ACTU MINIMUM WAGES CASE 2004

ACTU Written Reply Submission

9 March 2004

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R1 Introduction

R1.1 The ACTU's claim for a $26.60 increase in all award rates is moderate, affordable and fair. Nothing in the submissions of those opposing the ACTU claim substantiates any other conclusion.

R1.2 The key points which emerge from more recent economic data and the submissions of those opposing the ACTU claim are:

- The economy now is stronger than during last year's Case. This was conceded by both ACCI and the Commonwealth even before the release of the December National Accounts data on 3 March. The National Accounts data shows a robust and impressive performance. The seasonally adjusted growth in GDP for the December quarter (1.4%) is the highest figure for four years.

- There is simply an absence of any credible evidence that last year's Safety Net Adjustment (or any previous Safety Net Adjustment) has had any adverse economic impact either at the aggregate, sectoral or enterprise level;

- None of the opposing submissions provide any robust answer to the SPRC research regarding needs of the low paid.

R1.3 The three dot points above logically impel the conclusion that the Safety Net Adjustment this year can and ought be higher than the Safety Net Adjustment last year. However, the opposing submissions of the Commonwealth and the employer groups propose Safety Net Adjustments which are significantly below that which was awarded last year and in some cases significantly below that which those parties proposed in last year's proceedings. The Commonwealth, AiG and ACCI positions in these proceedings are simply not credible.

Australia's Economy is Strong

R1.4 Economic data released since the ACTU filed its original submissions confirms the ACTU's analysis of Australia's recent economic performance. The December quarter National Accounts show GDP growth in that quarter of 1.4 per cent (seasonally adjusted), giving Australia's economy an annualised growth rate in the last six months in excess of 5 per cent. Prices and wages growth have continued to be moderate with little change in either the CPI or the Wage Cost Index from the September quarter figures referred to in our original submissions. CPI is currently at 2.4 per cent and the most recent Wage Cost Index is 3.6 per cent in trend terms (3.7 per cent seasonally adjusted). Labour market conditions continue to be strong, unemployment remains at its lowest levels for 22 years.

R1.5 Importantly, this is an assessment of the economic performance of the economy which is not in any sense contradicted by the opposing submissions. The Commonwealth's brief analysis of Australia's economic position and outlook essentially confirms the ACTU position whilst ACCI specifically accept that the economy is in "a somewhat improved position compared to that we faced one year ago". The AiG submission essentially seeks to avoid the issue of Australia's improved overall economic outlook by focussing only on the potential negative consequences of an appreciation in the dollar. In doing so they vastly overstate the significance of this issue both for the economy as a whole and in the context of these proceedings and ignore entirely the fact that an appreciating dollar has some benefits as well as some costs for economic performance.

R1.6 Table R1.1 compares a range of key economic indicators from this time in 2002, this time last year and most recently available data. The data confirms the economy's performance now is stronger than at the same time last year and in certain key respects stronger than at the same time last in 2002. Of particular note is the strong ongoing decline in unemployment down from 6.7 per cent in January 2002 to 5.7 per cent now.

Table R1.1: Key Economic Indicators

	Same time 2 years previous (a)	This time last year (a)	Most recent data (a)	MYEFO forecast (2003-04)	
GDP (Trend)	3.8	3.1	3.5	3	3/4
GDP (Seasonally Adjusted)	4.4	2.8	4.0		
Inflation (CPI)	3.1	3.0	2.4	2	1/4
Employment Growth	1.4	3.0	1.8	1	1/2
Unemployment	6.7	6.1	5.7	5	3/4
Wages					
WCI	3.4	3.5	3.6		n/a
AENA	4.8	3.2	3.6	3	3/4

(a) *Trend figures have been used (except for CPI and GDP (Seasonally Adjusted))
*GDP, CPI and WCI are year to December 2001, 2002 and 2003 , respectively
*Labour Force statistics are year to January 2002, 2003 and 2004, respectively

The Contribution of Award workers to Australia's prosperity

R1.7 In its initial submissions the ACTU provided extensive evidence regarding the economic performance of the three most award dependent industries: Accommodation, cafes and restaurants, Retail trade and Health and community services. The original submissions showed that these industries had growth in output and employment exceeding the all industry average for the period 1996 to 2003, that real unit labour costs had fallen in the same period for each of the industries and that in Accommodation, cafes and restaurants and Retail trade profits have increased by more than 80 per cent.

R1.8 None of the material advanced by ACCI or the AiG touches in any way on this evidence.

R1.9 The Commonwealth does not dispute any of these facts. Rather, the Commonwealth engages in an analysis which purports to show:

- that the increase in employment in these three industries has occurred only in relation to employees under agreements;
- that award dependency is negatively associated with productivity;

- that growth in profits has not been as significant as the ACTU contends if one looks at an alternative measure.

R1.10 The Commonwealth analysis is subject to significant flaws:

- The analysis in relation to employment relies on statistically insignificant movements in proportions of award only employees and conflates the notion of changes in wage setting arrangements with employment growth;

- In relation to the regression analyses on which the Commonwealth rely to establish a negative linkage between productivity performance and award dependency Professor W Mitchell of the University of Newcastle says:

> *In summary, no professional econometrician would attempt to draw inferences from the regressions presented for the reasons presented above. In the professional literature, this sort of analysis would be rejected immediately as amateurish and in violation of professional practice.*

- The approach adopted by the Commonwealth in relation to profits is conceptually flawed.

R1.11 In short, none of the opposing submissions advance material which warrants any departure from the conclusions which the ACTU advanced in its original submissions regarding the contribution of award dependent workers to Australia's prosperity.

Award Wages Lag Behind

R1.12 No opposing party disputes that award only workers are concentrated at the bottom of the wages distribution, that in recent years award only workers have received average increases less than other aggregate wages measures or that the real after tax wages of the lowest five classifications in the Metal Industry Award have barely moved and in some cases worsened in the last four years.

R1.13 The submissions of the Commonwealth seek to dissipate the force of these propositions by claiming that the ACTU fails to pay sufficient attention to the dispersion of percentage increases under Federal agreements and between industries. An analysis of dispersed outcomes however confirms the ACTU proposition that generally award workers have fared worse than others in the community.

R1.14 In short, none of the material advanced by opposing parties warrants any change to the conclusions for which the ACTU contended regarding the wages of award workers in its original submissions.

Needs of the Low Paid

R1.15 The independent research on the needs of the low paid by the University of NSW Social Policy Research Centre confirms the need for significant increases in minimum wages to allow working Australian families a decent standard of living. Nothing in the opposing submissions demonstrates any flaw in that research. The Commonwealth simply repeats its earlier criticisms of the SPRC research without in any way responding to the material in the SPRC paper which dealt with those criticisms. AiG, in its submissions, simply ignores the research. ACCI and NFF essentially criticise the research on the basis that it is Sydney based. Two points may be made regarding this sort of critique:

- Workers in Sydney have to live on the Federal Minimum Wage no less than workers in other states or regions. In assessing the adequacy of the Federal Minimum Wage research based on living costs in Sydney is relevant, indeed it could be said critical, to an evaluation of whether the current level of the wage acts as a proper “safety net”;

- The SPRC report acknowledges the possibility of some regional variation in costs and provides some quantification in relation to housing of that likely variation. The ACCI and NFF attempt to provide a quantification of variations in regional costs. These attempts are problematic.

There will be no Adverse Economic Effects

R1.16 There is simply no credible evidence provided in the opposing submissions that any previous Safety Net Adjustment has had any adverse impact on economic growth, employment, inflation or productivity.

R1.17 It is apparent that the Commonwealth has, in effect, abandoned any argument that the ACTU claim would have any adverse macroeconomic effect. This much is evident from its failure to provide a costing of the ACTU claim to model its effects using the TRYM model. Neither the AiG or ACCI attempt any serious analysis of macroeconomic effects. Neither attempts a genuine macroeconomic costing. ACCI once again purports to cost the private sector impact of the claim but that costing is flawed in any event.

R1.18 Nor does any party provide credible evidence of any adverse economic impact arising from past Safety Net Adjustments:

- AiG relies on data which is four years out of date regarding growth in hours worked by low paid workers. This provides no basis on which to draw any conclusion regarding the effect of recent Safety Net Adjustments;
- ACCI and the RMI rely on survey evidence. The questions asked and methodology used in the surveys do not allow any proper conclusion to be drawn regarding adverse economic effects;
- The Commonwealth's analysis, as indicated above, relies extensively on the use of regressions with little merit;
- The NFF relies on modelling of an aggregate demand for rural labour. The modelling provides no evidence regarding the impact of Safety Net Adjustments and, in any event, contains errors of specification.

R1.19 It is two matters which the opposing submissions simply do not address which demonstrate most starkly their inability to provide cogent evidence of an adverse economic impact as a result of the ACTU claim:

- No party makes any attempt to dispute the ACTU's analysis of the combined effect of the 2002 Safety Net Adjustment and Superannuation Guarantee Charge increase referred to at Table 1.3 and paragraphs 4.8 to 4.10, 6.6, 6.14 and 6.15 of its original submissions. The combined effect of the 2002 SNA and SGC increases shows that an increase of the order of the ACTU claim is sustainable without adverse economic effects;

- No opposing party makes any mention of the fact that since the Pastoral Industry Award was varied for last year's Safety Net Adjustment only two Applications involving two employees (one for each Application) have been received seeking relief from the payment of that Safety Net Adjustment. This shows dramatically that even in adverse conditions moderate safety net adjustments have no significant impact on employment.

The ACTU Claim is Justified

R1.20 None of the opposing submissions provides any basis on which to refuse the ACTU claim. In many key respects the material in the opposing submissions confirms the fundamental basis for the grant of the claim, particularly in relation to the analysis of Australia's economic performance. The central propositions of the ACTU's case remain untouched by the submissions and evidence of those opposed to the claim.

R2 Award Workers and Award Industries

R2.1 In Chapter 2 of its original submissions the ACTU conducted an analysis of the economic performance of the three most award dependent sectors and showed that the performance of those sectors has been strong. Further, the ACTU showed that award workers are paid less than the rest of the community and in recent years had seen their wages fall behind others in the community with after tax award wages for the low paid having essentially remained the same since 1999.

The Economic Performance of Award industries

R2.2 No party other than the Commonwealth disputes any of the material in the ACTU's analysis of the economic performance of award dependent industries. The Commonwealth does not directly contradict any of the propositions for which the ACTU contends, rather suggesting that the ACTU submissions do not provide a full picture. ACCI engages in an entirely spurious attempt to correlate award dependency with higher inflation.

Output

R2.3 The Commonwealth deals with the ACTU's contentions regarding output growth in award dependent industries in two paragraphs: Commonwealth 3.30 and 3.31. In paragraph 3.30 of its submissions the Commonwealth suggests that the ACTU is "apparently positing a link between growth in the real value of the Federal Minimum Wage and output in these industries". This is a misconstruction of the ACTU's submission. The ACTU's original submissions showed that growth in output in each of the three most award dependent industries had exceeded the all industry average for the period 1996 to 2003 and had greatly exceeded real growth in the Federal Minimum Wage for that period. The Commonwealth's contentions simply have no bearing on this argument.

Profits

R2.4 At paragraphs 2.21 to 2.30 the Commonwealth criticises the ACTU's reliance on Gross Operating Profits data which showed that in Retail trade profits had increased 99 per cent in the period 1996 to 2003 and in Accommodation, cafes and restaurants Gross Operating Profits had grown 82.1 per cent in the same period.

R2.5 Essentially this critique is twofold:

- That the data relied upon by the ACTU only includes incorporated businesses with 20 or more employees; and
- That profits should be measured as a proportion of end year net capital stock.

Neither of these criticisms withstand scrutiny.

R2.6 The ABS publication on which the ACTU relied in its original submissions does only cover incorporated businesses with 20 or more employees. However, the Commonwealth suggestion that a superior means of examining industry profits is to use Gross Operating Surplus and Gross Mixed Income is simply without foundation. The Gross Mixed Income category in the National Accounts captures both returns to labour and returns to capital for unincorporated businesses. To add Gross Mixed Income to Gross Operating Surplus is not to provide any measure of profit, but rather provides a mixed measure of profits in all enterprises and returns to labour in unincorporated enterprises. Problems with the treatment of Gross Mixed Income are dealt with in *Productivity – general wages policies: Some problems arising from the recent growth in self-employment*, O. Covick (1981) 23 Journal of Industrial Relations at 3-22.

R2.7 The Commonwealth's claim for the superiority of this measure sits starkly at odds with the approach of the ABS which does not aggregate Gross Mixed Income to Gross Operating Surplus in its calculation of profit share in the National Accounts. Further, the Commonwealth's approach is contrary to that

of the Treasurer, who on release of the most recent National Accounts data referring to the profit share calculated using Gross Operating Surplus figures alone said:

> *In addition to that, the share of profits again increased, and the profit share of the economy at 25.6 per cent of total factor income is now the highest ever recorded in Australian history. That is a measure of the profitability of Australian companies in the current environment.*
>
> Treasurer, Mr Costello, Press Conference 3 March 2004

R2.8 The Commonwealth's approach of expressing its "profit" measure as a proportion of end year net capital stock is also conceptually problematic.

R2.9 The unqualified Commonwealth assertion that the industry profit rate is a 'superior measure of profitability' is squarely at odds with the expert literature on this matter.

> *" … as an indication of the realised rate of return the accountant's rate of profit is greatly influenced by irrelevant factors, even under ideal conditions. Any 'man of words' (or 'deeds' for that matter) who compares rates of profit of different industries, or of the same industry in different countries, and draws inferences from their magnitudes as to the relative profitability of investments in different uses or countries, does so at his own peril."*
>
> G C Harcourt, "The Accountant in a Golden Age", Oxford Economic Papers V 17, No 1 (Mar 1965), p 80

> *"The economic rate of return on an investment is, of course, that discount rate that equates the present value of its expected net revenue stream to its initial outlay. … it is [this rate] that is equalised within an industry in long-run industry competitive equilibrium and … equalised everywhere in a competitive economy in long-run equilibrium. It is an economic rate of return … above the cost of capital that promotes expansion under competition and is produced by output restriction under monopoly. Thus, the economic rate of return is the only correct measure of the profit rate for purposes of economic analysis. Accounting rates of return are useful only insofar as they yield information as to economic rates of return.*

> *... only by accident will accounting rates of return be in one-to-one correspondence with economic rates of return."*
>
> Franklin M Fisher and John J McGowan, "On the Misuse of Accounting Rates of return to Infer Monopoly Profits", American Economic Review V 73, No 1, (Mar 1983, pp 82 and 83)

See also:

J A Kay, "Accountants, too, Could be happy in a Golden Age: The Accountants Rate of Profit and the Internal Rate of Return", Oxford Economic Papers V 28, No 3 (Nov 1976)

F K Wright, "Accounting Rate of Profit and Internal Rate of Return", Oxford Economic Papers V 30, No 3 (Nov 1978)

Franklin M Fisher, "The Misuse of Accounting Rates of return: Reply" The American Economic Review, V 74 No. 3 (June 1984).

R2.10 The crux of the issue centres on differences between the economist's and the accountant's concept of the rate of return.

- The *economic* rate of return is (as expressed above in the quotation from Fisher and McGowan) a relationship between discounted expected *future* returns from an investment and the initial outlay.
- The *accounting* rate of return is (some variant of) a relationship between net revenues and the book value of assets in a *particular* year.

R2.11 The ABS capital stock series reflects an accounting framework. It does not seek to value the capital stock on the basis of discounted expected future returns. It is this series that the Commonwealth advocates be used in calculating industry profit rates. The Commonwealth here seeks to use the resultant series for precisely the purposes of economic analysis that Harcourt, and Fisher and McGowan, demonstrate to be perilous, inappropriate, and misleading – making comparisons across industries and over time [paragraph 2.30 and Chart 2.1].

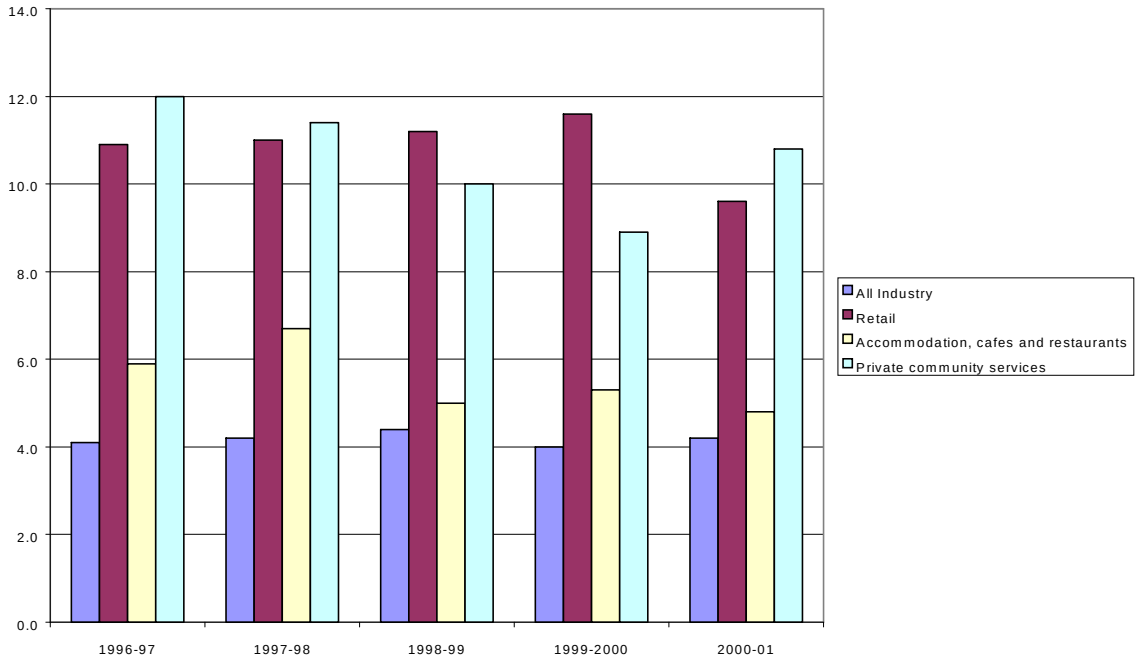
R2.12 This is no minor issue. In general the accounting rate of return is no useful or practical guide at all to profit rates (i.e. economic rates of return). In his 1984 reply Fisher identified the core problem succinctly, as follows:

> *"The numerator of the accounting rate of return in question is current profits; those profits are the consequence of investment decisions made in the past. On the other hand, the denominator is total capitalisation, but some of the firm's capital will generally have been put in place relatively recently in the expectation of a profit stream much of which is still in the future. While the economic rate of return is the magnitude that properly relates a stream of profits to the investments that produce it, the accounting rate of return does not. By relating current profits to current capitalisation, the accounting rate of return fatally scrambles up the timing.*
>
> *Moreover, this defect is not something that can be corrected by averaging, nor is it merely a start-up problem. It persists even in steady-state growth."* [p 509-510]

R2.13 Even if these matters are set to one side the ABS publication which does provide a measure of profits as a proportion of assets does not show the picture for which the Commonwealth contends. The ABS publishes an annual survey *"Business Operations and Industry Performance*" ABS Catalogue No. 8140.0 which covers all public trading and private employing businesses. The most recent data for that survey concludes with the financial year 2001. This survey thus provides profit data for a broader range of businesses than the material in the ACTU's original submissions but without the conceptual difficulties of the Commonwealth's Gross Operating Surplus and Gross Mixed Income aggregate figures.

R2.14 The survey provides a measure of return on assets, that is operating profits before tax as a percentage of the total book value of assets by industry. This is essentially the measure which the Commonwealth seeks to artificially construct from National Accounts data at paragraph 2.29 and 2.30 of its submissions. Figure R2.1 below shows the return on assets for the three most award dependent industries compared to the all industry average (figures are only available for the Private community services sector of Health and community services). The figure shows that for the period 1996-97 to 2000-01 the return on assets for the Retail, Accommodation, cafes and restaurants and Private community services industries exceeds the all industry average in every instance.

Figure R2.1: Rate of Return on Assets – Award Dependent Industries



Source: ABS Cat. No. 8140.0

Employment

R2.15 At paragraphs 5.38 to 5.46 of its submissions the Commonwealth attempts to deal with the ACTU's contention that employment growth in the three most award dependent industries for the period 1996 to 2003 has outstripped the all industry average and exceeded that of the three least award dependent industries for the same period. Essentially the Commonwealth's analysis relies on the alleged increases and falls in numbers of award only workers and agreement workers by industry as measured in the ABS Employment Earnings and Hours publications May 2000 and May 2002.

R2.16 This analysis suffers two serious flaws:

- It conflates notions of change in pay setting arrangements with notions of job creation and job loss. Thus, even if it were true, that award only employment in a particular sector had reduced this does not imply any "loss of jobs", rather it merely implies that there has been a change in pay setting arrangements in that industry;

- Further, and in any event, as the table below shows on the ACTU's calculations the movements in employment numbers of award only and agreement employees on which the Commonwealth relies for its analysis are virtually all attended by relative standard errors which make them too unreliable for use.

Table R2.1: Standard Errors on Movement estimates for Award Only and Agreement Employees

	Movement estimate number of award only employees 2000-2002	**Standard error**	**RSE %**	**Movement Estimate Number of agreement employees**	**Standard error**	**RSE %**
Mining	914**	3836	420	14578**	13144	90
Manufacturing	7159**	14663	205	-28572**	44154	155
Electricity, gas and water supply	-203**	321	159	-4434**	8332	188
Construction	16127**	15548	96	37776**	41976	111
Wholesale trade	-1018**	8894	873	7602**	35419	466
Retail Trade	-29991**	27175	91	-34314**	62483	182
Accommodation, Cafes and Restaurants	-3542**	10202	288	19963**	37043	186
Transport and Storage	-403**	10602	2630	34000**	35369	104
Communication Services	698**	1297	186	-15943**	8926	56
Finance and Insurance	-2125**	9172	432	1398**	31160	2229
Property and business services	-2678**	24256	906	117749**	70966	60
Government Administration and Defence	-33052	6057	18	56107**	33077	59
Education	-38426*	10330	27	41950**	27411	65
Health and community services	-36438**	23355	64	105686**	53037	50
Cultural and recreational services	-16039*	7049	44	16426**	31003	189
Personal and other services	-17594**	10480	60	6810**	27335	401

Source: Derived from unpublished data ABS Cat. No. 6306.0

** Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

* Estimate has a relative standard error or between 25% and 50% and should be used with caution.

R2.17 In short there is simply no basis to conclude that Safety Net Adjustments have had any adverse impact on employment growth in award dependent sectors. To the contrary, to the extent that the data on which the Commonwealth relies

shows anything it demonstrates the fallacy of its proposition that decent Safety Net Increases discourage agreement making.

R2.18 At paragraph 5.45 the Commonwealth asserts that year average hours worked in Accommodation, cafes and restaurants experienced declines of 5.4 per cent in 2001-02 and 1.4 per cent in 2002-03 and that year average employment also declined over these periods by 1.1 per cent and 1.9 per cent respectively. It is not surprising that some decline occurred in the employment performance of Accommodation, cafes and restaurants following the 2000 Olympics and in light of the combined effects of the September 11 events, the war in Iraq and the SARS outbreak. Nonetheless, as Figure 2.6 in the ACTU's original submissions shows, since November 2002 employment in this sector has been on a strong upward trend and now exceeds its previous Olympics inflated highs.

Inflation

R2.19 The ACCI submission presents data purportedly proving a positive relationship between award rates of pay and inflation:

> *Data on award coverage by state and inflation by capital city indicates a positive correlation between the proportion of total employees whose pay is determined by award only and the rate of inflation.*
>
> *…*
>
> *Data by industry shows a similar relationship. The percentage of employees in industries whose earnings are set by award only is positively correlated with the rate of inflation for the goods produced in those industries.*
>
> [ACCI Submission – 2004 Safety Net Review page 5-7 – 5-8]

R2.20 ACCI then presents two graphs showing this relationship on pages 5-8 and 5-9.

