion of people in poverty in each of 14 countries. The data are from a 1998 study. As can be seen in Figure 7, there is no ambiguity: the coordinated market countries had far lower poverty rates than the liberal market economies, particularly the United States where poverty is up to three times higher.

Figure 7: Poverty Rates, 14 OECD Countries, 1998



Source: Marx and Verbist (1998), cited in Rubery and Grimshaw (2003), p. 94.

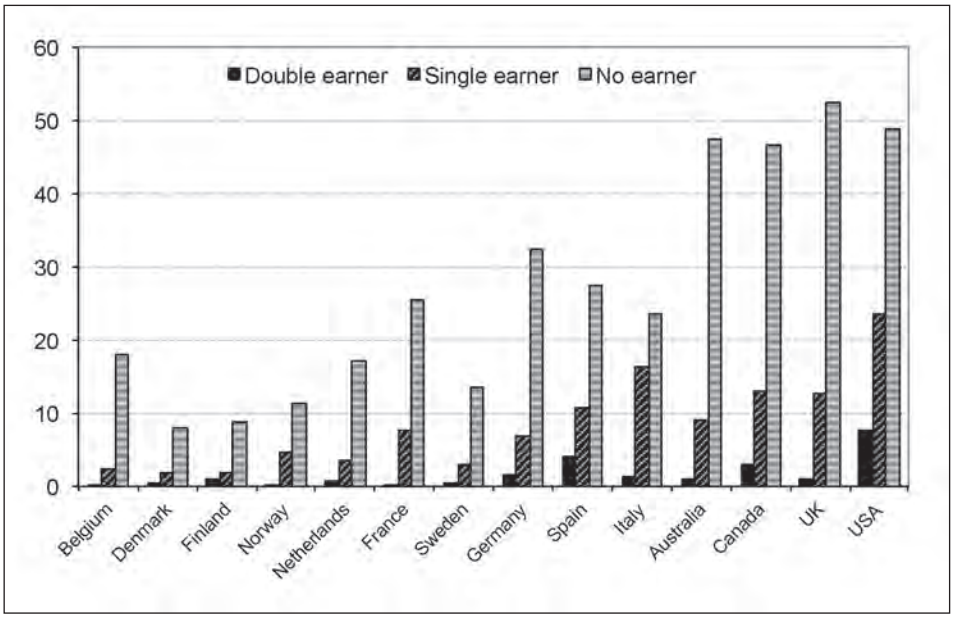
But the particularly notable feature is in Figure 8. This shows poverty rates in two-adult households, according to how many adults in the household are working. Poverty is in part a function of households' access to employment, so,

in *every* country, poverty was lower among dual-earner households (shown in solid black in Figure 8), than in *single*-income households (in diagonal stripes), or in no-earner households (grey horizontal stripes). A single-income household in the United States was more likely to be in poverty than a single-income household in any of the other countries here.

But notice also how in the United States, a *single*-income household was more likely to be in poverty than a household with *no* employed income earners in Denmark, Finland, Norway, Sweden, or even the Netherlands or Belgium. And a *two*-income household in the United States was more likely to be in poverty than a *single*-income household in each of those countries plus Germany. And indeed, it was roughly as likely to be in poverty as an unemployed household in Denmark.

A more recent and more wide-ranging German study that assessed five dimensions of social justice (poverty, labour market inclusion, education, health, social cohesion, and non-discrimination, and inter-generational justice) across 31 countries ranked Iceland, Norway, Denmark, Sweden, and Finland in the top five positions, with the United Kingdom 15th and the United States 27th (ahead of only Mexico, Chile, Greece, and Turkey) (Schraad-Tischle 2011). In short, welfare and industrial relations systems do not make a large inherent difference to economic efficiency, but they make a very large difference to social outcomes.

Figure 8: Poverty Rates in Two-earner Households, 14 OECD Countries, 1998



Source: See Figure 7.

Moving to a global, temporal scale, in each industrialised country there has been a shift away from the policies of the 'post-war Keynesian compromise', that had seen incremental improvements in the conditions of workers, industrial protections, and the welfare state, towards 'liberal market' or 'neoliberal' policies. With that, across much of the OECD, the share of income going to profits has risen, although this is also something that varies between countries (Ellis and Smith 2007). However, productivity growth was higher before the neoliberal reform period gained momentum. Across the developed nations in Europe and elsewhere, growth in GDP per hour worked was lower in the period from 1973 to 1992 than it had been from 1950 to 1973 (Maddison 1995). Growth in GDP per hour in the G7 nations was much higher in the 1970s than in the decades from the 1980s onwards (OECD productivity database).