R2.21 However, this analysis of award coverage and inflation is fundamentally flawed for the following reasons:

- The use of CPI December 2003 year end figures seems totally arbitrary and chosen because it achieves the desired results.
- There are many influences on inflation such as consumer demand and increases in wages elsewhere in the economy just to name a few. However, ACCI have not controlled for any of these factors.
- The data for inflation on the goods and services produced in industries that have a high concentration of award only employees is suspect and very selective. For example the inflation for the construction industry seems to be data for housing, which includes property rates and utilities; one has to wonder how inflation in property rates (which are set by government agencies) is related to inflation on goods and services produced in the construction industry.
- Finally, Accommodation, cafes and restaurants is the highest award only industry and yet it is conspicuously absent from the ACCI analysis (once again it seems to be a case of picking winners).

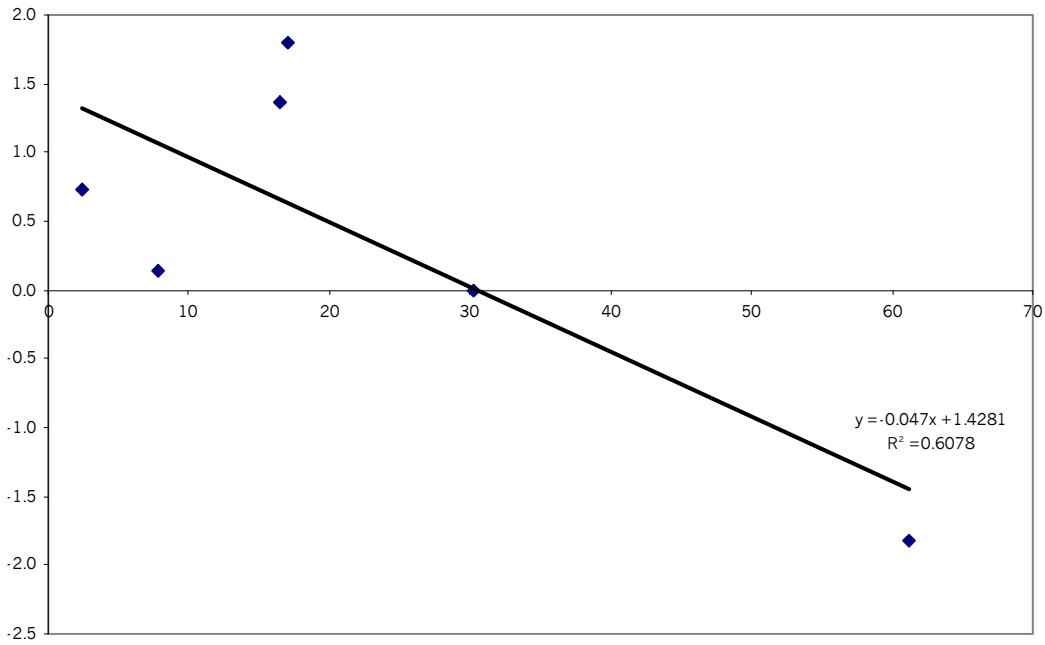
R2.22 Just to illustrate the point, Table R2.2 and Figure R2.2 below show that by removing Cultural and recreational services; adding in Accommodation, cafes and restaurants and using the percentage change in year end CPI for September 2003 there is a negative relationship between award coverage and inflation. The ACTU does not contend for such a relationship but it shows the speciousness of the ACCI approach.

Table R2.2: Industry Award coverage and Inflationary Outcomes

Industry	Award Coverage (%) May 2002	Year-ended inflation (%) September quarter 2003
Health and Community Services	30.3	0.0
Construction	17.1	1.8
Transport and storage	16.4	1.4
Accommodation, Cafes and Restaurants	61.2	-1.8
Education	7.8	0.1
Communication	2.4	0.7

Source: ABS Cat. Nos. 6306.0 and 6401.0.

Figure R2.2: Industry Award coverage and Inflationary Outcomes



Productivity

R2.23 The Commonwealth devotes a whole chapter and an Appendix in its submissions to an attempt to demonstrate that there is a negative link between award coverage and productivity. At the outset it is important to note that even if this analysis were accepted the Commonwealth have not shown:

- that real unit labour costs in award dependent industries have not decreased, which was the ACTU's original proposition in its submissions;

or

- that Safety Net Increases prevent productivity improvement.

R2.24 At paragraph 4.52 the Commonwealth criticises the ACTU for deflating C14 by CPI rather than price movements of the specific goods and services produced by the three most award reliant industries. The Commonwealth then turns its attention to movements in nominal wages instead. This is riddled with error. In comparing nominal wages growth with productivity growth the Commonwealth is comparing a nominal measure with a "real" measure – productivity growth numbers are obtained by measuring real output and dividing by number of hours worked to produce that output. Even if nominal unit labour costs were a measure that had any intrinsic value the Commonwealth simply have not properly calculated them.

R2.25 In fact, the Commonwealth's calculation of "nominal unit of labour costs" is an indicator of its desperation to avoid making any concession regarding improvements in productivity in award sectors. In its original submissions in 2003 at paragraph 8.37 the Commonwealth said that:

> *"If employees and industries with lower productivity growth receive wage increases based on high aggregate productivity growth then real unit labour costs in the low end productivity industries will increase as a consequence. In the present competitive environment, the rising real unit labour costs would manifest as diminishing profit margins…and employment [emphasis added]."*

It was only when the ACTU pointed out that real unit labour costs had indeed fallen in award dependent industries that the Commonwealth switched its focus to "nominal" unit labour costs.

R2.26 The use of CPI to deflate wage movements is a practice which the Commonwealth itself utilises in its submissions: see Chart 3.4 and 2003 submissions Figures 3.2 and 3.3. In any event the ACTU has obtained implicit price deflators for the three most award dependent industries for the period 1996 to 2003 from the ABS National Accounts data. This allows a comparison of the movements in real wages with movements in productivity

growth for the period (on the basis which in this instance the Commonwealth asserts is appropriate) or alternatively a genuine comparison of nominal wages growth with nominal labour costs growth. In each instance it can be seen that unit labour costs have fallen in the three industries in the period.

R2.27 As Table R2.3 below shows in the Accommodation, cafes and restaurants and Retail trade industries growth in the Federal Minimum Wage has been less than growth in productivity whether measured on a real or nominal basis. Whilst this is not the case for the Federal Minimum Wage in the Health and Community Services sector it remains true if award only average hourly ordinary time earnings for non-managerial employees in that sector are considered. That is unit labour costs (whether real or nominal) in that industry have fallen in the period 1996-2003.

Table R2.3: Award Reliant Industry Unit Labour Costs

Industry	Real Increase Wages	Real Increase Productivity	Nominal Increase Wages	Nominal Increase Productivity
Accommodation cafes and restaurants	9.4%	14.6%	28.3%	34.4%
Retail Trade	15.6%	16.6%	28.3%	29.4%
Health and community services (1)	15.0%	9.1%	28.3%	21.7%
Health and community services (2)	5.3%	9.1%	17.4%	21.7%

Source: ABS Cat No. 5204.0 published and unpublished data.

1. "Real" wages deflated by implicit price deflators for total output for industry.
2. Nominal productivity calculated using implicit price deflators for total output for industry.
3. Accommodation, cafes and restaurants, Retail trade and Health and community services (1) all use growth in the Federal Minimum Wage – real wages growth will actually be less than this. Health and community services (2) uses non-managerial AHOTE for award only employees from that industry (EEH May 2002 ABS Cat. No. 6306.0) and the percentage increase in the weekly award rate equivalent to that rate of pay.

R2.28 On this basis there is simply no reason to conclude that Safety Net Adjustments have had any negative impact on productivity growth in the three most award dependent industries.

R2.29 In Appendix A of its submissions the Commonwealth conducts a series of regression analysis aimed at establishing a negative linkage between productivity performance and award coverage. This analysis is highly flawed.

R2.30 Two general points may be made regarding the Commonwealth's approach. The first point to note is that statistical correlation does not imply causation. It may for example be possible to get statistically significant relationships for a given period between the productivity performance of an industry and the number of letters in that industry name. Secondly the regressions regarding productivity do not control for a range of factors such as the impact of technology change or national competition policy. An analysis which attempts to explain the increase in productivity in the communications sector without paying any regard to these issues is hardly compelling.

R2.31 Professor W. Mitchell, Professor of Economics and Director, Centre of Full Employment and Equity at the University of Newcastle has provided the ACTU with a brief critique of the regression analysis used by the Commonwealth. His observations are as follows:

(a) *Unfortunately, diagnostics relating to the estimated residuals and therefore the statistical validity of the models presented, are not reported in any of the five models. It is not accurate to conclude that a model is "robust" based on some value of the coefficient of determination (R^2 value). The author(s) of Appendix A, repeatedly, to give an impression of statistical authority, claim that "the diagnostic statistics show that this is a robust model". The classic problem of spurious regression (where there is no meaningful relationship at all) occurs in situations when the R-squared values are close to unity (their maximum). Professional econometricians do not readily rely on the R-squared value as a basis of assessing the "robustness" of their models. This task is rather achieved through the analysis of the residuals of each regression. This requires reporting of diagnostic statistics pertaining to serial correlation, heteroscedasticity, autoregressive conditional heteroscedasticity, normality, general misspecification, within-sample stability, and*

predictive failure to name the more significant tests that should be conducted. The author(s) choose to adopt what I would consider to be an "unprofessional" reporting practice by failing to fully disclose the advanced diagnostics arising from their estimation. In that sense, there is no way that a reader can conclude that the models are meaningful in any way at all.

(b) *Relatedly, one would have to have deep suspicions about some of the results. Model A is based on 16 observations, Model B 89, Model C 7, Model D 7 and Model E 11. Model B aside, no professional econometrician would attempt to conduct inference on samples below 30 observations at least. The distributional properties of the estimates in such small samples is basically unknown and so standard statistical tests are unlikely to be of any guide or use.*

(c) *There is also a strange regard for some of the more recent developments in time series econometrics. For example, in Model A we have two variables that are in change form (over 2002-2000) and another which is in level form as at 2000. The claim is that the level variable is included to model declines in award coverage over time. We might suspect that variable to be trending although without formal testing we could not be sure whether this is trending deterministically or stochastically, a difference that is not trifling for the validity of the regression specification.*

The change variables are most likely stationary and it would be a very strange model that could mix stationary variables in change form with a trending variable in level form. The fact that no discussion of the underlying properties of any of the variables used is provided also violates professional best practice and provides no sense of security about any of the results generated.

(d) *Points (b) and (c) would suggest that in the main, no inference can be conducted using the results from the reported regressions. However, even if those problems were addressed (an impossibility) a major*

problem with the specifications is overlooked (seemingly ignored completely) by the author(s). For the regression results to have validity, there can be no simultaneity between the left hand side and right hand side variables. This is referred to as the "endogeneity" problem and if it occurs any regression estimates are unable to be used for reliable inference.

Take Model C as an example. Here we have the change over 13 years in productivity (with no clue of how it is measured) regressed on the % point change in award coverage between 1990 and 2002 at the industry level. A stunningly (and inappropriately) low 7 observations is used. The author(s) conclude that "the results of the regression show that there is a significant relationship between these two variables."

But which variable is driving which? In a fully specified model, of the type that the author(s) would surely agree with, the two variables are jointly determined. One cannot infer causality from the model presented because there has not been adequate attention placed on the endogeneity problem. No testing is reported to allay the fears of the professional econometrician that the results are not biased in the extreme. This problem is not confined to Model C. In fact, all the models probably suffer from this deficiency and it is professional best practice to conduct formal endogeneity tests and then use an Instrumental Variables estimator to address the likely bias.

(e) *There are other likely problems in the measurement of some of the variables used. For example, in Models C and D, one of the explanatory variables is the percentage point change in award coverage between 1990 and 2002. To be meaningful in any way the award coverage definitions applying in both years would have to be commensurate. It is my understanding, after consulting the relevant ABS definitions (Cat 6306.0 and Cat 6315.0), that this is not the case and the definitions of award coverage differ markedly between start and end period used to construct the percentage point change. This introduces measurement errors into the analysis which are not considered by the author(s). How*

have they dealt with that source of bias? Why is weighted least squares suitable in this case? Professional best practice would suggest that measurement error bias has to be dealt with explicitly in the estimation process.

(f) Another source of measurement error arises in the sampling accuracy of the underlying data itself. The ABS provided standard errors for the data used and some simple computations indicate that the errors can be as large as 25 per cent on this data. How can the author(s) assure us that the "statistically significant" results allegedly found by them are not spurious and driven by measurement errors in the data.

In summary, no professional econometrician would attempt to draw inference from the regressions presented for the reasons presented above. In the professional literature, this sort of analysis would be rejected immediately as amateurish and in violation of professional practice.

R2.32 Further to point (f) above Tables A.1 and A.2 present results of regressions where the dependent variable is the change in award coverage between 2000 and 2002 as measured by the Employment Earnings and Hours surveys, ABS Catalogue No. 6306.0. In the case of Table A.1 this is changes in award coverage of full time and part time workers by industry and in the case of Table A.2 changes in award coverage of full time workers by industry and occupation. As the table below shows relative standard errors on change in award coverage by industry are high. In all but cases greater than 25 per cent and in all but cases greater than 50 per cent.

R2.33 It is not possible to isolate from the data supplied by the Commonwealth on which 89 observations it relied for its analysis in Table A.2 but analysis of a broader set of observations suggests that about three quarters of the movement estimates on proportions of full-time award workers by industry and by occupation have relative standard errors greater than 50 per cent.

Table R2.4: Standard Error on Movement in Award Only Proportions

	Incidence of Award only Employees			Standard Error		
	May-02	May-00	Change	Level Estimate 2002	Movement estimate	RSE Movement estimate
Mining	**5.9	*5.9	0.0	3.8	5.3	N/a
Manufacturing	12.5	11.4	**1.1	1.2	1.7	152.7
Electricity, gas and water supply	*1.1	*1.4	**-0.3	0.5	0.7	233.3
Construction	17.1	15.0	**2.1	2.9	4.1	193.3
Wholesale trade	11.7	12.1	**-0.4	1.4	2.0	490.0
Retail trade	34.2	34.9	**-0.7	1.8	2.5	360.0
Accommodation, cafes and restaurants	61.2	64.7	**-3.5	1.8	2.5	72.0
Transport and storage	16.4	18.4	**-2.0	2.3	3.2	161.0
Communication services	*2.4	*1.5	**0.9	0.9	1.3	140.0
Finance and insurance	*4.9	5.6	**-0.7	2.2	3.1	440.0
Property and business services	18.1	20.7	**-2.6	1.7	2.4	91.5
Government administration and defence	6.0	15.3	-9.3	1.1	1.5	16.6
Education	7.8	13.6	*-5.8	1.1	1.5	26.6
Health and community services	30.3	37.4	*-7.1	1.9	2.7	37.5
Cultural and recreational services	10.9	18.9	*-8.0	2.4	3.4	42.0
Personal and other services	22.2	27.1	**-4.9	2.5	3.5	71.4

** estimate has a relative standard error greater than 50% and is considered to unreliable for general use

* estimate has a relative standard error of between 25% and 50% and should be used with caution

Source: ABS Cat. No. 6306.0

R2.34 As noted in point (e) above Tables A.3 and A.4 conduct regression analysis where an independent variable is the percentage point change in award coverage 1990 to 2002. The definition of award coverage in the May 1990 publication on which the Commonwealth relies (ABS Cat. No.6315.0) is: "*covered by awards, determinations and collective agreements".* Unpublished data also allowed the identification of employees in receipt of overaward payments. The "change" in award coverage utilised by the Commonwealth is the difference between award coverage less overaward employees as measured in May 1990 and award only employees as measured in May 2002. This is completely misleading as the persons covered by the award coverage definition utilised by the Commonwealth for May 1990 would be found in the award only category, the collective agreements category, and the individual agreements category of the May 2002 survey. The May 1990 data is also heavily influenced by the presence of significant paid rates awards which are

of an entirely different character to the vast bulk of awards underpinning the May 2002 data.

R2.35 In summary then despite the extensive efforts of the Commonwealth in this regard nothing is demonstrated in the Commonwealth's submissions which would weaken the force of the ACTU's proposition that real unit labour costs have declined in the three most award dependent industries over the period of Safety Net Adjustments or the Commission's conclusion in its decision last year that there is no necessary association between award coverage, Safety Net Increases and productivity growth.

Award Workers

R2.36 No party disputes the evidence presented by the ACTU at paragraphs 2.16 to 2.19 that award only workers are paid less than others in the community. The positions of the Commonwealth and employer groups in this Case would result in the real wages of all award workers being cut.

R2.37 ACCI misconstrue the unpublished Employee Earnings and Hours Adjusted Weekly Time Earnings data. As the headings to the ABS data indicate, that data refers to all adults whether employed full time or part time and self evidently (from the heading to the Table) applies to casual employees. The purpose of providing weekly total earnings for all employees is to give an indication of the actual weekly wage earned by award only employees. The data also shows the absurdity of ACCI's constant and repetitive reference to award only employees earning more than $1,000 per week. Only 3 per cent of the award only workforce have earnings of this amount.

R2.38 At paragraph 6.53 ACCI rely on the Adjusted Weekly Total Earnings data to calculate the percentage of award employees who earn less than the trade rate. This is disingenuous. ACCI were also provided with adjusted Average Hourly Ordinary Time Earnings data which provides a proper basis for this calculation. This data shows 40 per cent of award only employees receive less than the trades rate (as at 2002).

R2.39 No party disputes that average increases for award workers last year were less than movements in all other key wage measures nor that in every year but 2002 the average increase in award rates has been less than the average movement in the Wage Cost Index for June 1999 to June 2003. The Commonwealth criticises the ACTU for comparing average increases for award only employees with average increases for others in the community. It says that this does not take sufficient account of dispersion in wage outcomes.

R2.40 The Commonwealth relies on data regarding wage outcomes under Federal Certified Agreements current as at September quarter 2003 to show that substantial numbers of employees under those agreements received wage increases of 3 per cent or less. This is so, however it is also apparent from the data that more substantial numbers of employees under Federal agreements received wage outcomes of 4 per cent or greater. The corresponding picture for award only employees is worse. No award employee received a wage increase of 4 per cent or greater (as a result of last year's Safety Net Adjustment the increase in the Federal Minimum Wage was less than 4 per cent) and based on EEH adjusted AHOTE data approximately 49 per cent of all award only employees received an increase of 3 per cent or less compared to the much lower proportion on Federal Certified Agreements. Thus even when the focus moves way from average outcomes to dispersed outcomes the ACTU's proposition that award only workers have generally fared worse than the rest of the community holds.

R2.41 The Commonwealth also relies for its contention in this regard on dispersion in industry average annualised growth rates in the Wage Cost Index. Tellingly these data provide further confirmation for the ACTU's proposition with the two most award dependent industries, Retail trade and Accommodation, cafes and restaurants recording the lowest outcomes. As we noted in our original submissions the same is true if the focus shifts to movements in the Wage Cost Index for occupations. The most recent data indicating that, over the life of the Wage Cost Index, Elementary clerical sales and service workers, where

the award only concentration is more than 40 per cent, have had the lowest increase in their wage rates of any occupational group.

R2.42 The Commonwealth also relies on distribution of employment by full time wage by method of pay setting data. In two of the three instances that data shows that even within the particular industry (Retail trade or Health and community services) award workers are significantly lower paid than their collective or individual agreement counterparts.

R2.43 In Chart 3.5 the Commonwealth compares movements in the Federal Minimum Wage, C10 and the Wage Cost Index. As is evident from that chart movements in C10 have broadly tracked movements in the Wage Cost Index since September 1997. If the Wage Cost Index remains at its current level of 3.7 per cent (seasonally adjusted) a $20 increase in C10 would be necessary for the movement in that wage rate to keep pace with the Wage Cost Index. In fact, the ACTU's evidence regarding needs of the low paid shows the case for increases in lower award rates of pay substantially beyond movements in the Wage Cost Index.

R2.44 No party disputes the ACTU's analysis of the movement in real after tax wage rates for the classifications C14 through to C10. As the ACTU indicated in its original submissions the real after tax wage for C14 has barely increased since 1999 and wage rates for C11 and C10 are currently worth less in real terms after tax than they were in June 1999. Interestingly the Commonwealth's Chart 3.4 shows essentially the same picture in relation to the before tax Federal Minimum Wage for the same period. It is noteworthy that the Commonwealth focuses on the increase in real value of the Federal Minimum Wage since 1990 rather than a more recent period.

Conclusion

R2.45 Nothing in the analysis of the opposing submission provides any basis for a departure from the conclusion for which the ACTU contended in its original submissions. That is that award workers have contributed their fair share to Australia's growth in productivity but deserve a better share in terms of their wages.

R3 Wages Update

Introduction

R3.1 Since the ACTU submitted its original submission a range of new ABS data has been released showing wage movements.

Table R3.1: Annual percentage increases in key wage movements.

	AWOTE	AWE	AWE (total earnings)	WCI	AENA
Original Submission	6.1	6.2	5.4	3.6	3.5
Reply submission	5.7	6.1	5.6	3.6	3.6

Source: ACTU National Wage Case Written Submission, 28 January 2004, ABS Cat. Nos., 6302.0, 6345.0 & 5206.0

R3.2 As it can be seen from Table 3.1 the new data shows a similar picture to that presented in the ACTU's original submission. This data confirms our original submission that the rest of the community has fared better than award only workers as each of the key wage movements have recorded a higher annual percentage increase than that received by award only workers, who received an annual increase of 3.1 per cent as a result of last years decision.

Average weekly earnings

R3.3 Table 12 of the ACTU Reply Composite Exhibit contains the most up to date Average Weekly Earnings data, released on 28 February 2004 for the November quarter 2003.

R3.4 The Average Weekly Ordinary Time Earnings (AWOTE) measure for full-time adult employees increased by 1.1 per cent during the November quarter 2003, this is a fall of 0.2 percentage points from the August quarter 2003. Over the year to November 2003 AWOTE has increased by 5.7 per cent.

R3.5 The Average Weekly Total Earnings (AWE) for full-time adults total earnings increased by 1.3 per cent for the November quarter. This represents a

slowing of 0.2 percentage points from the August 2003 quarter and a 6.1 per cent increase over the year to November 2003.

R3.6 Growth in Average Weekly Total Earnings (AWE total earnings) for all employees was in line with AWE at 1.3 per cent for the November 2003 quarter; this represents an increase of 5.6 per cent for the year to November 2003.

Wage Cost Index (WCI)

R3.7 ACCI go to great lengths in their submission to stress that the original series movement in the WCI should be used in regards to any consideration of the effects of SNA on wage costs. However, the SNA is not the only seasonal effect on wages as the ABS points out:

> *Important factors determining the seasonality of the WCI are the timing of effect of Australian workplace agreements and certified agreements, the length of these agreements, and the timing of significant centralised wage hearings that impact on award rates of pay such as the "Safety Net Review" conducted by the Australian Industrial Commission.*
>
> [ABS Cat. No. 6345.0 Wage Cost Index, page 22]

R3.8 As the ACTU noted in its original submissions a large number of federal enterprise agreements are negotiated during the September quarter and it would be difficult to differentiate the impact that each of the separate methods of pay setting would have on the WCI figures. Hence the importance of the seasonally adjusted and trend series.

R3.9 Growth in the WCI has been steady at approximately 0.9 per cent for the past eight quarters to December 2003 and a moderate 3.6 per cent increase for the year to December 2003.

R3.10 After the release of the WCI figures economists had the following to say:

> *"Given the progressive tightening in the labour market over the last 18 months, wage and labour costs currently remain relatively well behaved at an aggregate level,"*
>
> *"At its current annual pace, the wage cost index remains firmly in the Reserve Bank of Australia's comfort zone in terms of wages growth."*
>
> Su-lin Ong, Senior Economist, RBC Capital Markets
>
> *[www.theage.com.au,* Wage growth remains in check: economists, 25 February 2004]

and

> *"The wage cost index was not sufficiently high in our view to bring forward a rise in official interest rates at next week's RBA board meeting,"*
>
> Stephen Halmarick, Director economic and market analysis Citigroup,
>
> [The Australian Financial Review, Wage rises put focus on rates, 26 February 2004, page 5]

Average Earnings on a National Accounts Basis (AENA)

R3.11 Average non-farm compensation per employee, as measured in the ABS quarterly National Accounts, increased by 0.9 per cent during the December quarter 2003, to be 3.6 per cent higher than at the same time last year.

Management and Executive Remuneration

R3.12 ACCI encloses its Chapter on executive salaries from last year's wage case as an appendix to its submissions.

R3.13 Chapter 3 of the ACTU submission of 28 January 2004 provides information on pay increases for different methods of pay settings and wage movements generally in the community. Management and executive remuneration is just one area of wages growth given consideration. The material assists the Commission in assessing the "living standards generally prevailing in the Australian community".

R4 The ACTU Claim is Moderate

R4.1 In its original submissions the ACTU contended for four key propositions regarding the moderateness of its claim:

- That it will have a negligible impact on aggregate earnings of 0.1 per cent;
- That it provides an average increase for full time award workers of 4.5 per cent and an average increase for all award workers of 4.7 per cent;
- That it will result in an average increase for award workers in the five year period 2000 to 2004 (inclusive) of 3.4 per cent, the same as the average annual increase in the Wage Cost Index for the period June 1999 to June 2003; and
- That the claim will provide a real increase improving the real value of the after tax wage income of the lowest paid.

R4.2 No opposing party provides any evidence disputing any of these claims.

Costing the Claim

R4.3 No other party in these proceedings provides a genuine macroeconomic costing of the ACTU claim. Of particular significance is the complete abandonment by the Commonwealth of any such costing. In recent years it has become apparent that the Commonwealth's macroeconomic costing (subject to its failure to adjust for safety net flow) essentially produces the same result as that of the ACTU and its macroeconomic modelling of the net cost of the ACTU claim has produced a negligible impact on growth, inflation, employment and unemployment. The fact that the Commonwealth does not produce a macroeconomic costing in these proceedings is, in effect, a tacit admission that the macroeconomic impact of the ACTU claim is as the ACTU says it is.

R4.4 No party in its opposing submissions disputes the ACTU's comparison of the gross and net impact of its claim with the corresponding impact for the combined effect of the Safety Net Adjustment and Superannuation Guarantee Contribution increase in 2000 and 2002. As the ACTU submitted in its original submissions the comparability of the ACTU claim and the combined effect of the SGC and SNA in the years 2000 and 2002 is particularly significant in light of the Commission's finding that the 2002 Safety Net Increase had no adverse aggregate economic impact.

R4.5 Once again ACCI purport to cost the impact of the ACTU claim on the private sector and provide only a gross estimate of their calculated impact. As the Commission concluded last year:

> *"As such, [the ACCI costing] does not provide an economy wide estimate of the addition to wages costs resulting from the ACTU's claim".*
>
> See: Safety Net Review Wages 2003 PR002003 at 116

R4.6 The ACCI costing of the indirect "flow on effect" of the ACTU claim is even more problematic. Whilst ACCI have endeavoured to circumvent some of the criticisms of their earlier costings which provided no indication of the proportion of employees who allegedly received a Safety Net Increase it is apparent that the ACCI's new methodology ultimately suffers from precisely the same defect. The ACCI survey asked employers who passed on the Safety Net Increase to estimate the proportion of their employees who received the Safety Net Increase indirectly but the ACCI methodology provides no mechanism for weighting these responses by the individual firm's proportion of total employment. In effect, a firm with two employees has the same weighting, so far as employment effects are concerned, as a firm with 1,000 employees. More recently ACCI has supplied the ACTU with "weighted" survey results. This weighting does not circumvent the problem which the ACTU identifies. The below illustration shows the dangers of relying on proportion of firms for the calculation of employment effects.

R4.7 Suppose there are only two firms in the survey, one with two employees both of whom indirectly receive the Safety Net Increases flow on and the other with 998 employees, none of whom receive the Safety Net Increases as flow on. The true proportion of employees who received the Safety Net Increase indirectly as flow on is 0.2 per cent but the ACCI calculation, as shown in the table below, provides a proportion of employees receiving the Safety Net Increase as 50 per cent. This is because the ACCI have weighted by proportion of firms rather than proportion of total employment.

Table R4.1: The Fallacy Underlying Table 4 of ACCI – Chapter 10

Proportion of Employees who Received the Safety Net Increase indirectly as a flow on	Proportion of firms who passed on the Safety Net Increase	Proportion of employees receiving Safety Net Increase (weighted)
0	50.0	0.0
1-25	0	0.0
26-50	0	0.0
51-75	0	0.0
76-99	0	0.0
100	50.0	50.0
Total		50.0

R4.8 The ACTU's example is not merely a theoretical problem. The skewed distribution of employment by firm size is well known. For example, ABS data shows that whilst small businesses (employing less than 20 employees) account for more than 90 per cent of businesses, their proportion of employment is less than 50 per cent.

R4.9 Further, the ACCI submission itself demonstrates the flaws inherent in its methodology. Using the same methodology as ACCI uses to calculate the proportion of employees who received the Safety Net Increase indirectly the proportion of employees receiving the Safety Net Increase directly can be calculated. As the table below shows this calculation provides an estimate of employees receiving the safety net directly which is wildly different from the 24.6 per cent of private sector employees revealed by the ABS Employee Earnings and Hours Survey.

Table R4.2: Using ACCI's methodology to calculate the proportion of employees who receive an increase in wages as a direct result of the Safety Net decision

Proportion of Employees who Received the Safety Net Increase directly	Proportion of firms who passed on the Safety Net Increase	Proportion of employees receiving Safety Net Increase (weighted)
0	42.1	0.00
1-25	8.3	1.04
11.0	7.6	2.85
51-75	11.0	6.88
76-99	12.8	11.20
100	18.3	18.30
Total		**40.27**

R4.10 In short, whilst the ACCI has attempted to rectify the defects of its costing it has still failed to weight appropriately for employment numbers rather than firm numbers. This fundamental flaw stands quite apart from any criticisms of the survey methodology itself which are dealt with in Chapter 6 of these submissions.

R4.11 After ACCI had filed its materials the ACTU asked it to provide further information regarding its survey results. One request was for confirmation that its survey results were unweighted. On 3 March 2004 ACCI responded to this request by confirming that its original data was unweighted but then producing new "weighted" data.

R4.12 In no sense was this weighting process unavailable to ACCI before the filing date for its submissions – indeed ACCI advised the ACTU that it hadn't thought to weight the data until the ACTU enquired whether it was.

R4.13 The new "weighted" data is no better than the unweighted data. According to ACCI the weighting is not by reference to the proportion of employment of individual respondents in the total sample but rather by reference to the concentration of award only employees in particular industry sectors. This process is bizarre and has no cogent mathematical underpinnings. A normal weighting process would require proportions to have the same denominator and sum to 100 per cent. The concentrations of award only employees have different denominators and as a result don't sum to anything like 100 per cent.

The Level of Increase for Award Workers

R4.14 No party disputes the material advanced by the ACTU in its original submissions regarding the quantum of the average increase for award workers and the increase in selected Metal Industry Award classification rates as a result of the ACTU claim.

R4.15 The Commonwealth, in its submissions, states that the only appropriate comparator is movements in award wages with the Wage Cost Index. As the ACTU has stated previously the Wage Cost Index is an appropriate comparator when considering the impact of the ACTU claim on wage costs but comparisons with earnings measures are appropriate when a consideration of living standards is apposite.

R4.16 The only other relevant matter in this regard is the Commonwealth's submission that the level of increase in the ACTU claim will result in a disincentive to bargain. In this regard the following points may be made:

- Chart 3.6 and the regressions in Table A.1 and A.2 regarding the relationship between changes in wages and changes in award coverage are devoid of merit. To the extent that changes in award coverage show anything they show, there is no disincentive to bargain;

- Charts 3.10 and 3.11 actually show that past Safety Net Increases have meant that generally speaking the Federal Minimum Wage has increased by less than average annualised wage increases for employees under agreements and C10 has increased by percentage increases not much above the lower quartile increases for average annualised wage increases under Federal Wage Agreements. Note in this respect this is a comparison of percentage increases and tells us nothing regarding actual dollar amounts;

- The Commonwealth does not and cannot assert that past Safety Net Adjustments have had any demonstrable impact on the spread of bargaining.

R4.17 In Chapter 9 of its submissions Ai Group characterise the ACTU claim as excessive. This chapter amounts to little more than a rehash of Ai Group's economic arguments in this Case and provides no analysis of the increase sought by the ACTU in terms of its macroeconomic impact, its average increase for award workers or the increase for selected Metal Industry classifications.

Conclusion

R4.18 The opposing submissions provide no basis for a departure from the central conclusions for which the ACTU contended in its original submissions. The ACTU claim is moderate.

R5 Economic Conditions and Prospects[1]

R5.1 All recent economic data points to a strong and robust economy with the near and medium term outlook continuing to be positive. In the last 6 months the annualised rate of growth has exceeded 5%, profits and productivity remain high, prices and wages growth is contained and strong employment growth has seen unemployment hover around 22 year lows. Even before the release of the December National Accounts ACCI and the Commonwealth acknowledged in their submissions that economic conditions are better than they were twelve months ago. ACCI went on to say at paragraph 3.4 that "*Looking forward we see the prospect for better times*".

R5.2 In January 2004, ACCI had the following to say about the state of the Australian economy:

> *The Australian economy is a phenomenon. Over the past year it has been the strongest economy in the entire developed world. It has continued to succeed in spite of what may have been the most severe drought of the past hundred years, in spite of a protracted international downturn, in spite of having high real interest rates and in spite of the rising value of the dollar.*
>
> *The Australian economy, in spite of everything, has simply continued to grow. Investment expectations, although much lower than last year, remain positive. The unemployment rate has fallen below six per cent for the first time more than a decade. Inflation remains well contained. Real earnings continue to rise.*
>
> [ACCI, Keeping the Economy on Track, ACCI Review No. 107]

R5.3 This assessment of current economic circumstances and outlook makes all the more bizarre the positions for which employer groups and the Commonwealth contend in this Case. Patently last year's safety net adjustment has had no adverse impact on aggregate data, it is accepted that this year the economy is stronger than last year and that looking forward things are likely to get better and yet employer groups and the Commonwealth

[1] As in earlier submissions, the figures referred to in this chapter are trend numbers, unless otherwise specified. A more complete update of most of the relevant data has been supplied at Tag 1 of the ACTU Reply Composite Exhibit.

contend in these proceedings for amounts substantially below those awarded in last year's Case.

Economic Growth

R5.4 The December quarter 2003 National Accounts figures were released by the ABS on 3 March 2004. The data confirms that Australia's economic conditions continue to prosper and that factors such as SARS and the drought have now abated.

R5.5 The results show that the economy grew by a very healthy 1.4 per cent seasonally adjusted (1.1 per cent trend) for the quarter and a very solid 4.0 per cent seasonally adjusted over the year (3.5 per cent trend), largely reflecting growth in domestic consumption and strong growth in the rural sector.

R5.6 Abstracting from the volatility of the farm sector, the non-farm GDP grew by 0.8 per cent for the December 2003 quarter to be 3.0 per cent higher over the year.

R5.7 At paragraph 3.19 ACCI refer to a downward trend in growth in the market sector. Recent National Accounts data shows growth in that sector on an upward trend since March 2003. GDP for the market sector grew by 3.8 per cent for the year to December 2003.

Table R5.1: Agricultural Production, Chain volume measures (a): Seasonally Adjusted

	2002-03				2003-04			
	Sep $m	Dec $m	Mar $m	Jun $m	Sep $m	Dec $m	Mar(b) $m	Jun(b) $m
Outputs	9,668	8,300	8,203	8,410	9,249	10,354	10,294	10,339
less inputs	4,008	3,677	3,646	3,692	3,873	4,265	4,185	4,174
Gross agricultural product at market prices	5,660	4,623	4,557	4,718	5,376	6,089	6,109	6,165
Gross domestic product	182,704	182,920	184,519	185,164	187,663	190,200	na	na

Notes:
na Not available
(a) Reference year for chain volume measure is 2001-02
(b) Projections based on ABARE forecasts

Source: ABS Cat. No. 6305.0

R5.8 Table 5.1 shows the actual and projected values of agricultural production from September quarter 2002 to June quarter 2003 in seasonally adjusted terms. It can be seen from Table 5.1 that agricultural production fell to a low of $4557m in the March quarter 2003 before it started to rise again. In the December quarter 2003 agricultural production rose to $6089m which is 31.7 per cent higher than at the same time a year ago. The increase in agricultural production is forecast to continue and by June 2003 it is expected to increase to $6165m which equates to an increase of 30.7 per cent for the year.

Aggregate Demand

R5.9 Strong final domestic demand has continued to underpin the Australian economy in the December quarter 2003, increasing by 1.9 per cent during the quarter to be 6.7 per cent higher over the year to December 2003.

Private Consumption

R5.10 The December quarter National Accounts showed that private domestic consumption increased by 1.6 per cent for the quarter to be 5.4 per cent higher over the year to December 2003.

R5.11 Further, retail turnover recorded (as recorded in ABS Cat. No. 8501.0) increases of 0.6 and 0.5 per cent for the months of December 2003 and January 2004 respectively. Over the past 12 months (January 2003 to January 2004) retail sales grew by 8.8 per cent and motor vehicle sales (as recorded by ABS Cat. No. 9314.0) have increased by 6.4 per cent.

R5.12 More detail on the recent changes to retail trade and motor vehicle sales can be found in Tag 1 of the ACTU Reply Composite Exhibit.

Private Investment Expenditure

R5.13 Private domestic investment continues its strong growth in the December quarter 2003; with an increase of 2.9 per cent for the quarter bringing the growth for the year to December 2003 to 10.4 per cent.

The Housing Sector

R5.14 Private dwelling expenditure grew by 2.6 per cent during the December quarter 2003 and 5.6 per cent for the year.

R5.15 During the month of December 2003 the value of lending for new dwelling approvals grew by 2.3 per cent, while the number of new dwelling approvals fell by 2 per cent.

Business Investment

R5.16 Private business investment increased strongly during the December quarter 2003, up 3.3 per cent for the quarter. On a yearly basis, business expenditure increased by 13.6 per cent.

R5.17 Private business expenditure was supported by new engineering construction, (up 13.6 per cent over the year), machinery and equipment (up 15.7 per cent), and livestock, (up 63.4 per cent) to December 2003.

Business Sector

Company Profits

R5.18 Company profits have continued to grow strongly over the December quarter 2003. The company profits before tax measure from the ABS *Business Indicator* publication (Cat. No. 5676.0) rose by 6.3 per cent over the December quarter 2003 to be 27.5 per cent higher over the year to December 2003.

R5.19 The GOS measure of company profits, as measured by the ABS *National Accounts* (Cat. No. 5206.0) rose by 2.3 per cent during the December quarter 2003 to be 8.1 per cent higher over the year.

R5.20 Both the Commonwealth and ACCI assert in their submissions that focussing on the GOS share is misleading and that a better measure of profits is GOS together with gross mixed income. We have shown in Chapter 2 of our submissions that this is wrong. Conceptually gross mixed income comprises both returns to capital and returns to labour (hence its name). Neither ABS or the Treasurer appear to use the measure which the Commonwealth and ACCI favour in these proceedings.

R5.21 Clearly last year's decision by the Commission to award $17 has not resulted in a halt to the continued strong growth in company profitability.

Employment

R5.22 Australia's labour force figures continue to show strong jobs growth. The latest employment figures (as reported in ABS Cat. No. 6202.0) show that

23,100 jobs were created during the month of January 2004 with 18,100 of these being full-time.

R5.23 On a yearly basis, the number of total employees has increased by 1.8 per cent to January 2004, this equates to 168,000 new jobs created over the year. The number of people in full-time positions has increased by 2.3 per cent to January 2004 to 156,600; therefore over 90 per cent of all new employment over the year to January 2004 has been full-time.

R5.24 The unemployment rate has remained below 6.0 per cent for the last six months. As at January 2004, the unemployment rate is 5.6 per cent.

R5.25 Once again at paragraph 3.31 ACCI refer to hours worked data for the market sector on the basis that this approximates the private sector. As the ACTU demonstrated last year reliance on market sector data is of little assistance. The private sector accounts for more than 80 per cent of total employees whilst the market sector only accounts for about 60 per cent of all employees. The market sector excludes about 40 per cent of award only employees.

R5.26 There is simply nothing to suggest that last year's SNA has had any effect on employment growth.

Wages

R5.27 Wages growth remains moderate according to the most recent data released since the ACTU lodged its original submissions. A more detailed analysis of the recent data has been provided in Chapter 3 of this Reply Submission.

Inflation

R5.28 The December quarter 2003 figures for the Consumer Price Index were released on 28 January 2004. The all groups index rose by 2.4 percent for the year to December 2003, which is down from 3.0 per cent for the year to December 2002 and is well within the RBA's target range.

R5.29 Thus, the Australian economy has continued to grow simultaneously with a slowing in the rate of increase in prices over the last twelve months. There is evidence that this will continue; the RBA believes inflation could fall as low as 1½ per cent and then return to 2½ per cent in 2005 [see RBA Statement on Monetary Policy, February 2004].

R5.30 Peter Hendy, Chief Executive of ACCI had the following to say on the current inflationary environment:

> *The RBA, in its Statement on Monetary Policy released today, has confirmed that the Australian economy is in the midst of a period of sustainable non-inflationary growth.*
>
> *…*
>
> *The Bank expects inflation to fall to 1½% before rising again, and whatever acceleration in the inflation rate there may be will tend to be slow. It will not be until 2005 that the RBA expects the inflation rate to again reach 2½%, the mid-point of its target range.*
>
> [ACCI media Release, *No Further Rate Rises Needed*, Statement by Peter Hendy, Chief Executive, 9 February 2004]

R5.31 ACCI also assert that the inflationary pressures of any SNA on the non-tradeable component of CPI will cause the RBA to raise interest rates. However, in an ACCI Media Release Peter Hendy (ACCI Chief Executive) had the following to say:

> *With the economy maintaining and building on last year's momentum the Reserve Bank has made the correct decision not to constrain growth through an unnecessary increase in interest rates. Current economic growth appears sustainable. Wage pressures, while building, do not represent a serious risk to price stability in the medium term.*
>
> [ACCI, National Survey of Business Expectations Economic Growth Without Need to Raise Rates, Media Release 4 February 2004]

Productivity

R5.32 Growth in labour productivity has increased over the twelve months to December 2003. GDP per hour worked grew by 2.3 per cent for the year and GDP per hour worked market sector grew at a much better rate of 3.3 per cent for the year to September 2003.

R5.33 The Commonwealth and employer groups support an increase of 2.2 per cent at the C14 classification level. Percentage increases in all other award wage rates supported by the Commonwealth and employer groups are, of course, correspondingly less. This is a remarkable position to take given that the Treasurer has previously remarked that in similar circumstances (a low inflationary economy and increases in productivity) a 4 per cent increase in wages is affordable.

> *I have consistently said that in a low inflationary economy, if your inflation is in the twos, and you've got a productivity improvement of a round two percent, you can afford wages outcomes of about four percent.*
>
> [Treasurer Peter Costello, Press conference, 7 September 2000]

International Economy

R5.34 ACCI claim in paragraph 3.75 of their submission that "the international recession … remains an important obstacle to Australian export demand". However, only ACCI appear to hold the belief we are in the midst of an international recession.

R5.35 For example in December 2003 the OECD had the following to say on the world economy:

After a drawn-out period of fits and starts, a palpable recovery has taken hold across the OECD. The strong momentum already achieved in Asia, North America and the United Kingdom provides ample evidence of the renewed strength of the world economy.

[OECD Economic Outlook, Vol 2003/2 No. 74, December 2003 page vii]

In the MYEFO Treasury stated:

…the key development in recent months has been the marked improvement in the near-term outlook for the global economy, with the pace of activity accelerating in the United States, and signs of recovery in Asia.

[Treasury MYEFO December 2003, page 3]

Further in a speech presented in February of this year Malcolm Edey (RBA Assistant Governor Economic) stated:

…the world economy does seem to be recovering after three years of underperformance in the early part of this decade. Obviously the outlook is never risk-free, but a number of the risks that seemed important in the middle of last year have now faded into the background. In the last nine months or so, the main economic news around the world has been pointing to a firmer recovery. The euro area is still lagging behind, but we have seen a solid pick-up in growth in the US, Japan, China, and across the rest of east Asia, countries which together make up the major part of Australia's export market.

[Malcolm Edey Assistant Governor, RBA Address to CEDA/Promina Economic and Political Overview, 27 February 2004]

R5.36 Table 5.2 below shows the RBA's forecast for world growth. It can be seen that the growth of Australia's main trading partners is forecast to grow by 4.1 per cent in 2004.

Table R5.2: World GDP Growth

Year – average, per cent			
	2002	2003	2004
		Consensus forecasts	
United States	2.2	3.1	4.6
Euro area	0.9	0.5	1.8
Japan	-0.4	2.3	2.1
China	8	9.1	8.3
Other east Asia	4.4	3.4	5.1
G7	1.4	2.1	3.3
Major trading partners	2.9	3.2	4.1

Source: RBA Statement on Monetary Policy*, February 2004, page 4*

R5.37 Therefore, there is agreement from all but ACCI that the rest of the world economy is growing and will continue to grow. The growth in the world economy will help alleviate some of the difficulties that exporters may have due to an appreciating Australian dollar as demand for Australian exports increase.

Exchange Rate

R5.38 As mentioned in the ACTU original submission the movement in the relative value of the Australian dollar relative to the US dollar has been characterised by peaks and troughs since it was floated in 1983. From 1995 to 2001 the value of the Australian dollar depreciated against the US dollar and reached a low of 48 cents US in 2001. This made Australian exports very competitive on the world market as AiG point out:

> *The strength of the Australian economy has seen exports, particularly for manufactured goods, grow strongly, assisted by a low and competitive Australian dollar. Indeed, over the second half of the nineties, Australia's manufactured exports grew by one third, helping Australian business to capture a large share of its export markets.*
>
> [Australian Industry Group, How Competitive is Australia? Big Issues call for Big Ideas, June 2003 page 7]

R5.39 When AiG filed their submission the exchange rate was 79.7 cents US. It has now fallen to 75.8 cents US. This equates to a fall of approximately 5.0 per cent in the exchange rate in the last two weeks, highlighting the cyclical nature of the exchange rate.

Manufacturing

R5.40 The AiG contend that the Commission should not grant the ACTU's claim because it will have a detrimental effect on the manufacturing industry that has to compete in a growing global economy.

R5.41 AiG assert that manufacturers have been able to absorb past wage increases due to a competitive Australian dollar but with the recent appreciation in the exchange rate this will no longer be the case.

R5.42 However, in terms of these proceedings there are a several factors mitigating against this line of reasoning.

R5.43 Firstly, according to the ABS (Cat No. 6306.0) only 12.5 per cent of manufacturing employees are award only.

R5.44 An appreciating dollar makes exports relatively more expensive which may affect profits and prices received by exporters. However, a November 2003 survey conducted by DHL of Australian exporters found that only 31 per cent of firms thought the exchange rate would affect their output and only 28 per cent said the exchange rate would adversely affect investment decisions [see *DHL Export Barometer Australian Export Trends*, DHL Express, November 2003 – April 2004]

R5.45 Even though a rising Australian dollar will make exports more expensive it also makes imports relatively less expensive. As pointed out in the ACTU's original submission this reduces the costs to manufacturers using imported

inputs (thus keeping prices down), which will maintain their competitiveness both domestically and on the world market.

> *"The manufacturing sector has offsetting advantages for firms using imported inputs in capital equipment. Such investment is critical to our long-term competitiveness,"*
>
> [Ian Macfarlane [Minister for Industry, Tourism and Resources], Media Release: Dollar's rise has to be seen in economic context, 12 January 2004].

R5.46 Finally, the same DHL survey found that, despite the increasing dollar, 60 per cent of respondents felt that their orders would increase over the next twelve months [see *DHL Export Barometer Australian Export Trends*, DHL Express, November 2003 – April 2004].

R6 Economic Effects

R6.1 The ACTU claim, if granted, will have no adverse economic impact. None of the opposing material demonstrates any adverse impact at the aggregate, sectoral or enterprise level.

Aggregate Effects

R6.2 As noted in Chapter 4 no opposing party provides a genuine economy wide costing of the ACTU claim. Of particular significance is the Commonwealth's complete abandonment of any investigation of the aggregate impact of the ACTU claim, in effect, a tacit admission of the veracity of the ACTU's position that there are no measurable adverse macroeconomic impacts from its claim.

R6.3 The flaws in the ACCI costing have been outlined in Chapter 4 of these submissions. The ACCI costing is patently not a proper macroeconomic costing of the ACTU claim and suffers significant methodological flaws.