The period of neoliberal reforms has not brought about a period of unrivalled prosperity in terms of productivity advancement, but it has brought about a shift in income as the relative bargaining power of capital and labour has changed. Especially since the mid-1980s, the share of the top 1 per cent of income earners increased substantially in Australia, something that has been also seen in the other major English-speaking nations—the United Kingdom, Canada, and by most of all in the United States (Kapur, Macleod, and Singh 2006). Yet this share had been stable in the preceding period. Indeed, in the United States, as in many other countries, inequality between the top few and the rest had declined over much of the twentieth century (Kapur, Macleod, and Singh 2006).

Most recently, the global financial crisis has debunked the myth of efficient markets, the idea that markets 'self-correct' and find stable equilibrium, and the idea of 'trickle down' (or 'a rising tide lifts all boats') (Quiggin 2010). Also debunked was the myth of the superiority of numerical labour market flexibility. The United States experienced a worse deterioration in employment than Europe. The greater labour market flexibility in the United States that was meant to protect employment ended up more readily destroying it. Average employment in the United States fell by 3.8 per cent between 2008 and 2009, over double the fall in EU employment of 1.7 per cent. Yet GDP fell by considerably more in the European Union (4.2 per cent) than in the United States (2.4 per cent) (OECD 2010).

Thus the OECD in 2009 found no evidence that structural reform policies aimed at promoting flexibility had made labour markets 'less sensitive to severe economic downturns than was the case in the past'. It now recommended that governments improve income support and unemployment insurance benefit systems, though it had previously said these would decrease flexibility

(OECD 2009, p. 40). Instead, active intervention by unions and governments, negotiating and facilitating firm-level agreements for adjustment, helped moderate the effects of a crisis created elsewhere (Peetz, Le Queux, and Frost 2011).

Indeed, before the global financial crisis the OECD—once an enthusiastic supporter of labour market deregulation—had already begun hedging its position on employment-related policies. In 2004 it acknowledged that the evidence for a link between high wages or compressed wage structures and lower employment was 'fragile' (OECD 2004, p. 165.). In its 2006 *Employment Outlook*, the OECD analysed its own research and that of others and observed that: the effect of employment protection legislation on overall unemployment 'was probably small'; there is little or no significant union impact on overall labour market performance; a high degree of centralisation in bargaining was associated with lower unemployment; and evidence on the link between minimum wages and employment was 'ambiguous'. Several countries with highly regulated labour markets and active labour market programs had on average better employment rates than 'market reliant' countries. It conceded 'there is no single combination of policies and institutions to achieve and maintain good labour market performance' (OECD 2006, pp. 12, 13 & 18).

5. Implications

Overall, then, what can be said? There is some evidence that industrial relations *policies* that enhance fairness enhance economic performance. However, although this is a trend on average, the effects are conditional; they are not consistent or universal. What can be said with more certainty is that, *in any specific* workplace, *industrial relations can* make a difference to productivity. The decisions management makes, and the relationship it has with employees and unions, will shape what happens in the workplace and can have a noticeable effect on productivity.

That is not the same as saying, though, that if IR policy is altered at the national level, it is going to have a widespread or noticeable impact on productivity. It is what happens at the *workplace* that matters—and some managers will make decisions under a new framework that will make things better than they would have been, and some will make things worse. Some will consult with and involve their employees, and some will exclude or exploit them. Many seek a holy grail in employment or industrial relations policy that is going to give a magic boost to the economy. But there is none—certainly not to be found in policies that aim to shift the balance of power in industrial relations one way or the other.

That does not mean that *no* IR policies can influence productivity. The results of research suggests that government policies to encourage or discourage unions, to restrict the extent or scope of collective bargaining or related action, or to encourage or discourage non-unionism or individual contracting, will not do a great deal in net terms to change economic performance. Policies aimed at giving employees more say or more voice at work may well improve economic performance. This is an area where Australian policy still lags many other industrialised countries, but one largely beyond the scope of this article.

Interestingly in this context, the name of the present law is the *Fair Work Act*. As discussed above, advocates for various policy positions often argue that changes should be made to legislation because of the impacts on economic efficiency and productivity, when often what is being sought will have little impact on economic efficiency and productivity, but will have significant implications for the distribution of power and hence income—that is, for fairness. While there are problems of confusion arising from naming the associated *institution* Fair Work Australia (McCallum, Moore, and Edwards 2012, p. 249), it can be said that labelling the statute the 'Fair Work' was at least a tacit recognition that fairness is the principal issue with which industrial relations legislation can deal. Fairness is not the only consideration, but it is certainly an important one, and very probably the one that that legislation has the better chance of affecting.

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