R6.4 In support of its contentions regarding the impacts of the ACTU claim, ACCI rely on two other pieces of evidence:

- The results of its member survey; and
- An extension of Andrew Leigh's analysis in his paper *Employment Effects of Minimum Wages: Evidence from a Quasi Experiment*.

Neither of these pieces of evidence withstands scrutiny.

R6.5 No weight should be placed on the ACCI's survey results regarding the alleged effects of last year's Safety Net Adjustment, for reasons which are set out later in this Chapter.

R6.6 At paragraphs 9.29-9.31 ACCI rely on an extension of Leigh's analysis to calculate an estimated job loss of 450,000 jobs from the Australian economy as a result of the ACTU wage claim. The ACTU has already shown Leigh's analysis to be fundamentally flawed and further material regarding the flaws in that analysis is provided later in this Chapter. However, for present purposes it suffices to note that ACCI obtain their 450,000 job estimate by multiplying Leigh's calculated elasticity by a factor of five on the basis that the proportion of award employees is roughly five times greater than the proportion of employees dependent on the Western Australian statutory minimum wage. There is simply no credible basis for this approach.

R6.7 There is no linear relationship between an elasticity of demand and the proportion of the workforce affected by a wage increase. Indeed, even neo-classical assumptions would suggest that as the population affected by a wage increase expands and includes persons who are more highly skilled and highly paid the elasticity of demand will fall.

R6.8 Further, the characterisation of the ACTU claim as a 6 per cent wage rise is simply a nonsense. The ACTU claim is for a flat dollar increase and, as a result, it is completely misleading to characterise it as a 6 per cent wage rise. The absurdity of ACCI's position in this respect is highlighted if one applies the same methodology of calculation to the increase ACCI have supported in this case together with ACCI's own estimate of the number of employees covered by its proposal. This methodology yields the outcome that the ACCI proposal would itself cost 150,000 job losses.

Sectoral or Enterprise Effects

R6.9 The analysis in Chapter 2 of the original ACTU submissions and Chapter 2 of these submissions shows that past Safety Net Adjustments have had no discernible impact on those sectors in which award employees are most concentrated. The submissions of ACCI and the Commonwealth in this regard are dealt with in Chapter 2 of these submissions.

R6.10 It is important to note that no party disputes the matters set out in paragraphs 6.13 to 6.15 and in table 6.4 of the ACTU's original submissions regarding the combined effect of the $18 increase in the Safety Net Adjustment in 2002 and the 1% Superannuation Guarantee Contribution increase which took effect at around the same time. As the analysis in those paragraphs shows the combined effect of most two factors correspond to a $23.80 increase in the Federal Minimum Wage this year. In light of this evidence there is simply no basis on which to conclude that an increase of the order of magnitude sought by the ACTU in this case would have any adverse sectoral impact.

R6.11 At 7.12 to 7.23 AiG presents its "evidence" that Safety Net Adjustments have impacted adversely on employment. That analysis relies on the dispersion of growth in employment for different occupations ranked as higher or lower paying. No conclusion can be drawn from that data regarding the impact of safety net adjustments:

- that data shows that the growth in employment for higher deciles of occupation relative to lower deciles occurred in the period 1986 to 1996 as well as during the period 1996 to 2000;

- the most recent data in the analysis is year 2000 data, as a result the analysis tells us nothing about the most recent period.

R6.12 AiG's glib conclusion that because relative growth in hours for the lower six deciles was lower 1996 to 2000 than 1986 to 1995 safety net adjustments have had an impact on employment is simply unsustainable. No attempt is made to isolate the impact of award safety net adjustments on the data. The AiG proposition relies on nothing more than coincidence of timing.

Academic Research

Hyslop and Stillman

R6.13 At paragraph 5.23 of the Commonwealth's submission the Commonwealth deals with the ACTU's submissions regarding the recent study of the effects of increases in the New Zealand youth wage by Hyslop and Stillman[2]. The Commonwealth notes that the study finds a high level of non-compliance by New Zealand employers and that employment levels may have been affected by increased compliance levels.

R6.14 The ACCI takes up this theme in paragraph 9.6 of its submission where it argues that the New Zealand youth minimum wage was irrelevant to the market and consequently increases did not impact on employment levels. ACCI raises a number of points based on the assumption that the rates studied were non-binding.

R6.15 The findings by Hyslop and Stillman are clear. Youth wage levels significantly increased by up to 69 per cent. The study finds no significant impact on employment levels or hours worked. The authors raise the issue of non-compliance themselves and remain committed to their finding that there is no robust evidence of adverse affects on youth employment or hours worked. Indeed the authors find stronger evidence of positive employment responses to the changes.[3]

R6.16 At paragraph 9.16 ACCI's submission is that the New Zealand youth wage reforms had almost no impact on the actual real wages of teenagers. This is clearly not the case. Earnings and income increased by 10 - 15 per cent for 16-17 year olds and between 5 and 10 per cent for 18 -19 year olds relative to 20 - 25 year olds. Hyslop and Stillman find a significant increase in youth average wages of 7 per cent for 16 - 17 year olds and 4 per cent for 18 to 19 year olds. These are significant findings as only 10-20 per cent of the wages

[2] Hyslop, Dean and Stillman, Steven. May 2003 "*Youth Minimum Wage Reform and the Labour Market.*" Unpublished.
[3] Ibid page 23

distribution was affected by the youth wage reform. The change in wage levels would have been much more significant had the authors concentrated their studies on low wage workers.

Manning

R6.17 At paragraph 5.21 of the Commonwealths submission the Commonwealth in its brief response to the ACTU's analysis of Professor Alan Manning's work *Monopsony in Motion – Imperfect Competition in Labour Markets*,[4] argues that Manning's' modelling supports the Commonwealth's position that the potential costs of excessive minimum wage increases are high.

R6.18 The Commonwealth fundamentally misconstrues Manning's work in its brief response at paragraph 5.21 of its submissions. Manning argues against the blind assumption that there is a negative relationship between minimum wage increases and employment levels. In fact Manning argues that it is not inconceivable that there be concurrent increases in the minimum wage and employment levels.

Leigh

R6.19 The Commonwealth at paragraph 5.25 whilst noting that the ACTU is highly critical of a recent paper by Andrew Leigh[5] states that these criticisms are yet to be debated in the literature. This is no longer the case. Ian Watson Senior Researcher at ACIRRT, University of Sydney has recently published work, which describes Leigh's research as empirically and methodologically flawed.[6] Watson finds that the model used by Leigh to assess the impact of wage rises was a poor fit to the data, and was compromised by Leigh's failure to include adequate statistical controls. This paper is reproduced at Tag 2 of the ACTU Reply Composite Exhibit.

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[4] Manning, A., "*Monopsony in Motion – Imperfect Competition in Labour Markets" Princeton University Press*, Princeton and Oxford, 2003.
[5] A. Leigh, *"Employment Effects of Minimum Wages: Evidence from a Quasi-Experiment" Australian Economic Review*, Vol 36, No 4.
[6] I. Watson, *"A needle in a haystack. Do increases in the minimum wage cause employment losses?".* ACIRRT working paper 90, March 2004.

R6.20 Watson's paper takes into consideration Andrew Leigh's erratum shown as attachment 9-C in the ACCI's submissions.

R6.21 In particular Watson argues:

- Leigh fails to control for a range of factors which may be influencing his results and that Leigh has selected an inadequate control group.
- The study fails to account for trends in employment during the period of the study.
- Leigh has failed to deal satisfactorily with the problem of endogeneity.
- The study's results are at best inconclusive. Watson argues that the findings are 'ludicrous'[7] given the size of standard errors involved in this type of exercise.
- The regression analysis utilised by Leigh produces a model which is a very poor fit to the data.

R6.22 Professor Junankar's response to Leigh's comments is attached at Tag 3 of the ACTU Reply Composite Exhibit. His conclusion is that Leigh's econometric analysis is weak for a range of reasons.

R6.23 Further, it is to be noted that in Leigh's erratum (which itself erroneously describes the nature of the error he made with his original data) Leigh claims that using the correct proportions for employment to population has no impact on his results. Leigh has simply failed to grapple with the problem that using the proper employment to population ratio, a more appropriate part-time weighting, ABS seasonally adjusted data and investigating all increases in the WA statutory minimum wage does affect his results, as the below table and figure indicates. The data shows broadly a reduction in negative employment impacts with higher wage increases. The ACTU does not contend for such a simplistic analysis but it highlights the defects in the approach taken by Leigh.

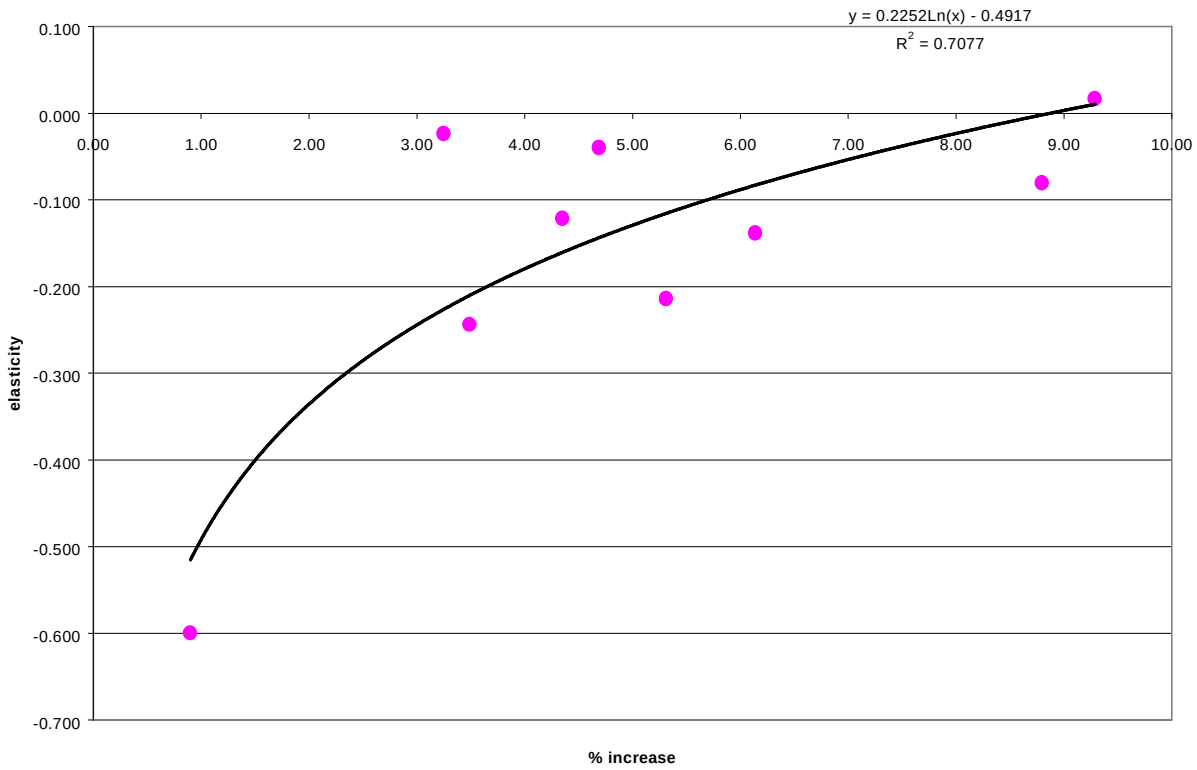
[7] Ibid page 9.

Table R6.1: Reworking Leigh's Analysis with Proper Data

	WA	Rest of Australia	Difference in Difference	Implied Elasticity
May-94	0.520	0.490		
Nov-94	0.525	0.494		
	0.005	0.004	0.001	
May-94	0.526	0.496		
Nov-94	0.533	0.502		
	0.007	0.006	0.002	0.017
Jun-95	0.543	0.511		
Dec-95	0.532	0.512		
	-0.011	0.001	-0.011	-0.214
Jul-96	0.537	0.507		
Jan-97	0.533	0.506		
	-0.003	-0.001	-0.002	-0.040
Aug-97	0.534	0.499		
Feb-98	0.533	0.503		
	-0.002	0.004	-0.005	-0.600
Sep-98	0.537	0.507		
Mar-99	0.528	0.507		
	-0.009	0.000	-0.009	-0.244
Dec-99	0.540	0.512		
Jun-00	0.537	0.517		
	-0.004	0.005	-0.009	-0.138
Dec-00	0.540	0.514		
Jun-01	0.530	0.511		
	-0.010	-0.003	-0.007	-0.081
Jan-02	0.529	0.510		
Jul-02	0.527	0.509		
	-0.002	-0.001	-0.001	-0.024
Jan-02	0.531	0.510		
Jul-02	0.527	0.512		
	-0.003	0.002	-0.005	-0.122

Source: ABS Cat. No. 6202.0.55.001

Figure R6.1: Elasticity v. % Increase



Source: Table R6.1 above

R6.24 As we noted in our original submissions Leigh's results are also sensitive to a change in the months before and after minimum wage increases which are analysed.

R6.25 It is submitted that Leigh's study should be disregarded.

Lewis

R6.26 The NFF's submission relies heavily on work commissioned by the NFF undertaken by Professor Philip Lewis[8] entitled " A Report on the Effect of Raising Minimum Wages on Rural Business". Professor Lewis' paper was attached to the NFF's submission.

[8] Centre for Labour Market Research University of Canberra.

R6.27 Lewis concludes that the level of employment in rural and regional Australia is negatively impacted by increases in wages. Lewis finds that "…rises in the wages of agricultural workers significantly reduces employment in this sector."[9] Lewis relies on previous work undertaken in conjunction with Garnett A.M[10] to establish this negative relationship of -0.80.

R6.28 The following points may be noted regarding the Garnett and Lewis paper:

- The paper tells us nothing of the impact of increases in award wages on the demand for rural labour. The paper estimates a relationship for changes in aggregate wages across the rural sector and employment. There is no basis for calculating how an increase in award wages will impact on aggregate wages in the sector;

- The Garnett and Lewis labour demand equation appears to be mis-specified. At the industry level intermediate inputs and other factors such as land are more important than at the macro level and should be included in the underlying production function.

- It appears Garnett and Lewis have adjusted their elasticity of substitution by the share of wages in gross output rather than value added.

R6.29 On 19 November 2003 Vice President Ross varied the Pastoral Industry Award by including in the award a modified NFF proposal to enable a streamlined process allowing individual award respondents seeking relief from the 2003 SNR decision to demonstrate an incapacity to pay.[11]

R6.30 The Commission's web based information sheet regarding the Economic Incapacity Principle was amended on 30 May 2003 to clearly demonstrate that "Information as to whether any Commonwealth Government assistance has been granted for the purposes of drought relief in a drought declared area," would be acceptable evidence.

[9] Professor Philip Lewis, Centre for Labour Market Research University of Canberra. *'A Report on the Effect of Raising Minimum Wages on Rural Businesses'*, paragraph 20.
[10] Garnett, A.M. and Lewis, P.E.T. (2002), 'Demand and Supply of Farm Labour,' paper presented to the 31st Conference of Economists, Adelaide, 30th September – 4th October.
[11] PR940769

R6.31 To date only two applications have been made under s113 of the Act for postponement of the 2003 Safety Net Adjustment. Both applications concerned properties in New South Wales and concerned one part-time or casual employee respectively.[12] One applicant has informed the Commission that they seek leave to withdraw their application.

R6.32 The NFF's advocate in the above matters before Vice President Ross on 9 February 2004 in response to claims that neither applicant had provided detailed financial information as required by the amended award, informed the Commission that "We [NFF] sent out detailed information to our members in respect to the nature of the application and the decision of Your Honour last year."

R6.33 In addition to the information sent directly to NFF members, Vice President Ross' decision was widely publicised throughout the rural electronic and print media. Despite this widespread publicity of an opportunity to defer the 2003 SNR only one application involving one part-time employee is currently on foot. One application alleging incapacity to pay does not indicate adverse employment impacts flowing from the moderate pay increases awarded to low paid rural workers. The NFF's current submission must be placed in this context and rejected.

Surveys

R6.34 At present there are two surveys (one from ACCI and one from RMI) relied upon in these proceedings in relation to the allegation that safety net adjustments have adverse economic impacts. A number of points may be made which relate to both surveys.

R6.35 Both surveys show that overwhelmingly safety net adjustments do not have adverse employment impacts with more than 80 per cent of businesses in

[12] C2004/1707 and C2004/1708

each survey responding that the SNA had no impact on employment and with 10 per cent or less indicating adverse employment impacts.

R6.36 Neither survey allows for any calculation of the net employment impact of safety net adjustments as results are expressed on the basis of the proportion of firms responding that there had been an impact without any consideration of the magnitude of that impact.

R6.37 Low Pay Commission research suggests that survey responses will tend to overstate employment impacts compared to econometric testing of employment effects. This is partly as a result of response bias and partly as a result of survey results not measuring the magnitude employment effects (compare for example the Low Pay Commission survey results with the results of Stewart).

R6.38 In its May 2002 Employee Earnings and Hours survey the ABS asked questions regarding both over award employees and the flow of safety net adjustments. The responses to the questions have not been published due to data quality concerns. The ABS has advised the ACTU as follows:

> *A number of data items collected in EEH 2002 are not available for release as a result of data quality concerns. Included among the data items deemed not available for release are data on 'Award (paid more than the award rate)' and the 'Safety net wage adjustment'. For both of these data items, quality concerns were raised during the editing process and confirmed during the subsequent Post Enumeration Survey. Contact with providers gave a strong indication that there were frequent instances of incorrect reporting, usually resulting from a misunderstanding of the question or the associated notes and definitions. In particular, many respondents were identified as having incorrectly reported employees being paid by 'award (paid more than the award rate)' when there was either clearly no link between the employee's rate of pay and the relevant award rate, and/or some other form of agreement was in place which took precedence over the award. With respect to the safety net adjustment, it became apparent that this term and the associated concept were not widely understood by respondents. In addition to under-reporting of entitlement to the safety net adjustment among award-only employees, there was*

frequent incorrect reporting of safety net entitlements among employees who had no link between their remuneration and an underlying award.

R6.39 The ACCI and RMI surveys purport to investigate precisely those issues in respect of which the ABS found data quality concerns to be such an issue in the May 2002 EEH.

R6.40 The ACCI and RMI surveys exclude some or all employers who did not pay Safety Net Adjustments from the ambit of their questions regarding the impact of those adjustments. This has the following effects:

- It results in a likely overstatement of the proportion of firms experiencing negative impacts as firms which logically should suffer no negative consequences are excluded from the total in respect of which proportions are expressed;
- It results in a likely understatement of the proportion of firms experiencing no impact or positive impacts.
- It means that no data is available on "false positives", that is firms who logically could not have experienced negative impacts but nonetheless respond that they have.

R6.41 Data from this year's and last year's RMI survey make clear that a proportion of employers will respond that safety net increases have a negative impact whether logically this is possible or not.

R6.42 For example, last year:

- 13 per cent of firms with no employees said they had reduced the total number of employees as a result of the award increase compared to 17% of firms where employees received an increase responding that they had reduced the total number of employees;
- Similarly 26 per cent of firms who had paid more than the safety net

adjustment to their employees attributed an adverse employment impact at their firm to the award increase.

R6.43 This year additional data supplied by the RMI shows:

- 19 per cent of employers who paid more than the safety net adjustment attributed a decrease in employment to that adjustment; and
- 34 per cent of businesses who answered "don't know" or "not sure" in relation to a question which asked then to assess the level of profitability in their business in the broadest of terms were none the less able to say that the award increase had adversely impacted on the profitability of their business.

R6.44 This year the RMI modified aspects of its survey and ACCI designed its survey such that by less "false positives" will come through the survey process. Far from providing the results of the surveys with greater validity it simply highlights a huge problem in accepting their veracity.

R6.45 The measured number of firms responding to each survey regarding adverse employment effects is in both cases (and regardless of which employment question is considered) 10 per cent or less. The results from last year's and this year's RMI surveys tell us that results of this magnitude are just as likely to come from firms where logically the award increase can have had no adverse impact. In other words the proportion of employers measured by the surveys as indicating adverse employment effects as a result of the SNA is that proportion who will always respond that SNA increases have a negative employment impact whether they do or not.

R6.46 A number of further specific criticisms may be made of the ACCI survey.

R6.47 In no sense is the survey sample properly constituted. Paragraph 8.16 makes clear that South Australian and Territory businesses will, effectively, not be represented in the survey sample. Further, an equal number of businesses were selected for survey from each State affiliate which did participate thus

potentially greatly skewing results. In addition information provided by ACCI regarding the industry composition of responding firms indicates that those firms are not representative of the overall population nor indeed representative of the distribution of award only employees.

R6.48 On 3 March 2004, in response to an ACTU request for more information regarding the survey ACCI provided the total number of responses to each question. It is noteworthy that the percentages reported in ACCI's original submissions do not make sense when regard is had to the totals provided in the more recent information.

R6.49 For example:

- At paragraph 8.18 ACCI says it received 289 surveys but no question is reported as having more than 287 overall respondents;
- At page 8-7 ACCI purports to cross-tabulate the results of questions 1 and 2 of the survey when these questions had differing numbers of respondents;
- The cross-tabulation table suggests that 111 firms responded "no" to both questions 1 and 2 (using N=286 as the basis for the cross-tabulation) and as a result would have been asked no further questions: see ACCI page 8-28. This implies the maximum number of responses to subsequent questions should be 175 (286 – 111) yet ACCI reports questions 3, 5, 6, 7 and 8 as having greater numbers of respondents than this.
- From paragraphs 8.46 to 8.52 results are reported for questions 3 to 8 in firms where no direct safety net increase was granted. In light of the way the survey was conducted and the information contained in the cross tabulation on page 8-7 of the ACCI survey this population should consist of some six firms. None of the percentages reported for the responses to questions 4 to 8 can properly be understood to be a percentage of six.

- The proportion of firms responding that numbers of full-time employees had decreased (question 5) does not make sense. ACCI say there were 181 respondents to this question and they report 4.8% having responded that there was a decrease in full-time employment. This cannot be so. If the number of those responding that there was a decrease was 8 the correct percentage is 4.4%. If the number responding that there was a decrease is 9 the correct percentage is 5.0%. A similar problem pertains with the percentage reported as having responded to question 6 as having seen part time and casual employees increase and as having responded to question 8 that profitability had decreased.

R6.50 In some instances these might seem like small matters but where (as is the case in relation to employment impacts) effects reported are small in magnitude errors of this kind can give little confidence in the veracity of the reported results.

R6.51 The difference between estimates for responses to question 6 regarding increases and decreases in full-time employment is not statistically significant – the relative standard error on the difference estimate is at least 90 per cent and may be more than 100 per cent depending on whether 8 or 9 firms responded that full-time employment had decreased. This is equivalent to saying that the observed difference between the increase and decrease responses to this question is likely to be the result of sampling variability rather than a "real" difference.

R6.52 In relation to question 6 the difference estimate on the reported results for the increase and decrease options has a relative standard error of 48.8 per cent, a level at which the ABS would suggest the estimate should be used with caution. However as the proportion of firms reporting an increase in part-time and casual employees is misstated it may be that the RSE exceeds 50 per cent, a level at which the ABS warns that the estimate is too unreliable for general use. The true number of firms responding to question 6 that there was an increase in part-time or casual employment assuming 180 respondents to question 6 is either 8 (4.4 per cent) or 9 (5.0 per cent). Even

the assumption of 180 responses is problematic, when if the survey were conducted properly the maximum number of responses should be 175. If there were 9 responses to question 6 saying an increase then the RSE on the movement estimate is greater than 50 per cent. If there were 8 responses but the true number of respondents is 171 then the RSE on the increase estimate exceeds 50 per cent. None of these possibilities can be ruled out given the difficulties which arise from the manner in which the results were reported.

R6.53 One final point to note is that whilst attachment 8A suggests ACCI affiliates were not circularised with instructions regarding conduct of the survey until 18 February 2004, ACCI advised the survey was conducted between 19 December 2003 and 5 February 2004.

R6.54 In short neither the ACCI or the RMI survey can be relied upon for the proposition that last year's safety net adjustment had any significant adverse employment impact.

R7 Needs of the Low Paid

Introduction

R7.1 There is nothing in the opposing submissions that should lead the Commission to depart from its conclusions that:

- Employees on low wages experience difficulties making ends meet and affording what are generally considered by the broader community to be basic necessities; and
- Whilst safety net adjustments are not perfectly targeted to meeting the needs of the low paid, they assist in meeting those needs.

R7.2 There is nothing in the opposing submissions which detracts from the ACTU submission that the Commission can have regard to the SPRC budget standards as valid empirically determined benchmarks of adequacy and as indicators of the needs of the low paid.

Budget Standards

R7.3 In its original submissions the ACTU presented September 2003 low cost and modest but adequate budget standards. The SPRC budget standards are the only empirically determined benchmarks before the Commission. We demonstrated that the budget standards were valid empirically determined benchmarks to which the Commission could have reference in determining the ACTU claim. The validity of the standards for this purpose was demonstrated by outlining the methodology which underlies the construction of the budget standards and by locating the budget standards in the ABS data on expenditure of employed households. The SPRC assessment, with which the ACTU agrees, is that minimum wages should be set at above the low cost standard but below the modest but adequate standard.

Commonwealth

R7.4 In responding to the ACTU submission, the Commonwealth refers to the Joint Government submission made to the Safety Net Review Case in 1998-99. As we noted in our original submissions, the SPRC has specifically dealt with those Joint Government criticisms. The Commonwealth does not respond to the SPRC material which deals with these Joint Government criticisms. Specifically, the Commonwealth refers to differences in housing costs in different locations. SPRC acknowledged this criticism in the Joint Government submission and dealt with it. [see detailed response to ACCI]

R7.5 The Commonwealth state at paragraph 6.7 that the SPRC have adjusted the standards for concerns about methodology. This is not correct. The SPRC has modified very slightly the original estimates to correct minor errors in the underlying spreadsheets, and has discussed criticisms but does not *adjust* the methodology in response to those criticisms.

R7.6 At paragraph 6.14 the Commonwealth refers to the tax transfer system as a better tool for addressing needs of low paid. The ACTU has consistently stated that minimum wages and the tax transfer system are complementary, not substitutes as the Commonwealth suggest. We note that the AIG Effective Marginal Tax Rate tables show that the low paid do benefit from wage increases. [see detailed response to AIG]

R7.7 At paragraph 6.19 the Commonwealth claim that the low paid have benefited from tax cuts in July 2003. The ACTU showed in our original submissions that the real after tax wages of low paid award workers have barely moved since 1999.

ACCI

R7.8 Chapter 11 of the ACCI submissions consists of a mischaracterisation of the ACTU's use of budget standards and a rehash of its flawed economic arguments regarding the impact of the ACTU claim:

- Paragraphs 11.17 to 11.20 suggest that the ACTU is promoting an "over-

consideration" of needs. This is simply unsustainable. The ACTU submissions address all factors to which the Commission is required to have regard and adduce evidence of empirically determined budget standards as a result of the Commission's comments in last year's decision;

- Paragraphs 11.22 to 11.49 are predicated on the ACCI's fallacious assumption that the ACTU claim will have adverse impacts on employment or inflation;

- In paragraphs 11.50 to 11.71 ACCI refer to the ACCER questions but do not deal with them in any meaningful way.

R7.9 ACCI's criticisms of the ACTU's use of the SPRC budget standards are:

- That they are not relevant to minimum wages setting;

- That they contain an upward bias;

- That they are based on costs in Hurstville; and

- That the ACTU assesses the adequacy of the Federal Minimum Wage (and not other award classification rates) to meet the costs of the budget standards.

Each of these criticisms is unsubstantiated.

R7.10 At paragraphs 11.57, 13.2, 13.12, 13.13 and 13.14 the ACCI misunderstand or misrepresent budget standards research. Its application is not restricted to an assessment of adequacy of social security payments. The budget standards method can be used generally to develop adequacy benchmarks for any standard of living. Specifically in relation to setting minimum wages, the original 1997 paper *Development of Indicative Budget Standards for Australia* notes:

In relation to the determination of wages, questions of adequacy standards have predominated ever since the Harvester Judgement in 1907 and have re-emerged as part of the ACTU's recent 'living wage' claim.[13]

R7.11 That is, the updated budget standards report can be validly applied to the task of setting minimum wages.

R7.12 At paragraphs 13.8 - 13.9 ACCI question that minimum wages can be set having regard to a point between the low cost and modest but adequate standards. As we stated in our original submissions, the ACTU commissioned the updating of the budget standards report to provide empirically determined benchmarks of adequacy. Further, we had SPRC locate the budget standards in the quintiles of household expenditure data (ABS) to verify that they are appropriate to the task before the Commission. The SPRC made its assessment of where in relation to the two standards it was appropriate to focus upon in determining wages for the reasons given in the report. As noted by ACCI, the ACTU agrees with the SPRC judgement. ACCI accepts that the low cost standards were designed to assess the adequacy of social security payments. SPRC say this makes a standard higher than the low cost standards appropriate. This leads to the conclusion, noted in the SPRC report, that somewhere between the two standards is appropriate. A point between two empirically determined benchmarks is empirically grounded.

R7.13 ACCI note that SPRC acknowledges potential for upward bias in the budget standards methodology (paragraphs 13.18 - 13.20). The SPRC report acknowledges "there is a risk in this" but it also states that there are a series of steps designed to combat this by validating the estimates using focus group feedback from consumers and behavioural data on actual expenditure patterns.

R7.14 The ACCI assertion at paragraph 13.19 that the use of Hurstville for costing is a source of upward bias is not correct. The budget standards are based on

[13] Saunders P, Chalmers J, McHugh M, Murray C, Bittman M, Bradbury B, Development of Indicative Budget Standards for Australia, SPRC, UNSW, page 28

living costs in Hurstville but as such this does not create an upward bias in the estimates.

R7.15 ACCI question the ACTU use of single income households (paragraphs 13.26 - 13.36). The ACCI couples data does not relate to income distribution or the low paid. The ABS Household Expenditure Survey (HES) shows that first quintile households with employee income up to $682 per week (in 1998-99) are made up of 36.2 per cent lone person households, 22.3 per cent couples with dependent children, 18.9 per cent couple only, and 8.0 per cent lone parent with dependent children, (among others). There is good reason to suspect that single income families might be more concentrated amongst couple families in the lowest income quintile but even if the 23 per cent figure on which ACCI rely is used then 57.4 per cent of all households in the lowest quintile of working households are single income households.

R7.16 The ACCI arguments imply that ACCI prefer an approach in which the wage depends upon the family/household circumstances, including what other sources of wage incomes there are. This seems at odds with all accepted notions of equity and the rights of the individual. The logic of the ACCI position suggests, for example, that if a married worker with a working spouse was to divorce, their employer should increase her/his wages to compensate for the loss in income at the household level.

R7.17 It is important to note here that the ACCI cannot compare the disposable income of a couple with two employed persons with the SPRC September 2003 budget standards for households with one employed person (a single wage earner). That is, the number of adults, number of employed adults, and indeed the number of children in the household has an impact on the budget standards themselves. The difference in budget standard between a couple household where one of the couple is employed and where two are employed is the extra cost of employment of the second member.

R7.18 The ACCI seem to think issues of regional variation are paramount (paragraphs 13.37 – 13.60). They are not. As we said in response to the Commonwealth, SPRC acknowledges and deals with this issue.

R7.19 The first point to be made is that a safety net wage has to support low paid workers in Sydney as well as the rest of the country.

R7.20 At paragraph 13.37 ACCI quote the SPRC report on regional variations in market rents if the original methodology was reapplied. The point ACCI miss is that in relation to the budget standards before the Commission market rents have been adjusted by CPI. Using the example ACCI quote, the rent in the housing budget is not the September 2003 market median rent of $240 for a two bedroom unit in Middle Sydney but the $196 which results from CPI adjustment of the Hurstville rent included in the original 1997 budget standards. Because the increase in market rents has outstripped the increase in the CPI (which was used to adjust the Hurstville rents included in the budget standards) SPRC conclude:

> *More importantly, this in turn results in a narrowing of the differential between the (Sydney based) market used in the budget standards … and the actual rents in other capital cities.*

R7.21 At paragraph 13.38 ACCI state "Budget standards are being used to assess needs. To the extent that needs vary markedly, their possible utility for this case is diminished". As the point being made relates to location, the ACCI confuse the needs themselves (which will vary between households, as indicated by the SPRC budget standards), with the cost of meeting those needs (which may vary by location). (ACCI repeat this confusion of needs and costs in paragraph 13.80.)

R7.22 ACCI produces two cost of living calculators derived from Internet websites of two migration services companies 'Australia-Migration' and 'Go Matilda'.

R7.23 There is no reason to assume that the basket of goods and services used in the calculators even remotely resemble the budget standards baskets.

Indeed, the calculator basket of goods and services will almost certainly differ from the Low Cost budget basket which as the SPRC report points out differs from the Modest But Adequate basket.

R7.24 The explanation of the 'Go-Matilda' calculator comes with the warning:

> *great care should be taken before relying on the results - your monthly pattern of expenditure may be unlike our basket, and could give a result significantly different to that derived from our calculator.*

R7.25 Moreover, while ACCI seeks to rely on these calculators, they make no attempt to explain the fact that they produce different results. For example, Calculator 1 claims that the Melbourne equivalent of the $360.10 Sydney Single Low Cost budget is $287. Calculator 2 estimates this figure at $322.73. As the "Go Matilda" calculator warns if the basket of goods is different the result will be different.

R7.26 Finally, the calculators appear to be out of date – the Go-Matilda calculator is based on the quarter ended 31 March 2001 and house prices the quarter ended 31 December 2000. The budget standards are for September 2003.

R7.27 These calculators, for which the underpinning baskets of goods and services have no relevance to the budget standards baskets of goods and services, provide no assistance to the Commission.

R7.28 The ACCI submission on the significance of the FMW (paragraphs 13.61 – 13.79) is curious to say the least. It is not consistent with the ACCI insistence, elsewhere in its submission and its relevant press releases, on portraying the ACTU claim exclusively as a percentage of the FMW.

R7.29 If the ACCI is suggesting that the FMW is redundant then it should be abolished and a new FMW at a higher (non-redundant) level be established.

R7.30 The ACTU chose single income households earning the FMW for two reasons:

- In assessing the adequacy of the FMW to meet needs it is necessary to consider how it relates to budget standards; and
- Workers have to live on the FMW for the time they are receiving that rate of award pay.

R7.31 Moreover, in our original submissions we provided an estimate of incomes needed by the couple, and couple plus two households to achieve the Low Cost Budget Standard. As SPRC states minimum wages should be determined somewhere in between the Low Cost and Moderate But Adequate standards so a higher wage is implied. Self-evidently, this calculation shows that for these family types wage income considerably in excess of the current FMW is insufficient to meet even the low cost budget standard.

R7.32 Our calculations in our original submissions assume that families with children are eligible for maximum Rent Assistance. Not all low paid working family households will be eligible for Rent Assistance. For those family households not eligible for Rent Assistance household disposable income would be $55.44 lower than calculated, making the gap even wider.

NFF

R7.33 The Lewis report for the NFF presents a cost of living index – country versus city to show regional variation in the cost of living. The ACTU makes the following comments in relation to this exercise:

- The city/country differential is small at 4 per cent.

- There is no reason to assume that the basket of goods and services used resembles the budget standards baskets. Therefore the weightings used in the index may vary widely from the budget standards.

- The totals are sensitive to the assumption that the largest component "Other" (39.87 per cent of the total index) has been assigned a relative price based on the transportation differential (1.01). For example, if the index figure for 'Other' is 1.04 (thereby matching the relative price assigned to Food, Alcohol and Tobacco, and Petrol) the total city-country differential reduces from 4 per cent to 3 per cent.

- Housing is the only component where the relative price is lower for the country - most things are more expensive in the country.

Conclusion

R7.34 In summary, none of the criticisms of the SPRC budget standards or the ACTU's use of them withstand scrutiny. The budget standards provide compelling empirical evidence that a significant increase is needed in minimum wages to allow low paid working families to properly meet their needs.

Witness Evidence

R7.35 No party other than ACCI refers to the ACTU Witness evidence.

R7.36 ACCI questions (paragraph 14.12) whether Robyn Larnach has three dependents who do not contribute to household income. ACCI appear to be seeking to substitute their interpretation of Ms Larnach's circumstances for her own (not the ACTU's). The fact that Ms Larnach's son has 12 hours work per week, the earned income from which he spends on himself, and that her daughter receives (part) Youth Allowance, which she spends on her personal bills and expenses, does not in any way detract from the fact that they, and

her daughter's child, living at home as they do, are dependent upon Ms Larnach.

R7.37 At paragraphs 14.14 – 14.15 ACCI question witness expenditures and priorities. ACCI says some witnesses can save while others cannot. Only Michelle Billington's $10 per week 'savings' and Rhonda Scannell's $20 'superannuation salary sacrifice' could be described as saving. ACCI says some witnesses report that they are able to spend some money on recreation, entertainment **and** holidays while others say this is not possible. Only Symon Heaton spends money on recreation **and** entertainment. Maria Perez spends $15 per week on recreation and Robyn Larnach spends $2.30 per week on entertainment.

R7.38 The witness evidence on holidays is as follows:

- Symon Heaton had a holiday 12 months ago for the duration of three days – we submit what most people would describe as a long weekend or a mid-week get away.
- Robyn Larnach has holidays once a year staying with relatives or at their expense.
- Rhonda Scannell 6 months ago had holiday paid for by her children.
- Maria Perez had a holiday a year ago paid for by her children.
- Wilhelmina Wilson had a holiday 3 years ago paid for by her sons.
- Carolyn Stephenson has not had a holiday in 2 years.
- Michelle Billington says she cannot afford a holiday.

R7.39 Excluding Symon Heaton, this evidence is not consistent with the ACCI assertion that witnesses report that they are able to spend some money on holidays. Mr Heaton's holiday of three days, we submit, does not constitute 'holidays' as generally understood.

R7.40 At paragraphs 14.17 – 14.20 ACCI makes some curious assertions. Award wage increases and the incentive to bargain (paragraph 14.17b) and safety net adjustments and the effect on employment (paragraph 14.17d) are matters which are canvassed in these Cases. The comments of Ms Billington and Ms Larnach are not irrelevant. The ACTU (paragraph 14.19) does not ask witnesses to address matters other than those directly before this Commission. That several witnesses provide evidence that they cannot afford private health insurance is valid comment in terms of things they miss out on.

R7.41 At paragraph 14.22 ACCI query Rhonda Scannell's stated classification. Ms Scannell is in fact employed as a Classification Skill Level 2 Manufacturing Production Employee. Her award rate of pay is $465.00. Ms Scannell receives a $5.00 attendance bonus making her total weekly gross $470.00. A deduction of $20.00 for superannuation is made leaving $450.00. The confusion arises from Ms. Scannell's pay slip which has this "$450.00" stated as her gross pay.

R7.42 These clarifications do not alter Ms Scannell's net wage or expenditure. As stated in her witness statement deductions of $71.00 tax and $5.80 union fees from $450.00 leave $373.20. Ms Scannell's expenditure is $388.19. It remains the case that Ms Scannell's evidence is illustrative of the needs of the low paid.

R7.43 Notwithstanding the ACCI submission, the evidence of the witnesses is illustrative of the real life experiences of employees who earn award rates of pay. They juggle finances, go into debt and go without things like holidays, new clothes, insurance cover and motor vehicles.

Inequality

R7.44 No one contests the ACTU submission that income inequality has increased since 1996.

Other Submissions

Tax and Transfer System – AIG

R7.45 The Commonwealth and the AIG refer to the July 2003 tax cuts. In our original submissions the ACTU modelled the real wage after tax for low paid workers, and showed that it had barely moved since 1999. We conclude from this that there has not been a significant change in the tax system for low paid workers.

R7.46 At paragraphs 5.10, 5.17, 5.20, 5.24, 5.28, and Annexures 4 and 5 AIG refers to changes to income support arrangements, at paragraph 5.10 going as far as describing them as 'significant'. This AIG portrayal of what is in fact regular indexation of income support and income thresholds is misleading. There has been no significant change in income support arrangements as claimed by AIG.

R7.47 The dollar and percentage increases depicted in AIG Annexure 4 simply maintain the real values of the payments (and thresholds). The Commission should not discount the SNA on this basis. The figures shown are gross disposable income increases, not real disposable income increases. We quote Centrelink from its online publication *Adjusting Maximum Payment Rates*:

> *The maximum rate of all payments from Centrelink will change from time to time. Most payments are adjusted in line with the Consumer Price Index (CPI)… .*

R7.48 The Centrelink sheet lists all payments in a table. The second column to that table is headed "When Adjusted (each year)". That is, the changes are not significant changes to income support arrangements as AIG claim, but regular indexation, not to increase the values of the payments but to maintain their real value; and not the *significant adjustments in the social safety net* the Commission was referring to in the 2003 decision.

R7.49 We utilise the EMTRs in AIG Annexure 5 to show the net increase from the ACTU claim in this Case. The following tables are based on Tables 1 – 5 in AiG Annexure 5. We have assumed that the EMTRs at each earned income level apply across the next $26.60 (or part-time equivalent). We note that this is the same approach adopted by AIG for their calculations in Annexure 5. As AIG notes in their footnote 1 to Annexure 5 this is generally an accurate measure. The ACTU Claim and net amounts for income levels below $450 have been calculated on the basis of the percentage to the FMW.

Table R7.1: Single Income, Two Parent Family, with Two Children

Household earned income	Effective Marginal Tax Rate	ACTU Claim (including part-time equivalent)	Increase in disposable income resulting from ACTU Claim	
$ per week	%	$ per week	$ per week	%
250	17	14.83	12.31	83.0
300	17	17.80	14.77	83.0
350	17	20.76	17.23	83.0
400	17	23.73	19.70	83.0
450	34	26.60	17.56	66.0
500	34	26.60	17.56	66.0
550	30	26.60	18.62	70.0
600	50	26.60	13.30	50.0
650	61.5	26.60	10.24	38.5
700	61.5	26.60	10.24	38.5

Table R7.2: Two Income (equally distributed) Two Parent Family with Two Children

Household earned income	Effective Marginal Tax Rate	ACTU Claim (including part-time equivalent)	Increase in disposable income resulting from ACTU Claim	
$ per week	Per cent	$ per week	$ per week	Per cent
250	32	14.83	10.08	68.0
300	32	17.80	12.10	68.0
350	32	20.76	14.12	68.0
400	32	23.73	16.14	68.0
450	17	26.60	22.08	83.0
500	17	26.60	22.08	83.0
550	17	26.60	22.08	83.0
600	37	26.60	16.76	63.0
650	48.5	26.60	13.70	51.5
700	48.5	26.60	13.70	51.5

Table R7.3: Two Income (ratio of 2:1) Two Parent Family with Two Children

Household earned income	Effective Marginal Tax Rate	ACTU Claim (including part-time equivalent)	Increase in disposable income resulting from ACTU Claim	
$ per week	%	$ per week	$ per week	%
250	21.3	14.83	11.67	78.7
300	21.3	17.80	14.01	78.7
350	27	20.76	15.5	73.0
400	27	23.73	17.32	73.0
450	27	26.60	19.42	73.0
500	27	26.60	19.42	73.0
550	27	26.60	19.42	73.0
600	47	26.60	14.10	53.0
650	69.8	26.60	8.03	30.2
700	59.8	26.60	10.69	40.2

Table R7.4: Single Parent Family with One Child

Household earned income	Effective Marginal Tax Rate	ACTU Claim (including part-time equivalent)	Increase in disposable income resulting from ACTU Claim	
$ per week	%	$ per week	$ per week	%
250	57.7	14.83	6.27	42.3
300	65.5	17.80	6.14	34.5
350	65.5	20.76	7.16	34.5
400	65.5	23.73	8.19	34.5
450	65.5	26.60	9.18	34.5
500	77.5	26.60	5.99	22.5
550	66.4	26.60	8.94	33.6
600	58.9	26.60	10.93	41.1
650	61.5	26.60	10.24	38.5
700	61.5	26.60	10.24	38.5

Table R7.5: Single Person

Household earned income	Effective Marginal Tax Rate	ACTU Claim (including part-time equivalent)	Increase in disposable income resulting from ACTU Claim	
$ per week	Per cent	$ per week	$ per week	%
250	17	14.83	12.31	83.0
300	37	17.80	11.21	63.0
350	18.5	20.76	16.92	81.5
400	18.5	23.73	19.34	81.5
450	35.5	26.60	17.16	64.5
500	35.5	26.60	17.16	64.5
550	31.5	26.60	18.22	68.5
600	31.5	26.60	18.22	68.5
650	31.5	26.60	18.22	68.5
700	31.5	26.60	18.22	68.5

R7.50 Last year the Commission concluded on AIG EMTR evidence

> ***[227]*** *The evidence adduced by AiG demonstrates that the net benefit of a given wage rise to federal award employees can be as low as 20 per cent and is in the order of 50 to 60 per cent for most persons at the lower pay levels. That is, for every additional dollar paid by an employer the net amount received by the employee can be as low as 20 cents and will usually be 50 cents or less.*

R7.51 The above tables, based on the AIG EMTR tables in AIG Annexure 5, clearly do not demonstrate this conclusion. While the net benefit of a given wage rise to federal award employees can be as low as 20 per cent, and is in the order of 40 per cent for Sole Parents, for most persons at lower pay levels the net benefit is in the order 60 or 70 or 80 per cent. That is, for every additional dollar paid by an employer the net amount received by the employee can be as low as 20 cents but will usually be 60 or 70 or 80 cents or more.

R7.52 Further we submit that the EMTRs reflected in the above tables are consistent with the NATSEM data presented by the ACTU in last year's Case. That data showed that:

- For individuals with earnings from wages and salaries, categorised by decile of family income, more than three quarters in each of the first four deciles, with average gross family income up to $729 per week, face effective marginal tax rates not exceeding 40 per cent.

R7.53 The problem of high EMTRs for low and middle income households is an issue for government to address - it provides no basis for the Commission to award less than it considers otherwise appropriate. As the NATSEM figures show, the cases in which such high EMTRs apply are in the vast minority.

Table R7.6: EMTRs of individuals with earnings according to their deciles of gross family income

Family EMTR ranges	Gross family income decile			
	1	**2**	**3**	**4**
%	%	%	%	%
0	12	2	*	*
0<=20	**51**	4	3	4
20<=40	16	**81**	**82**	**73**
40<=60	4	4	3	6
60<=80	10	6	10	15
80<=100	7	2	*	2
>100	*	*	*	*
Total	100	100	100	100
Average EMTR	30	36	36	39
Proportion with EMTR >60%	17	8	11	17
Average gross family income per week	291	498	613	729

Source: NATSEM Table 7

Financial Stress

R7.54 At paragraph 12.4 ACCI engage in a comparison between financial stress indicators for jobless households and employed households utilising results from the ABS General Social Survey. They imply this has not been available before but a comparison of financial stress indicators for Unemployed households and Employed households was made in the 2002 Case (ACTU Reply Submission).

R7.55 The ABS advise that the General Social Survey tables present results for person in households, not households as suggested by ACCI. The ACCI comparison (paragraphs 12.8 – 12.12) of jobless persons with all persons in households where at least one person is employed is not relevant to this Case. The "All persons in employed households" category clearly includes people who are not low paid. Rather the Commission should consider financial stress data for households in the bottom quintile of income distribution of households whose principal source of income is wages and salaries. This is the relevant population in terms of a consideration of needs of the low paid. As Professor Sue Richardson stated in her paper[14] referred to in ACTU submissions last year while not all low paid are in low income

[14] Richardson S., Low Wage Jobs and Pathways to Better Outcomes, NILS Monograph Series Number 7

households, (full-time) employed persons in low income households are low paid.

R7.56 In previous Cases the ACTU has provided the Commission with an analysis of financial stress facing low income households relying on Household Expenditure Survey data (HES) for 1998-99. This analysis showed that households in the lowest quintile of working households suffered significant degrees of financial stress.

R7.57 The ACTU commissioned ABS unpublished data from the General Social Survey to provide the financial stress data for the population persons whose principal source of income is employee income. The following table provides the results for persons in households in the first quintile and first two quintiles of the income distribution for the population principal source of income employee income.

R7.58 The data shows that over the ensuing three years since the HES data was collected financial stress for people in low income working households remains a significant issue.

Table R7.7: Financial Stress Indicators: person in Households whose principal source of income is employee income 2002

Quintiles for Persons in Households with Principal Source of Income: Employee Income Only [(a)]	1st Quintile		1st two Quintiles	
Upper boundary of income quintile(s)	$425		$569	
	('000)	%	('000)	%
Unable to raise $2,000 within a week for something important	323	23.5%	574	19.9%
Number of different types of cash flow problems in last 12 months(b)				
None	902	65.6%	2006	69.4%
One	178	13.0%	347	12.0%
Two	103	7.5%	189	6.5%
Three or more	149	10.8%	274	9.5%
Types of cash flow problems in last 12 months(c)				
Unable to pay electricity, gas, or telephone bills on time	282	20.5%	537	18.6%
Unable to pay mortgage or rent payments on time	127	9.2%	208	7.2%
Unable to pay for car registration or insurance on time	141	10.3%	264	9.1%
Unable to make minimum payment on credit card	95	6.9%	177	6.1%
Pawned or sold something because cash was needed	61	4.5%	95	3.3%
Unable to heat home	18	1.3%	36	1.2%
Went without meals	30	2.2%	59	2.0%
Sought financial help from friends or family	173	12.5%	343	11.9%
Sought assistance from welfare /community organisations	50	3.6%	89	3.1%
Number of different types of dissaving actions taken in last 12 months(b)				
None	955	69.5%	2101	72.7%
One	277	20.2%	497	17.2%
Two	69	5.0%	171	5.9%
Three or more	42	3.1%	63	2.2%
Types of dissaving actions taken in last 12 months(c)				
Reduced home loan repayments	81	5.9%	136	4.7%
Drew on accumulated savings/term deposits	126	9.2%	267	9.2%
Increased the balance owing on credit cards by $1000 or more	114	8.3%	213	7.4%
Entered into a loan agreement with family/friends	64	4.6%	122	4.2%
Took out a personal loan	70	5.1%	124	4.3%
Sold household goods or jewellery	31	2.2%	62	2.1%
Sold shares, stocks or bonds	31	2.3%	58	2.0%
Sold other assets	28	2.0%	40	1.4%
Other action taken	19	1.4%	33	1.1%
All persons aged 18 years or over	**1375**	**100.0%**	**2889**	**100.0%**

Source: ABS Cat No 4159.0 2002 unpublished data.

(a) persons where household income was not known or was not adequately reported are excluded from all columns except the all persons column

(b) information for some persons was not known or not adequately reported

(c) Categories are not mutually exclusive

Underemployment, unemployment and needs of the low paid

R7.59 In Chapter 6 AIG refer to the Professor Sue Richardson paper *Low Wage Jobs and Pathways to Better Outcomes*. In paragraph 6.7 AiG quote a range of conclusions which relate to countries other than Australia:

- third dot point - the conclusion comes from a study by Stewart and Swaffield on Mobility in the UK, and the statistics from a study of the UK by Stewart again.
- fourth dot point - the quoted "low pay-no pay cycle" is from the same study by Stewart for the UK.
- fifth dot point – the quote and statistics are from a study of the US by Connolly and Gottschalk.

R7.60 AiG overstate the extent to which low pay is associated with insecure employment in Australia. Richardson does not say that all low paid people cycle through a low pay – no pay cycle. While Richardson says quite a large section of low wage workers cycle between low wage jobs and no jobs she does not suggest that this is universal. As Richardson says the issue with low wage jobs is:

> *The growth of such jobs will be of most concern if they are dead-end, such that the people who occupy them stay in the same sorts of jobs for lengthy periods of time, and leave them largely because they leave the workforce rather than because they find substantially better jobs.* [p. 2]

R8 Other Matters

The Proposed ACCI Change to the Principles

R8.1 ACCI in Chapter 15 of its submissions proposes a change to the Principles regarding the operative date of variations. This change should be rejected out of hand. It simply has the effect of creating delays in award workers receiving pay increases. If ACCI is genuinely concerned regarding the impact on firms of short notice regarding operative dates of awards it should itself on behalf of its members make application at an earlier stage to vary those awards for Safety Net Adjustments and/or take greater steps to publicise the likelihood of upcoming award increases given that the 12 month rule provides ACCI and its members with significant advanced notice of the likely operative date of any Safety Net Adjustment.

The AiG Proposed Change to the Principles

R8.2 In Chapter 4 of its submissions AiG proposes a change to the Principles requiring of unions a commitment to continuous improvement in productivity, efficiency and flexibility of workplaces covered by the award in order to access Safety Net Adjustments. Such a change should not be granted.

R8.3 As material in the ACTU's original submissions and these submissions demonstrates award dependent sectors have increased productivity throughout the period of Safety Net Adjustments and there is simply no basis for the suggestion that the proposed amendment is in any way necessary.

R8.4 Section 143(1B) of the *Workplace Relations Act* (the Act) already requires that decisions of the Commission should not:

(a) include matters of detail or process that are more appropriately dealt with by agreement of the workplace or enterprise level;

(b) prescribe work practices or procedures that restrict or hinder the efficient performance of work; and

(c) contain provisions that have the effect of restricting or hindering productivity, having regard to fairness to employees.

R8.5 The principal objects of the Act and the objects of Part VI of the Act are also relevant in this regard.

R8.6 The proposed amendment to the Principles does not paraphrase or reproduce any provision of the Act. In the circumstances it should not be included: see paragraph 171 *Safety Net Review Wages* May 2002 [PR002002].

Skills Based Classification Structure and Relativities

R8.7 The AiG submission in relation to skills based classifications and relativities is wrong when it says that in all previous Safety Net Wage Cases the ACTU and its affiliates have elected to pursue flat dollar safety net adjustments. Indeed this is only the third case in which the ACTU has not pursued as some portion of its claim a percentage increase.

R8.8 The claim that the Ai Group's proposal for a flat $10 per week adjustment results in less compression of relativities than the ACTU claim is no more than a function of the fact that the Ai Group proposal results at every level of the classification structure in significantly lower increases for workers than the ACTU claim.

Award Structures

R8.9 The Ai Group seeks certain actions from the Commission regarding the recent amendment to the Workplace Relations Act regarding Victorian workers. As the AiG itself notes it can be expected that unions will shortly make application to have various awards declared as Common Rules. Those applications

should be dealt with in the ordinary course of the Commission's business and there is no need for the Safety Net Review proceedings to pre-empt in any way the issues which might arise in those proceedings.

The Commonwealth proposal to defer the decision date

R8.10 At paragraphs 1.17 to 1.20 the Commonwealth suggests the Commission should defer its decision until after the May Budget to allow the parties to make submissions on the matters contained in the Budget. This proposal should be rejected out of hand.

R8.11 The directions in these proceedings (to which the Commonwealth consented) provide a timetable for filing of materials and for oral submissions which conclude on 29 March 2004. The Commonwealth proposal essentially seeks to create a further round of submissions (the directions already provide for, in effect, two rounds of written submissions and one round of oral submissions).

R8.12 It is disingenuous to suggest that a further round of submissions would not result in delays in variation of awards. Parties would require time to digest the detail of the Budget and write submissions, respond to other parties submissions and the Commission would have to consider all these matters.

R8.13 The Commonwealth says only one award was varied for the safety net prior to 20 May last year but as the ACCI submission shows 34 were varied prior to the end of May and 147 in June. It is unrealistic to assume parties and the Commission could properly conclude a round of submissions regarding measures in the Budget (and presumably new economic data and other material released after 29 March 2004 and before 11 May 2004) in a period of nine days. The relevant date is not 20 May but more likely some time in June. As ACCI's material shows significant numbers of awards would have their date of effect for the Safety Net Adjustment extend beyond 12 months from the last increase under the Commonwealth proposal.

Submission of DEAC / NCID and ACCI regarding Disability Employment

Submissions of the DEAC and NCID

R8.14 As a result of last years Safety Net Review – Wages decision, the Commission established a Disability Sector Industry Consultative Council (ICC). The ICC has met on several occasions and is continuing to meet to discuss the matters raised by DEAC and NCID.

Submissions of ACCI regarding Supported Wage Considerations

The ACTU supports the proposal to achieve consistency of the minimum payment under the Supported Wage System in awards of Commission - "Proposed Approach For 2004" contained in the ACCI submissions at 16.35 to 16.38.

MINIMUM WAGES CASE 2004

ACTU Reply Composite Exhibit

9 March 2004

D No. 5/2004

MINUMUM WAGES CASE 2004

REPLY COMPOSITE EXHIBIT

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2. A needle in a haystack. Do increases in the minimum wage cause employment losses? Working paper 90, Ian Watson, ACIRRT, University of Sydney, March 2004

3. Impact of Minimum Wages on Employment: Some Comments on Andrew Leigh's paper and response to my critique, P.N. Junankar, University of Western Sydney, March 2004

TAG 1

Economic Tables and Charts (update)

Tag 1: Economic Conditions - tables and commentary[1]

(Updated for new data released since the ACTU's original submission)

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[1] Note: As in previous submissions, all data in these tables has been expressed in trend terms, unless otherwise mentioned. While seasonally adjusted estimates may provide a clearer focus on adjustments in the real economy, by abstracting from the effects of seasonal influence, they still include factors of volatility and irregularity, which can make interpretation difficult.

The trend estimates presented dampen out these irregularities using a moving average methodology. This provides a more reliable guide to the underlying directions of the data.

TABLE 1: PROPORTIONS OF REAL GROSS DOMESTIC PRODUCT
MAJOR EXPENDITURE COMPONENTS

Component	year to Dec. 2002	year to Sept. 2003	year to Dec. 2003
Final Consumption Expenditure			
Households	60.0	60.6	60.8
Government	17.9	18.0	17.9
Total	77.8	78.5	78.8
Gross Fixed Capital Expenditure			
Private			
Dwellings	6.0	6.2	6.3
Non-dwelling construction	3.2	3.7	3.8
Machinery and equipment	7.2	7.8	8.1
Intangible fixed assets	1.6	1.6	1.6
Ownership transfer costs	1.7	1.7	1.7
Total private gross fixed capital expenditure	20.0	21.3	21.7
Public (total)	3.7	3.8	3.8
Total gross fixed capital expenditure	23.8	25.2	25.5
Change in inventories	0.0	0.5	0.7
Gross National Expenditure (GNE)	101.5	104.2	105.0
Net Exports (a)	-1.4	-3.8	-4.6
Statistical Discrepancy	-0.1	-0.4	-0.4
Gross Farm Product	3.4	2.7	2.6
GROSS DOMESTIC PRODUCT	100	100	100

Source: ABS Cat. No. 5206.0

Notes:

(a) Exports minus imports

All figures are trend estimates

Reference year for chain volume measures is 2001-02

Table 1: Proportions of Real Gross Domestic Product - Major Expenditure Components

Table 1 presents the major expenditure components as a percentage of GDP for the years ended December 2002, September 2003 and December 2003. The relative size of each of these components has continued to remain stable over this period.

The December 2003 data show that Final Consumption Expenditure accounted for 60.8 per cent of total GDP over the year, up slightly from the 60.6 per cent recorded over the year to September 2003.

The total contribution of private investment expenditure to GDP has continued to grow in December 2003, with total private investment expenditure contributing 21.7 per cent of total GDP over the year, compared with 21.3 per cent over the year to September 2003, and 20.0 per cent over the year to December 2002.

The increase in the contribution of private investment to GDP over the past year has come from all sources of private investment expenditure. Investment spending on private dwellings accounted for 6.3 per cent of total GDP over the year to December 2003, compared with 6.0 per cent in the 2002 calendar year. Similarly, the contribution of spending on business investment items (non-dwelling construction and machinery and equipment) to total GDP has also increased. Over the year to December 2002, investment spending on non-dwelling construction, and machinery and equipment each accounted for 3.2 per cent and 7.2 per cent of total GDP, increasing to 3.8 per cent and 8.1 per cent respectively over the latest year to December 2003.

The contribution of public sector investment to GDP has increased slightly going from 3.7 per cent (over the year to December 2002) to 3.8 per cent (to December 2003) of total GDP.

Net exports subtracted 4.6 per cent of total GDP over the year to December 2003, up on the year to September 2003 (which subtracted 3.8 per cent of GDP).

The farm sector contributed 2.6 per cent to total GDP for the year to December 2003.

TABLE 2: CHANGES IN REAL GROSS DOMESTIC PRODUCT

	Gross domestic product		Gross farm product		Gross non-farm product	
	percentage change on					
	previous period	year earlier	previous period	year earlier	previous period	year earlier
Year -						
1998-99	5.2		12.8		4.9	
1999-00	3.8		7.0		3.6	
2000-01	2.1		-1.7		2.2	
2001-02	3.8		3.6		3.8	
2002-03	3.0		-24.1		4.0	
Six Months -						
1999-2000						
Dec	1.7	3.8	3.3	10.4	1.6	3.6
Jun	2.0	3.7	0.6	3.9	2.0	3.7
2000-01						
Dec	0.6	2.6	-2.4	-1.9	0.6	2.7
Jun	1.0	1.6	1.0	-1.5	1.1	1.7
2001-02						
Dec	2.3	3.3	4.2	5.3	2.3	3.4
Jun	1.9	4.3	-2.2	2.0	1.8	4.2
2002-03						
Dec	1.4	3.4	-19.3	-21.1	2.3	4.1
Jun	1.2	2.6	-9.8	-27.3	1.5	3.8
2003-04						
Dec	2.0	3.2	20.2	8.4	1.5	3.1
Quarter -						
2000-01						
Sep	0.2	3.1	-1.5	-0.4	0.2	3.1
Dec	0.1	2.1	-1.5	-3.2	0.1	2.2
Mar	0.4	1.4	0.8	-2.6	0.4	1.5
Jun	1.1	1.8	1.9	-0.3	1.1	1.9
2001-02						
Sep	1.2	2.8	2.3	3.5	1.3	3.0
Dec	1.1	3.8	1.9	7.0	0.9	3.8
Mar	1.0	4.4	-0.2	5.9	0.8	4.2
Jun	0.8	4.2	-5.7	-1.9	1.0	4.1
2002-03						
Sep	0.7	3.7	-11.4	-15.0	1.2	4.0
Dec	0.5	3.1	-12.5	-27.0	1.0	4.1
Mar	0.5	2.6	-6.0	-31.2	0.7	4.0
Jun	0.8	2.6	5.6	-23.0	0.7	3.7
2003-04						
Sep	1.1	2.9	12.1	-2.6	0.8	3.2
Dec	1.1	3.5	8.8	21.1	0.8	3.0

Source: ABS Cat. No. 5206.0

Note:

All figures are trend estimates

Reference year for chain volume measures is 2001-02

Table 2: Changes in Real Gross Domestic Product

GDP growth in the December quarter 2003 was 1.1 per cent. In total, GDP grew 3.5 per cent in trend terms over the year to December 2003.

Gross Farm Product (GFP) increased by 8.8 per cent during the December 2003 quarter, to be 21.1 per cent higher than at the same time a year earlier. This is largely due to a break in the drought.

Abstracting from the farm sector of the economy, Gross Non-Farm Product (GNFP) continued to grow strongly in the December 2003 quarter, increasing a further 0.8 per cent. GNFP in December 2003 was 3.0 per cent higher that at the same time a year earlier.

TABLE 3: AGGREGATE PRIVATE FINAL DOMESTIC DEMAND

	Private Consumption		Private Fixed Investment		Private Final Domestic Demand	
	percentage change on					
	previous period	year earlier	previous period	year earlier	previous period	year earlier
Year -						
1998-99	4.8		5.4		5.0	
1999-20	4.1		7.7		5.0	
2000-01	2.8		-5.5		0.8	
2001-02	3.4		9.6		4.8	
2002-03	4.1	3.8	15.5	6.5	6.8	4.5
Six months -						
1999-2000						
Dec	2.1	4.5	4.1	7.2	2.6	5.2
Jun	1.6	3.7	3.9	8.2	2.1	4.7
2000-01						
Dec	1.4	2.9	-6.3	-2.7	-0.5	1.6
Jun	1.3	2.6	-2.0	-8.2	0.5	0.0
2001-02						
Dec	1.5	2.8	5.8	3.7	2.5	3.0
Jun	2.4	3.9	9.2	15.6	4.0	6.6
2002-03						
Dec	1.9	4.4	8.3	18.3	3.5	7.6
Jun	1.9	3.8	4.3	12.9	2.5	6.0
2003-04						
Dec	3.0	4.9	5.7	10.3	3.7	6.3
Quarter						
2000-01						
Sep	0.7	3.0	-3.9	1.0	-0.4	2.5
Dec	0.7	2.9	-4.1	-6.2	-0.4	0.6
Mar	0.6	2.7	-1.1	-9.7	0.2	-0.4
Jun	0.6	2.6	2.5	-6.6	1.0	0.4
2001-02						
Sep	0.7	2.7	2.7	-0.2	1.2	2.0
Dec	0.9	2.9	3.5	7.8	1.5	4.0
Mar	1.3	3.6	4.8	14.1	2.1	6.0
Jun	1.2	4.3	5.0	16.9	2.2	7.1
2002-03						
Sep	0.9	4.5	4.3	18.7	1.8	7.8
Dec	0.7	4.2	2.7	17.8	1.2	7.4
Mar	0.8	3.8	1.7	14.4	1.1	6.3
Jun	1.3	3.9	2.4	11.6	1.6	5.8
2003-04						
Sep	1.5	4.5	3.0	10.2	1.9	5.9
Dec	1.6	5.4	2.9	10.4	1.9	6.7

Source: ABS Cat No. 5206.0

Notes:

Reference year for chain volume measures is 2001-02

All figures are trend estimates

Table 3: Private Final Domestic Demand

Growth in Private Final Domestic Demand continued to remain strong during the December 2003 quarter, increasing 1.9 per cent during the quarter to be a solid 6.7 per cent higher than a year earlier, driven by solid growth in both private consumption and investment.

Private Consumption expenditure increased 1.6 per cent during the December 2003 quarter, to be 5.4 per cent higher than at the same time a year ago.

Growth in private fixed investment expenditure has been even stronger, increasing 2.9 per cent in the December 2003 quarter, to be 10.4 per cent higher than in December 2002.

TABLE 4: TOTAL PUBLIC AND FINAL DEMAND

	Total public final demand		Total final demand	
	percentage change on			
	previous period	year earlier	previous period	year earlier
Year -				
1998-99	4.5		4.8	
1999-00	4.1		4.8	
2000-01	-0.5		0.5	
2001-02	2.5		4.3	
2002-03	3.9		6.2	
Six months -				
1999-2000				
Dec	2.9	4.4	2.6	5.0
Jun	0.9	3.9	1.9	4.5
2000-01				
Dec	-0.8	0.1	-0.6	1.2
Jun	-0.2	-1.0	0.4	-0.2
2001-02				
Dec	1.9	1.6	2.3	2.7
Jun	1.4	3.3	3.4	5.8
2002-03				
Dec	2.2	3.7	3.2	6.7
Jun	2.0	4.2	2.4	5.7
Quarter -				
2000-01				
Sep	-0.5	0.9	-0.5	2.2
Dec	-0.4	-0.7	-0.4	0.3
Mar	-0.2	-1.3	0.1	-0.6
Jun	0.3	-0.8	0.9	0.1
2001-02				
Sep	1.2	0.9	1.2	1.8
Dec	1.0	2.4	1.4	3.6
Mar	0.5	3.1	1.8	5.3
Jun	0.8	3.5	1.9	6.4
2002-03				
Sep	1.1	3.5	1.6	6.8
Dec	1.4	3.8	1.3	6.7
Mar	1.0	3.8	1.3	5.9
Jun	0.6	4.3	1.0	5.4
2003-04				
Sep	0.5	3.5	1.6	5.4
Dec	0.7	2.8	1.7	5.9

Source: ABS Cat No. 5206.0

Notes:

Reference year for chain volume measures is 2001-02

All figures are trend estimates

Table 4: Public and Total Final Demand

Total final demand expenditure continued to grow solidly in the December 2003 quarter, increasing 1.7 per cent, to be 5.9 per cent higher than in December 2002.

As can be seen in Table 3, part of this has been due to strong growth in both private consumption and investment expenditure.

Total Public Final Demand has also increased strongly in the December quarter 2003, up 0.7 per cent to be 2.8 per cent higher than at the same time a year earlier.

TABLE 5: CONTRIBUTIONS TO GROWTH IN GROSS DOMESTIC PRODUCT

Component	2002-03 Sep	Dec	Mar	Jun	2003-04 Sep	Dec	Dec Qtr 2001 to Dec Qtr 2002	Sep Qtr 2002 to Sep Qtr 2003	Dec Qtr 2002 to Dec Qtr 2003
Final Consumption Expenditure									
Government	0.2	0.2	0.1	0.1	0.1	0.1	0.7	0.6	0.5
Private	0.6	0.4	0.5	0.8	0.9	1.0	2.7	2.7	3.2
Total final consumption expenditure	0.8	0.6	0.7	0.9	1.1	1.1	3.3	3.3	3.8
Gross Fixed Capital Expenditure									
Private									
Dwellings	0.3	0.1	0.0	0.0	0.1	0.2	1.1	0.3	0.3
Non-dwelling construction	0.3	0.3	0.1	0.0	0.1	0.1	1.2	0.5	0.3
Machinery and equipment	0.2	0.2	0.2	0.4	0.4	0.2	1.0	1.1	1.2
Real Estate transfer expenses	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Total private gross fixed capital formation	0.8	0.6	0.3	0.5	0.6	0.6	3.3	2.1	2.2
Public									
Total public gross fixed capital formation	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.2	0.1
Total gross fixed capital formation	0.9	0.7	0.4	0.5	0.6	0.7	3.4	2.3	2.2
Increase in stocks									
Private non-farm	-0.1	0.1	0.4	0.4	0.0	-0.2	-0.2	0.9	0.6
Farm	-0.1	0.1	0.1	0.0	0.0	0.1	-0.2	0.2	0.2
Total changes in inventories	-0.4	0.0	0.8	0.4	0.1	-0.5	-0.6	1.4	0.8
Gross National Expenditure	1.4	1.4	1.6	1.8	1.8	1.6	6.3	6.6	6.9
Exports of goods and services	0.1	-0.1	-0.3	-0.3	0.0	0.1	0.1	-0.7	-0.5
less Imports of goods and services	0.7	0.6	0.6	0.7	0.7	0.7	3.0	2.7	2.8
Net Exports	-0.6	-0.7	-0.9	-1.0	-0.8	-0.6	-2.8	-3.4	-3.3
Statistical discrepency	-0.1	-0.2	-0.2	0.0	0.1	0.2	-0.4	-0.3	0.1
Gross Domestic Product	0.7	0.5	0.5	0.8	1.1	1.1	3.1	2.9	3.5

Source: ABS Cat. No. 5206.0

Note:

Reference year for chain volume measures is 2001-02

All figures are trend estimates

Table 5: Contributions to Growth in Gross Domestic Product

As can be seen, there has been little change to that data presented from the September 2003 quarter.

Total final consumption expenditure contributed 1.1 percentage points towards the total 1.1 percentage point growth in GDP in the December 2003 quarter. This was counterbalanced by a 0.6 percentage point subtraction from net exports and 0.5 percentage point subtraction from changes in inventories from GDP growth.

Total gross fixed capital formation contributed a further 0.7 percentage points towards GDP growth in the December quarter 2003.

TABLE 6: INDICATORS OF CONSUMPTION EXPENDITURE

	Retail Turnover (value) - trend (a)		New Motor Vehicle Sales (number)	
	percentage change on			
	previous period	year earlier	previous period	year earlier
Year -				
1998-99	5.7		3.7	
1999-00	5.0		-6.4	
2000-01	6.5		4.7	
2001-02	7.8		2.3	
2002-03	6.5		7.8	
Quarter -				
2001-02				
Sep	1.5	7.8	1.8	-5.1
Dec	1.7	8.1	3.5	-0.7
Mar	2.0	7.6	2.8	6.6
Jun	2.1	7.6	0.5	8.9
2002-03				
Sep	1.6	7.7	1.0	8.0
Dec	0.9	6.9	1.5	5.9
Mar	1.0	5.9	3.1	6.3
Jun	1.9	5.6	4.8	10.9
2003-04				
Sep	2.7	6.7	3.2	13.3
Dec	2.4	8.2	-1.5	9.9
Month -				
2002-03				
Jul	0.5	7.8	0.4	8.3
Aug	0.5	7.8	0.5	8.2
Sep	0.4	7.5	0.5	7.6
Oct	0.3	7.2	0.4	6.7
Nov	0.3	6.9	0.6	5.8
Dec	0.3	6.5	0.7	5.4
Jan	0.3	6.2	1.0	5.3
Feb	0.4	5.8	1.3	6.0
Mar	0.5	5.6	1.5	7.4
Apr	0.6	5.5	1.6	9.1
May	0.7	5.5	1.6	10.9
Jun	0.8	5.8	1.7	12.5
2003-04				
Jul	0.9	6.2	1.3	13.5
Aug	0.9	6.7	0.5	13.5
Sep	0.9	7.3	-0.2	12.8
Oct	0.8	7.8	-0.7	11.5
Nov	0.7	8.3	-0.9	9.9
Dec	0.6	8.6	-0.8	8.2
Jan	0.5	8.8	-0.7	6.4

Source: ABS Cat. Nos. 8501.0 and 9414.0.55.001

Table 6: Indicators of Consumption Expenditure

Since the ACTU's original submission, additional data on retail turnover has become available for the months of December 2003 and January 2004, as has data on January 2004 Motor Vehicle sales.

The value of retail turnover increased 0.6 and 0.5 per cent in each of the months of December 2003 and January 2004 respectively, leaving it 8.8 per cent higher over the year to January 2004.

The latest motor vehicles sales data shows that the number of new motor vehicles sold in January 2004 decreased by 0.7 per cent, to be 6.4 per cent higher than a year ago.

TABLE 7: MANUFACTURING PRODUCTION

		percent change on	
	$ million	previous period	year earlier
Year -			
1998-99	72194	2.0	
1999-00	72820	0.9	
2000-01	74696	2.6	
2001-02	76726	2.7	
2002-03	78518	2.3	
Quarter -			
2000-01			
Sep	18768	0.3	5.8
Dec	18663	-0.6	3.8
Mar	18601	-0.3	1.2
Jun	18664	0.3	-0.3
2001-02			
Sep	18870	1.1	0.5
Dec	19115	1.3	2.4
Mar	19316	1.1	3.8
Jun	19425	0.6	4.1
2002-03			
Sep	19495	0.4	3.3
Dec	19630	0.7	2.7
Mar	19724	0.5	2.1
Jun	19669	-0.3	1.3
2003-04			
Sep	19532	-0.7	0.2
Dec	19377	-0.8	-1.3

Source: ABS Cat. No. 5206.0

Notes:

Reference year for chain volume measures is 2001-02

All figures are trend estimates

Table 7: Manufacturing Production

The latest National Accounts data suggests that manufacturing production fell by 0.8 per cent during the December 2003 quarter, to be 1.3 per cent lower than a year earlier.

TABLE 8: THE HOUSING SECTOR

	Private Dwelling Expenditure (a)	Total New Dwelling Approvals	Value of New Dwelling Approvals	Value of Lending for New Dwellings
		percentage change on previous period		
Year				
1998-99	8.3	2.0	-0.2	-3.6
1999-00	12.0	11.8	11.5	1.4
2000-01	-17.5	-29.0	-11.4	-3.6
2001-02	16.1	38.1	30.2	28.3
2002-03	16.3	2.2	16.9	-2.3
Quarter -				
2000-01				
Sep	-10.8	-21.6	-12.6	-9.6
Dec	-13.0	-3.7	2.9	-3.2
Mar	-4.6	5.3	6.7	19.9
Jun	6.2	16.7	10.5	22.0
2001-02				
Sep	7.2	18.6	11.7	15.6
Dec	6.8	2.6	2.6	-2.5
Mar	6.3	-1.5	2.1	-21.3
Jun	5.5	4.5	4.5	6.9
2002-03				
Sep	4.7	4.0	9.4	-2.9
Dec	2.3	-3.9	3.6	4.3
Mar	0.3	-5.4	-3.7	1.5
Jun	0.8	3.0	3.9	20.0
2003-04				
Sep	1.9	6.0	5.2	10.9
Dec	2.6	-2.0	-2.6	0.4
Month -				
2002-03				
Jul	(b)	1.5	3.5	7.4
Aug		0.7	3.5	0.0
Sep		-0.4	2.8	-7.4
Oct		-1.5	1.3	0.1
Nov		-2.3	-0.2	20.7
Dec		-2.7	-1.6	-10.1
Jan		-2.3	-1.9	-5.4
Feb		-1.1	-1.1	4.6
Mar		0.2	0.3	15.6
Apr		1.0	1.2	-3.8
May		2.1	2.7	22.3
Jun		2.4	2.9	-7.1
2003-04				
Jul		2.5	2.0	16.2
Aug		1.6	0.7	-11.9
Sep		0.3	-0.5	6.9
Oct		-0.9	-1.3	0.6
Nov		-1.7	-1.3	-1.6
Dec		-2.0	-1.0	2.3

Source: ABS Cat. Nos. 5206.0, 5609.0 and 8731.0

Notes:

(a) Reference year for chain volume measures is 2001-02

(b) This data from ABS National Accounts Cat.no. 5206.0, and is only available on a quarterly basis

All figures are trend estimates

Table 8: The Housing Sector

Private Dwelling expenditure continued to increase by 2.6 per cent during the December 2003 quarter.

The most recent data on dwelling approvals, and those concerning the value of lending for new dwellings, continue to show a rather mixed message.

Both the number and value of new dwelling approvals declined during the month of December 2003, by 2.0 per cent and 1.0 per cent respectively, suggesting some levelling off in spending on housing may occur over the coming year, as has been expected for some time. The value of lending for new dwellings, however, grew during the month of December 2003 to be 2.3 per cent higher.

A levelling off of expenditure on housing to more normal levels has been expected for some time now.

TABLE 9: INVESTMENT

	Private Business Fixed Investment				Change in private non-farm stocks
	Non-dwelling construction	Machinery & equipment	Total (a)	Total public investment	
	percentage change on previous period				$ million
Year -					
1998-99	8.5	-0.1	3.0	7.9	5477
1999-2000	-8.6	11.1	3.7	8.0	4066
2000-01	-18.7	4.2	-3.4	-11.0	1501
2001-02	8.7	5.4	6.3	4.7	718
2002-03	34.9	14.3	20.2	5.2	2009
Quarter -					
1998-99					
Sep	1.4	-1.9	-0.7	3.6	669
Dec	-0.3	0.8	0.4	2.2	1002
Mar	0.0	0.8	1.6	-0.2	1720
Jun	-0.7	2.9	0.9	2.4	2086
1999-2000					
Sep	-1.8	2.5	0.9	7.2	1834
Dec	-3.0	3.0	0.5	2.3	1097
Mar	-5.1	3.5	-1.0	-3.4	535
Jun	-6.5	1.7	-1.7	-5.9	600
2000-01					
Sep	-7.6	0.8	-1.7	-4.7	754
Dec	-5.2	-0.1	-1.5	-1.4	562
Mar	-1.1	-0.8	-0.9	-0.2	184
Jun	1.5	0.2	0.6	0.7	1
2001-02					
Sep	0.6	0.8	0.7	3.7	132
Dec	1.8	2.3	2.1	1.7	265
Mar	8.5	3.9	5.2	-0.7	255
Jun	12.0	4.2	6.4	0.0	66
2002-03					
Sep	10.5	3.5	5.6	1.5	-185
Dec	7.6	2.4	4.1	3.4	-26
Mar	2.7	3.0	2.9	1.9	782
Jun	1.3	4.7	3.6	-0.2	1438
2003-04					
Sep	2.5	4.4	3.8	-0.5	1474
Dec	2.5	2.8	2.7	0.4	1014

Source ABS Cat. No. 5206.0

Notes:

(a) Total of non-dwelling construction and machinery & equipment investment

Reference year for chain volume measures is 2001-02

All figures are trend estimates

Table 9: Investment

Growth in each of the components of business investment has continued to remain strong during the December 2003 quarter.

Non-dwelling construction investment expenditure increased by 2.5 per cent during the December 2003 quarter.

Machinery and equipment investment spending also increased solidly by 2.8 per cent in the December 2003 quarter.

Considering these two items together, total Private business fixed investment expenditure rose 2.7 per cent during the December 2003 quarter.

Total public investment also rose in the December quarter by 0.4 per cent.

TABLE 10: CONSUMER PRICE INDEX

	All groups (a)	
	percentage change on previous period	percentage change on year earlier
Year -		
1998-99	1.2	
1999-00	2.4	
2000-01	6.0	
2001-02	2.9	
2002-03	3.1	
Quarter -		
2000-01		
Sep	3.7	6.1
Dec	0.3	5.8
Mar	1.1	6.0
Jun	0.8	6.0
2001-02		
Sep	0.3	2.5
Dec	0.9	3.1
Mar	0.9	2.9
Jun	0.7	2.8
2002-03		
Sep	0.7	3.2
Dec	0.7	3.0
Mar	1.3	3.4
Jun	0.0	2.7
2003-04		
Sep	0.6	2.6
Dec	0.5	2.4

Source: ABS Cat. No. 6401.0

Notes:

(a) weighted average of eight capital cities

Table 10: Consumer Price Index (CPI)

The latest figures for the December quarter 2003 show CPI continues to remain within the RBA's target range increasing be 0.5 per cent for the December quarter 2003 to be 2.4 per cent higher for the year.

TABLE 11: WAGE COST INDEX (a)

	All Sectors		Private Sector		Public Sector	
	percentage change on					
	previous period	year earlier	previous period	year earlier	previous period	year earlier
Year -						
1999-2000	2.9		2.8		3.0	
2000-2001	3.4		3.5		3.4	
2001-2002	3.3		3.2		3.4	
2002-2003	3.5		3.4		3.8	
Quarter -						
1997-98						
Dec	0.8		0.8		0.8	
Mar	0.8		0.8		0.8	
Jun	0.8		0.8		0.9	
1998-99						
Sep	0.7	3.2	0.7	3.2	1.0	3.5
Dec	0.8	3.2	0.7	3.0	1.0	3.8
Mar	0.8	3.1	0.7	2.9	0.9	3.9
Jun	0.8	3.1	0.7	2.9	0.9	3.9
1999-2000						
Sep	0.7	3.0	0.7	2.9	0.7	3.6
Dec	0.7	2.9	0.7	2.8	0.6	3.1
Mar	0.7	2.8	0.7	2.8	0.6	2.8
Jun	0.8	2.9	0.8	2.9	0.7	2.6
2000-01						
Sep	0.9	3.1	0.9	3.2	0.9	2.8
Dec	0.9	3.4	0.9	3.4	1.0	3.2
Mar	0.9	3.6	0.9	3.6	1.0	3.6
Jun	0.9	3.7	0.9	3.7	0.9	3.8
2001-02						
Sep	0.8	3.6	0.8	3.5	0.8	3.8
Dec	0.7	3.4	0.7	3.3	0.8	3.6
Mar	0.8	3.2	0.8	3.2	0.8	3.3
Jun	0.8	3.2	0.9	3.2	0.8	3.2
2002-03						
Sep	0.9	3.3	0.9	3.3	0.9	3.3
Dec	0.9	3.5	0.9	3.4	1.0	3.6
Mar	0.9	3.6	0.8	3.5	1.1	3.9
Jun	0.9	3.6	0.8	3.4	1.2	4.3
2003-04						
Sep	0.9	3.6	0.8	3.3	1.2	4.6
Dec	0.9	3.6	0.8	3.3	1.1	4.7

Source: ABS Cat. No. 6345.0

Notes:

(a) Total hourly rates of pay, excluding bonuses
All figures are trend estimates

Table 11: Wage Cost Index

The latest Wage Cost Index (WCI) figures for total hourly rates of pay, excluding bonuses during the December 2003 quarter are shown in Table 11.

The Private Sector, Public Sector and All Sectors WCI measures each increased by 0.8, 1.1 and 0.9 per cent respectively during the December quarter 2003, broadly in line with December quarter 2002 numbers.

Over the year to December 2003, the All Sectors WCI has increased 3.6 per cent.

TABLE 12: AVERAGE WEEKLY EARNINGS

	Full-time Adults				All employees	
	Weekly Ordinary Time Earnings (AWOTE)		Weekly Total Earnings (AWE)		Weekly Total Earnings (AWE Total Earnings)	
	percentage change on					
	previous period	year earlier	previous period	year earlier	previous period	year earlier
Year -						
1998-99	3.6		3.4		2.2	
1999-00	3.6		3.2		2.5	
2000-01	5.1		4.6		5.3	
2001-02	5.6		5.4		4.2	
2002-03	5.1		5.2		4.3	
Quarter -						
2000-01						
Aug	1.2	5.3	1.0	4.9	1.3	5.6
Nov	1.1	5.3	0.9	4.7	1.0	5.8
Feb	1.2	5.0	1.0	4.4	1.0	5.2
May	1.4	5.0	1.3	4.3	1.2	4.6
2001-02						
Aug	1.6	5.4	1.6	4.9	1.2	4.4
Nov	1.4	5.7	1.4	5.4	0.9	4.3
Feb	1.2	5.7	1.3	5.7	0.9	4.2
May	1.1	5.4	1.2	5.6	0.8	3.8
2002-03						
Aug	1.0	4.9	1.1	5.2	1.0	3.6
Nov	1.3	4.8	1.3	5.0	1.2	4.0
Feb	1.6	5.2	1.6	5.3	1.4	4.5
May	1.5	5.6	1.3	5.4	1.4	5.1
2003-04						
Aug	1.3	5.9	1.8	6.1	1.4	5.5
Nov	1.1	5.6	1.3	6.1	1.3	5.6

Source: ABS Cat. Nos. 6302.0

All figures are Trend estimates

Table 12: Average Weekly Earnings

Growth during the November 2003 quarter in each of the three wages measures from the ABS's Average Weekly Earnings are slightly below that recorded in the August quarter 2003.

The Average Weekly Ordinary Time Earnings (AWOTE) and Average Weekly Earnings (AWE) measures for Full-time Adults grew by 1.1 and 1.3 per cent respectively during the November 2003 quarter, to be 5.6 per cent and 6.1 per cent higher over the year.

The All employees Weekly Total Earnings measure was up 1.3 per cent in the November 2003 quarter, to be 5.6 per cent higher over the year.

TABLE 13: COMPANY PROFITS

	Company Profits before tax		Gross Operating Surplus (GOS)		Profit share of total factor incomes (a)
	percentage change on				
	previous period	year earlier	previous period	year earlier	per cent
Year -					
1998-99	16.3		3.2		23.2
1999-00	30.0		7.7		23.8
2000-01	-4.6		6.6		24.0
2001-02	6.4		7.4		24.4
2002-03	31.3		6.5		
Quarter -					
1999-2000					
Sep	7.8	26.8	1.4	2.3	22.9
Dec	8.6	30.7	3.4	5.1	23.4
Mar	7.4	32.6	4.7	9.9	24.2
Jun	3.1	29.5	3.5	13.5	24.6
2000-2001					
Sep	-3.7	15.8	1.1	13.3	24.6
Dec	-6.7	-0.6	-0.6	9.0	24.1
Mar	-6.3	-13.2	-0.5	3.5	23.6
Jun	-1.1	-16.7	1.3	1.3	23.6
2001-02					
Sep	4.2	-9.9	2.8	3.0	23.9
Dec	5.9	2.3	2.8	6.5	24.2
Mar	5.1	14.7	2.6	9.8	24.6
Jun	4.6	21.3	1.8	10.3	24.9
2002-03					
Sep	7.9	25.5	1.3	8.8	25.0
Dec	10.3	30.8	0.9	6.8	24.9
Mar	7.3	33.5	1.1	5.2	24.9
Jun	5.5	34.6	2.0	5.5	25.1
2003-04					
Sep	6.0	32.3	2.4	6.6	25.3
Dec	6.3	27.5	2.3	8.1	25.5

Source: ABS Cat. Nos. 5651.0 and 5206.0

Notes:

(a) From National Accounts - Financial year figures are averages of quarterly data

Reference year for chain volume measures is 2001-02

All figures are trend estimates

Table 13: Company Profits

The latest company profits data from the ABS's Business Indicators publication suggests that company profits before income tax continued their recent strong growth, increasing 6.3 per cent in the December 2003 quarter, to be a significant 27.5 per cent higher over the year.

Data from the most recent December quarter National Accounts appears to further confirm that recent strong growth in business profits has continued over the past year. The Gross Operating Surplus measure from the national accounts increased 2.3 per cent in the December 2003 quarter, to be 8.1 per cent higher over the year.

Also, the most recent national accounts data shows that the profit share of total factor income has continued to grow over the past year, and reached a new record high of 25.5 per cent during the December 2003 quarter.

TABLE 14: EMPLOYMENT

	All persons					
	Full Time	Part Time	Total		Total Male	Total Female
	percentage change on					
	year earlier	year earlier	previous period	year earlier	year earlier	year earlier
Year -						
1998-99	1.6	3.8	2.2		2.0	2.4
1999-00	2.5	3.5	2.8		2.2	3.4
2000-01	1.5	3.7	2.1		1.4	2.9
2001-02	-0.5	5.8	1.2		1.1	1.3
2002-03	1.6	4.6	2.4		1.8	3.2
Quarter -						
2001-02						
Sep	-1.4	5.6	0.2	0.5	0.1	1.0
Dec	-0.9	6.0	0.3	0.9	0.7	1.2
Mar	-0.3	6.6	0.6	1.5	1.5	1.5
Jun	0.4	5.0	0.5	1.7	2.0	1.3
2002-03						
Sep	1.0	4.3	0.5	1.9	1.8	2.1
Dec	1.6	5.1	1.0	2.6	1.9	3.5
Mar	2.1	5.0	0.9	2.9	2.0	4.1
Jun	1.7	3.9	-0.1	2.3	1.5	3.3
2003-04						
Sep	1.9	2.5	0.2	2.0	1.8	2.4
Dec	2.3	1.2	0.9	2.0	2.5	1.3
Month -						
2002-03						
Jul	0.9	4.1	0.1	1.8	1.9	1.6
Aug	1.0	4.2	0.2	1.9	1.8	2.0
Sep	1.2	4.5	0.3	2.1	1.8	2.5
Oct	1.4	4.9	0.3	2.4	1.8	3.0
Nov	1.6	5.2	0.4	2.6	1.9	3.5
Dec	1.9	5.3	0.4	2.9	2.1	3.9
Jan	2.1	5.2	0.3	3.0	2.1	4.1
Feb	2.2	5.0	0.2	3.0	2.0	4.2
Mar	2.1	4.7	0.0	2.8	1.9	4.1
Apr	1.8	4.4	-0.1	2.6	1.6	3.7
May	1.6	4.0	-0.1	2.3	1.4	3.3
Jun	1.5	3.4	-0.1	2.1	1.4	2.9
2003-04						
Jul	1.6	2.9	0.1	2.0	1.5	2.6
Aug	1.9	2.4	0.2	2.0	1.8	2.4
Sep	2.1	2.0	0.3	2.1	2.1	2.1
Oct	2.3	1.6	0.3	2.1	2.4	1.7
Nov	2.3	1.2	0.3	2.0	2.6	1.3
Dec	2.3	0.7	0.3	1.9	2.7	0.9
Jan	2.3	0.4	0.2	1.8	2.7	0.6

Source: ABS Cat No. 6202.0

Notes:

All figures are Trend estimates

Annual and Quarterly figures are simple averages of monthly data

Table 14: Employment

Since the ACTU's original submission was prepared, the ABS has release new Labour Force data for the months of January and February 2003. Table 14 provides an update of the trend employment numbers.

The months of January 2004 saw solid increases in the total number of employed persons.

The total number of employed persons increased by 18,100 in January 2004 brining a total increase of 156,600 additional employed persons over the year to January 2004.

In percentage terms, total employment grew 0.2 per cent in January 2004, to be 1.8 per cent higher over the year.

The number of full-time jobs rose 2.3 per cent over the year to January 2004, while the number of part-time jobs rose 0.4 per cent over the same period. Total employment amongst males and females, increased by 2.7 per cent and 0.6 per cent respectively over the year to January 2004.

TABLE 15: UNEMPLOYMENT

	Looking for Full-Time Work		Looking for Part-Time work		Total Unemployed		
	'000	rate	'000	rate	'000	rate	rate (Seasonally Adjusted)
Year -							
1997-98	144.6	2.2	593.3	21.3	737.9	8.0	8.0
1998-99	147.5	2.2	147.5	19.3	691.6	7.4	7.4
1999-00	148.8	17.1	484.5	17.1	633.3	6.6	6.6
2000-01	152.4	2.2	472.1	16.2	624.5	6.4	6.4
2001-02	158.4	2.3	498.7	16.2	657.1	6.6	6.6
2002-03	155.6	2.3	461.5	14.6	617.4	6.1	6.1
Quarter -							
2001-02							
Sep	161.6	16.9	514.5	16.9	676.1	6.9	6.8
Dec	162.1	16.7	513.4	16.7	675.5	6.8	6.8
Mar	157.4	16.0	494.0	16.0	651.4	6.6	6.6
Jun	152.6	15.3	472.8	15.3	625.4	6.3	6.3
2002-03							
Sep	160.2	14.8	458.3	14.8	618.5	6.2	6.2
Dec	160.2	14.4	454.5	14.4	614.7	6.1	6.1
Mar	151.8	14.6	465.5	14.6	617.4	6.1	6.1
Jun	150.3	14.6	466.3	14.6	616.5	6.1	6.1
2003-04							
Sep	149.4	14.2	449.3	14.2	598.7	5.9	5.9
Dec	150.2	13.6	429.2	13.6	579.4	5.7	5.6
Month -							
2002-03							
Jul	157.4	2.3	462.2	14.9	619.7	6.2	6.1
Aug	160.7	2.3	458.2	14.8	618.9	6.2	6.3
Sep	162.4	2.4	454.6	14.6	617.0	6.2	6.2
Oct	162.4	2.4	452.6	14.5	615.0	6.1	6.0
Nov	160.6	2.3	453.6	14.4	614.2	6.1	6.1
Dec	157.7	2.3	457.2	14.4	614.8	6.1	6.1
Jan	154.1	2.2	461.9	14.5	616.1	6.1	6.1
Feb	151.3	2.2	466.1	14.6	617.4	6.1	6.0
Mar	150.0	2.2	468.6	14.6	618.7	6.1	6.1
Apr	150.0	2.2	468.8	14.7	618.8	6.1	6.1
May	150.3	2.2	466.9	14.6	617.2	6.1	6.0
Jun	150.5	2.2	463.0	14.6	613.5	6.1	6.1
2003-04							
Jul	150.1	2.2	456.9	14.4	607.0	6.0	6.1
Aug	149.3	2.1	449.3	14.2	598.7	5.9	5.9
Sep	148.8	2.1	441.7	14.0	590.4	5.8	5.8
Oct	149.0	2.1	434.7	13.8	590.4	5.8	5.7
Nov	150.0	2.1	428.8	13.6	583.7	5.7	5.6
Dec	151.6	2.1	424.2	13.5	575.8	5.6	5.6
Jan	153.0	2.2	421.1	13.4	574.1	5.6	5.7

Source: ABS Cat No. 6202.0.55.001

Notes:

All figures are Trend estimates (except final column which presents the seasonally adjusted unemployment rate)

Annual and Quarterly figures are simple averages of monthly data

Table 15: Unemployment

The most recent labour force data shows that Australia's unemployment rate remained at 5.6 per cent in the January 2004 in trend terms. In seasonally adjusted terms the unemployment rate increased slightly to 5.7 per cent for the same time period.

TABLE 16: BALANCE OF PAYMENTS

	Goods							
	Credits	Debits	Net balance	Net Services	Net Income	Net Current Transfers	Balance on Current Account	Current Account Deficit
				$ million				% of GDP
Year -								
1997-98	87 684	-92 258	-4 574	-1 220	-18 326	18	-24 102	3.9
1998-99	85 962	-98 557	-12 595	-1 840	-18 259	- 741	-33 435	5.1
1999-00	96 933	-110 606	-13 673	-1 106	-18 057	227	-32 609	4.8
2000-01	119 929	-119 986	- 57	- 599	-19 299	15	-19 940	2.9
2001-02	121 246	-122 383	-1 137	- 187	-20 436	- 26	-21 786	3.0
2002-03	116 031	-132 892	-16 861	- 642	-22 474	- 175	-40 152	5.5
Quarter -								
1998-99								
Sep	22 413	-24 714	-2 301	- 514	-4 515	- 256	-7 586	4.8
Dec	21 837	-24 618	-2 781	- 528	-4 616	- 193	-8 118	5.0
Mar	20 960	-24 471	-3 511	- 448	-4 629	- 153	-8 741	5.4
Jun	20 752	-24 754	-4 002	- 350	-4 499	- 139	-8 990	5.5
1999-2000								
Sep	21 565	-25 687	-4 122	- 321	-4 412	132	-8 723	5.3
Dec	23 272	-26 981	-3 709	- 332	-4 423	82	-8 382	5.0
Mar	25 145	-28 195	-3 050	- 278	-4 543	31	-7 840	4.6
Jun	26 951	-29 743	-2 792	- 175	-4 679	- 18	-7 664	4.5
2000-01								
Sep	28 410	-30 062	-1 652	- 148	-4 728	- 26	-6 554	3.8
Dec	29 627	-30 076	- 449	- 163	-4 768	- 2	-5 382	3.1
Mar	30 685	-29 961	724	- 178	-4 860	22	-4 292	2.5
Jun	31 207	-29 887	1 320	- 110	-4 943	21	-3 712	2.1
2001-02								
Sep	31 022	-29 932	1 090	- 3	-5 003	2	-3 914	2.2
Dec	30 460	-30 203	257	6	-5 039	- 12	-4 788	2.7
Mar	29 923	-30 720	- 797	- 56	-5 108	- 3	-5 964	3.3
Jun	29 841	-31 528	-1 687	- 134	-5 286	- 13	-7 120	3.9
2002-03								
Sep	29 954	-32 493	-2 539	- 144	-5 493	- 37	-8 213	4.5
Dec	29 706	-33 394	-3 688	- 115	-5 638	- 65	-9 506	5.2
Mar	28 825	-33 709	-4 884	- 160	-5 673	- 50	-10 767	5.8
Jun	27 546	-33 296	-5 750	- 223	-5 670	- 23	-11 666	6.3
2003-04								
Sep	26 444	-32 627	-6 183	- 211	-5 725	- 16	-12 135	6.5
Dec	25 669	-32 049	-6 380	- 156	-5 821	- 33	-12 390	6.5

Source: ABS Cat. Nos. 5302.0, 5206.0

Notes:

All figures are trend estimates

Table 16: Balance of Payments

Australia's Current Account Deficit, as a proportion of GDP, remained steady at 6.5 per cent during the December 2003 quarter.

TAG 2

A needle in a haystack.
Do increases in the minimum wage cause employment losses?
Working paper 90, Ian Watson,
ACIRRT, University of Sydney,
March 2004

acirrt working paper

A needle in a haystack. Do increases in the minimum wage cause employment losses?

working paper 90 by

Ian Watson*

March 2004

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Does increasing the minimum wage lead to employment losses? For many years most economists thought that the answer to this was a straight forward 'yes'. However, research during the 1990s began to overturn this conventional wisdom and showed that increases in the minimum wage did not automatically lead to employment losses. At present, the literature on this important topic remains divided, both in Europe and the United States. A recent Australian study, by Andrew Leigh, examined the impact of statutory minimum wages in Western Australia and reached conclusions which supported the conventional view. However, close scrutiny of Leigh's paper shows that it is fundamentally flawed. It suffers from both methodological and empirical weaknesses which are so severe as to make its claims unsustainable. Despite Leigh's efforts, it remains the case that we simply do not know a great deal about the employment impact of Australia's system of minimum wages.

Debating the impact of minimum wages

Does increasing the minimum wage lead to employment losses? In recent decades this question has intrigued economists, particularly since the mid-1990s when seminal work by American economists, Card and Krueger, unsettled the conventional wisdom (see the consolidated research in Card and Krueger, 1995). That wisdom was largely based on theoretical considerations which decreed that if the minimum wage was set at a level above the market-clearing wage, then labour demand would drop and employment would fall. In the words of Charles Brown: 'attempts to raise poorly paid workers' wages will cost some of them their jobs' (Brown, 1995, p. 827). This logic has featured prominently in the arguments advanced by employer groups and conservative governments in their opposition to substantial increases in the minimum wage in Australia.[1] What Card and Krueger did was challenge this wisdom by showing empirically that increases in the minimum wage in some American states did not lead to job losses.

The conventional wisdom is, of course, somewhat simplistic. The 'rise in minimum wages leads to job loss' logic must be contextualised in at least

[1] Australia does not have a 'minimum wage' in the same way that some overseas countries do. Rather, the Australian Industrial Relations Commission (AIRC) adjusts *award* minimum rates of pay. It does this through an annual Safety Net Review decision (also called the Living Wage case). This decision applies to award workers who have not been subject to enterprise based bargaining and who would not be likely to gain an increase in pay without a change in the award rate of pay. The Federal change in minimum rates usually flows through to State award workers as well. Western Australia is one state that does have its own statutory minimum wage, based on the *Minimum Conditions of Employment Act 1993* which applies to non-award, non-federal employees.

two ways, as Lewis (1997) showed clearly. First, the impact of an increase in the minimum wage will have only a small impact on the *average* wage, since most workers already receive wages higher than the minimum wage. Secondly, the labour market for minimum wage workers is essentially one among many labour markets. In the minimum wage labour market, which is essentially a market for low skilled labour, labour substitutability is common and the impact of *relative* wages can be pronounced. In other words, an increase in the minimum wage for one group of low skilled workers can lead to a drop in their employment, as employers substitute other low skilled workers in their place. The net employment effect may be negligible, but the adverse effect on particular sub-groups of workers may be considerable (Lewis, 1997, pp. 204–5).

Actual employment outcomes also depend on assumptions about employer behaviour. If employers choose to substitute capital for labour, in the form of labour-replacing equipment, then the net employment effect may also be adverse. In reality, most minimum wage workers are located in labour intensive industries, such as personal services, hospitality or retail, where there are physical limits to the installation of labour-replacing equipment. Where it does suit an employer to choose new machinery over labour, the time involved in its installation may result in considerable delays before the impact of an increase in minimum wages on employment becomes evident. Indeed, this question of time lags may be critical for whichever form of substitution takes place. As Borland and Woodbridge observed:

> the employment response to a change in labour costs is likely to vary with the time-horizon considered ... The variety of factors that account for the potential difference between short-term and long-term adjustment include time-lags involved in recruiting and training substitute labour for low-wage workers, organizational costs in restructuring production processes, time taken to identify and instal new capital, and the cost of severance payments to low-wage workers who are laid off (1999, p. 95).

Obviously it is difficult to reach a firm theoretical conclusion about the impact of the minimum wage on employment. A great deal depends on numerous assumptions, including the composition of the workforce, the degree of competition in the labour market, and the impact of higher wages on consumer demand. In particular, the size of the minimum wage increase can be critical: below a certain threshold its impact may be insignificant.[2]

[2] Ehrenberg (1992, p. 5) observed in summarising the state of play in the minimum wage debate at the beginning of the 1990s: 'it is significant that none of the studies suggest that at current relative values of the minimum wage, large disemployment effects would result from modest increases in the minimum wage—increases up to, say, 10%. In this sense, all the findings are very consistent.' Writing in 1997, Dawkins (1997, p. 192)

With so many caveats involved, it is wise to be cautious when it comes to theoretical pronouncements. As Dolado et al. observed:

> Predictions of economic theories are almost always sensitive to assumptions. We are surprised by an unconditional claim [that raising the minimum wage automatically leads to unemployment] ... and sceptical that anyone actually believes it. Yet it pervades the analysis of the minimum wage (1996, pp. 327–28).

It is clear that detailed empirical studies are more useful for shedding light on the relationship between minimum wages and employment. As Borland and Woodbridge (1999, p. 96) observed 'the question of how employment of low-wage workers will be affected by an increase in wages must be resolved empirically'. Similarly, Card and Krueger (1995, p. 7) argued that elucidating this relationship requires 'systematic empirical study' rather than the 'abstract theoretical reasoning' which has characterised the field.

Unfortunately, much of the empirical literature is far from systematic or rigorous. Prior to the 1980s, it often entailed repeating the same economic modeling exercise against similar data. For example, an early overview on the impact of minimum wages (Brown et al., 1982) concluded that a 10 per cent increase in the minimum wage would have an adverse impact on employment of between 1 and 3 per cent. The authors of this study conceded, however, that their conclusion was not based on a large body of research because 'one could argue that there really are not 25 independent studies' (1982, p. 502). Their use of the same labour force data and the similarity of their methodologies meant that most of the studies simply replicated each other.

More sophisticated analyses began to emerge during the late 1980s, as researchers began to make use of longitudinal data. Detailed studies of firms were also conducted, which allowed researchers to examine the impact of increases in minimum wages on the employment patterns within those firms (Katz and Krueger, 1992; Card and Krueger, 1994). The best known of these studies was Card and Krueger's investigation of the 1992 increase in statutory minimum wages in New Jersey. Termed a 'natural experiments' approach, Card and Krueger compared the impact of a rise in the minimum wage (from $4.25 to $5.05) on employment in fast-food restaurants in New Jersey with similar restaurants in Pennsylvania where no such wage increase had occurred.[3] The firms affected by the wage increase were regarded as

offered a similar view: 'while a small increase in minimum wages may not have much of an effect on employment, a large increase might have a significant negative effect. It seems that this is becoming the conventional wisdom.'

[3] Card had adopted a similar approach, using Current Population Survey data (that is, individual-level rather than firm-level data) to study the impact of increases in statutory minimum wages in California during the late 1980s (Card, 1992).

a 'treatment group' and the firms where no wage increases occurred were regarded as a 'control group'. A comparison between the employment outcomes for the two groups resembled an *experiment*, whilst the real world setting, with its policy-prescribed changes, provided the *natural* dimension. (Other researchers, including Andrew Leigh, have used the term 'quasi-experiment' in a similar vein.)

What made Card and Krueger's research so important was its controversial findings alongside its methodological rigour. It reversed the conventional wisdom by showing that increasing statutory minimum wages had no deleterious effects on employment, and it did so in a way which survived critical scrutiny. Subsequent criticism (for example, Welch, 1995; Neumark and Wascher, 2000) was answered by means of a reanalysis of the New Jersey wage increase using payroll data (Card and Krueger, 1998, 2000). This study confirmed Card and Krueger's earlier survey-based findings.

It may be the case, as Machin and Manning (1997, p. 735) pointed out, that increasing the minimum wage has less impact on employment in the United States because the minimum wage is so low in that country. It might be argued that in countries where the ratio of minimum wages to average wages is much higher—such as in Europe and Australia—the adverse effect on employment of increasing minimum wages will be much more pronounced. It is important, therefore, to examine what recent empirical research in Europe and Australia has shown.

Not surprisingly, recent European research has produced contentious results. Several studies of the impact of the minimum wage in France, the Netherlands, Spain and the United Kingdom failed to find strong evidence showing that increasing minimum wages invariably led to employment losses (Dolado et al., 1996; Dickens et al., 1999). In a summary of a number of earlier studies Machin and Manning, p. 739 concluded:

> our study of the experience of minimum wages in four European countries finds very little evidence of important employment effects associated with minimum wages. Effects are typically small and in some cases go the opposite way in terms of predictions of the orthodox model of the labour market. On the whole our results seem in line with the recent US work that fails to find any evidence of job loss associated with minimum wages. The emphasis seems to have shifted from 'how negative are the employment effects?' to 'is there an employment effect?' and, in some circles, 'what potential is there for a positive effect?' (1997, p. 739).

At the same time, other research on French minimum wages has found a stronger relationship between increases in minimum wages and employment losses (Abowd et al., 1999), particularly for young workers (Bazen and

Skourias, 1997). This is consistent with the conclusions of the OECD summary of the literature. They found that over 20 major studies had been carried out during the 1990s examining the impact of the minimum wage on employment (OECD, 1998). The results of these studies varied considerably, and there were no clear, unambiguous findings. The OECD concluded tentatively:

> young workers may be most vulnerable to job losses at a high level of the minimum wage. There is less evidence available on the employment effects, if any, for other groups such as women and part-time workers (OECD, 1998, p. 31).

There have been few Australian studies during the last decade which have explored in any detail the relationship between minimum wages and employment outcomes. Some research, such as Borland and Woodbridge (1999), looked closely at this issue, but did not advance any new empirical findings. Other studies, which did include empirical findings, were focussed more generally on wages and unemployment. For example, the research by Debelle and Vickery (1998)—which suggested that a one per cent drop in unemployment might follow a two per cent reduction in the growth of real wages—was based entirely on macro-economic modeling of aggregate wages and employment data.

One recent study which did look specifically at minimum wages and employment using more detailed data was that by Mangan and Johnston (1999). While their concerns were posed in the context of proposals to introduce training wages for young people, they located their study within the broader debate about the employment effects of minimum wages. Their findings regarding this relationship were equivocal. Their first model—which examined the employment effects for young people of changes in the relativity between youth and adult wages—produced estimates which were not statistically significant (at 95 per cent level or above) (1999, p. 423). Their second model examined different labour market outcomes for young people contingent on the youth-adult wage relativity. This time their findings were statistically significant, but the size of the estimates were small, leading them to conclude:

> the results indicate that the inverse relationship between wages and employment in the youth labour market is small ... Taken overall, wages do not appear to be a major factor in determining youth employment numbers (1999, pp. 426–427).

An important study of the youth labour market by Junankar et al. (2000) argued that much of the econometrics behind the youth minimum wage debate was methodologically flawed. They argued that many researchers often

ignored the importance of part-time work and the impact of school retention rates on employment, both of which are critical issues for modelling the youth labour market accurately. In their own modelling of data disaggregated by industry, Junankar et al. (2000, p. 184) found that the estimated wage elasticities were 'almost always incorrectly signed [in terms of the conventional wisdom's expectation] or statistically insignificant'. They concluded: 'we have still not found the elusive Australian elasticities, and we don't think anyone else has beaten us to it' (2000, p. 184).

Some of the most convincing evidence to date has come from across the Tasman. New Zealander researchers, Hyslop and Stillman (2004), examined very large increases in youth wages in the period following 2001 and found evidence of *positive* employment responses. They studied reforms to the minimum wage system which brought about wage increases for 18 and 19 year-olds in the order of 69 per cent, and increases for 16 and 17 year-olds of about 41 per cent. As Hyslop and Stillman (2004, p. 1) noted, the large wage increases studied by Card and Krueger were in the range of 19 to 27 per cent. If there was to be an adverse impact on employment, then, clearly, wage increases of this magnitude should have made it evident. Instead, Hyslop and Stillman (2004, p. 2) found:

> positive employment responses to the changes for both groups of teenagers, and that 16–17 year-olds increased their hours worked by 10–15 percent following the minimum wage changes.

In summary, the theoretical arguments about wages and unemployment hinge on what assumptions are made, while the empirical research remains strongly divided. One of the main problems with the minimum wages debate is the tendency to pursue a generally acceptable and universally applicable answer to the relationship between wages and employment. Such a goal is elusive, if not utopian. There are so many unique factors in a local, or even national economies, that universally applicable findings are impossible to obtain. This does not stop economists trying to find the 'true' elasticity of demand for low wage labour (that is, the responsiveness in the demand for labour following a change in wages). In some cases, economists review the current literature and then average out the various elasticities to arrive at an estimate of what the 'real' elasticity might be: 'Taking all the studies for the many countries together, a "best guess" for the long-run constant-output labour-demand elasticity based on this literature is -0.30' (meaning that a 1 per cent rise in wages results in a 0.3 per cent fall in employment) (Hamermesh, 1999). This kind of logic led Kennan to critically note:

> There seems to be an implicit belief that an average of the estimates from many such studies must mean something. But in fact if there is one impeccable study in the set, and if the results of this study are inconclusive, what is gained by tossing in

> the results of the other studies and taking an average? What if all of the studies are impeccable, and they are all inconclusive? (Kennan, 1995, p. 1955)

A recent Australian study: Andrew Leigh's quasi-experiment

The most recent Australian study to explore the impact of minimum wages on employment has been written by an Australian, Andrew Leigh, currently working at Harvard University. Writing in the December 2003 issue of the *Australian Economic Review*, Leigh posed the question: 'Does raising the minimum wage cost jobs?' (2003, p. 361). Leigh's answer consisted of a 'quasi-experiment' which looked at the situation in Western Australia between 1994 and 2001, when six statutory minimum wage increases were handed down. By comparing employment rates before and after the increases, he sought to show that minimum wages did cost jobs, and he made use of a control group (the rest of Australia) to validate his before-and-after results.[4]

Leigh located his analysis in the tradition of natural experiments (see, for example, Meyer, 1995; Kennan, 1995), the framework behind the Card and Krueger studies mentioned above (Card and Krueger, 1994, 1995). As noted earlier, this approach tests the impact of policy changes, such as increases in statutory minimum wages, by comparing a treatment group (a group subject to the change) and a control group (a group not subject to the change).

The techniques for assessing the differences between the treatment group and the control group vary. Some studies have used fixed effects models, where regressions are fitted to the data, using controls for state fixed effects and year effects (see overview in Besley and Case, 2000, pp. F681–F685). Other studies have used 'difference-in-difference' estimators, where the observations from both groups are pooled and then analysed in one of two ways. Either simple differences across states and across time are calculated, or regressions are run against the data. It is important to note that difference-in-difference estimators have been subject to considerable criticism in recent years (see, for example, Bertrand et al., 2002; Johansson and Selén, 2002).

Leigh's approach made use of difference-in-difference estimators, using Australian Bureau of Statistics time-series data for seasonally-adjusted, full-time equivalent employment to population ratios. He calculated the before-and-after difference in these employment rates for Western Australia by subtracting the employment rate three months after a minimum wage in-

[4] Leigh made some mistakes with the data in his original article and these have since been corrected in an erratum, see Leigh (2004).

crease from the employment rate which prevailed three months before. Leigh did this for six occasions when minimum wage increases occurred in Western Australia between 1994 and 2001. His control group was the rest of Australia, so he repeated the before-and-after differencing for this control group. He then calculated the difference-in-difference between the Western Australia figure and the rest of Australia figure. For example, in the case of August 1994 he found that the employment rate in Western Australia rose by 0.0006, but the employment rate rose even greater in the rest of Australia (by 0.003) so the relative change in Western Australia was a fall of 0.002. Taking March 2001, as another example, Leigh found that the employment rate in Western Australia fell by 0.037, whilst the employment rate for the rest of Australia also fell, but by a smaller amount (0.020). Thus, the relative change in Western Australia was again a fall, this time by 0.017.[5]

Leigh also used regression analysis, but not in the fashion pursued by most natural experiments. The more usual approach is to fit a regression model to the employment data, with a reasonable number of controls, and to then scrutinise the interaction effect between the treatment group (those who got the wage increase) and the post-intervention period (the period after the wage increase). The size and direction of this coefficient provides evidence for whether the intervention has led to a change in the outcome under investigation. Leigh made no use of statistical controls except for his control group (a point to which I will return later) and did not make use of an interaction term. Rather, he fitted his regression to the difference-in-difference estimates themselves, rather than to the employment rates. The procedure he followed was to pool all the data for the period 1981 to 2002 (broken down into six month blocks) to provide 247 observations and then ran regressions on these data. The independent variable in Leigh's model was a modified dummy variable which took account of whether an increase in the statutory minimum wage had occurred in Western Australia in that six month block. Rather than setting the dummy to a value of 1, he used the size of the percentage increase in the minimum wage. This allowed him to interpret his coefficient for this variable as an elasticity of labour demand.[6] Essentially Leigh was posing the question: do these six difference-in-difference estimates—when minimum wage increases took place—stand out from the rest of the estimates? His overall finding was that that they did stand out, and that the coefficient suggested an elasticity of labour demand of -0.149 (Leigh, 2004). This can be interpreted as saying that for every 10 per cent increase in wages, there is a 1.5 per cent reduction in employment.

Leigh reported a second set of regressions based on breaking down the

[5] Figures taken from Leigh (2004), not Leigh (2003).

[6] Though Junankar (2004, p. 67) argued that Leigh was mistaken in assuming that his coefficient estimates represented elasticities.

data into subgroups based on age and sex. His key conclusions were that the elasticities for labour demand were much greater (as high as -0.491) for young people. The elasticities were higher for young women compared to young men (-0.624 compared to -0.362) (Leigh, 2004). Leigh later suggested that these findings for young workers supported the view that overall elasticity figures (such as his -0.149) were probably underestimates of the true elasticity of labour demand for *minimum wage* workers (as distinct from all workers). This was based on the view that younger workers make up a large proportion of minimum wage workers.

Overall, Leigh's results led him to conclude that:

> The elasticity of the Western Australian statutory minimum wage appears similar to that of US minimum wages. Australian minimum wages do 'bite', but is is not clear that they bite more fiercely than in America (2003, p. 317).

A flawed study?

Has Leigh indeed shown increases in statutory minimum wages in Western Australia caused employment losses? I would argue that the answer is a definite 'no'. As I show below, his study is fundamentally flawed, with major methodological and empirical weaknesses.

Methodologically, Leigh pitches his study at the wrong level of analysis. He fails to control for a range of factors which might be influencing his results and he selects an inadequate control group. Leigh also takes no account of trends in employment during the period he studies and has no clear way of distinguishing before-and-after effects. Finally, Leigh has failed to deal satisfactorily with the problem of endogeneity (that is, the fact that the minimum wage increases may be partly determined by the same factors which are also involved in determining the employment outcomes).

Empirically, Leigh's results are inconclusive. Four of his six difference-in-difference estimates are statistically significant, but the size of the standard errors involved in this kind of exercise make the precision of his findings quite ludicrous. Leigh's regression analysis produces a model which is a very poor fit to the data, with only 4 per cent of the variability in relative employment differences between Western Australia and the rest of Australia explained by his model (Leigh, 2004).

Methodological weaknesses

Leigh conceded that he had reluctantly used Australian Bureau of Statistics macrodata aggregates—such as employment-population ratios—instead of the kind of microdata which other researchers using the natural experiments approach have employed. Obviously there is a place for the use of macrodata

aggregates in research, such as studies into the impact of large movements in average wages on employment. But when it comes to studies into the impact of small movements in relative wages on a small subset of the population, macrodata aggregates are inappropriate. As Machin and Manning (1994) argued, macro models which attempt this task assume that all sectors of the labour market are roughly equivalent. A more appropriate way to explore questions about the impact of minimum wages on employment is to use firm-level data from a panel survey, where the same firms are examined before and after some event (such as a wage increase). This was the approach used by Card and Krueger (1994) in their study into the impact of the New Jersey wage increase on the fast-food industry.

An absence of adequate statistical controls is one of Leigh's greatest weakness. In his regression modeling, Leigh made use of no other controls (such as age composition of the workforce or industry composition, to mention just two considerations). This is particularly important in the light of his poor R^2 results, which showed that 96 per cent of the variability in the outcome—the relative employment differences between Western Australia and the rest of Australia—was due to factors outside his model. *Clearly, something that Leigh was not measuring was driving the results in his modeling.* Why did Leigh not attempt to control for any other factors which might have been responsible for driving these results?

Now it might be argued that the use of a control group obviates the need for statistical controls.[7] According to this logic, the difference-in-difference estimators should ensure that only the effects of the treatment show up in the results. However, such confidence is misplaced, and would only happen—if at all—in a genuine randomised experiment. In a 'natural' experiment the assumption that no further controls are needed is erroneous. As Hamermesh (1995, p. 838) argued in his critique of Card and Krueger: 'without true experiments there are no easy research strategies that might allow us to avoid the modeling necessary to control for changes in other variables that determine the outcomes of interest to us.'

In the absence of such controls, the burden falls even more heavily upon the choice of control group. Again, it becomes evident that Leigh's approach is flawed. As Besley and Case argued, the control group for a natural experiment must closely match the treatment group:

> ... control groups must be stable, and adequately reflect the effect of changes in other variables that are simultaneously influencing outcomes of the group under study ... Good control groups will be those whose fortunes have evolved similarly to

[7] It is worth noting that many of the other natural experiment approaches used elsewhere have routinely employed a range of statistical controls as well as the use of a control group.

> those of the group experiencing the policy change *and* who respond similarly to changes in variables that drive policies to change ... our conclusion is for a return to an older issue in public finance, the need to understand where policy comes from as part of estimating its incidence (2000, p. F675).

There are good grounds for believing that the 'rest of Australia' is a very poor control group: the other Australian states have widely differing industry and employment characteristics, and considerable variation in their wage-fixing systems. Averaging them into a 'rest of Australia' control group does not resolve this problem.

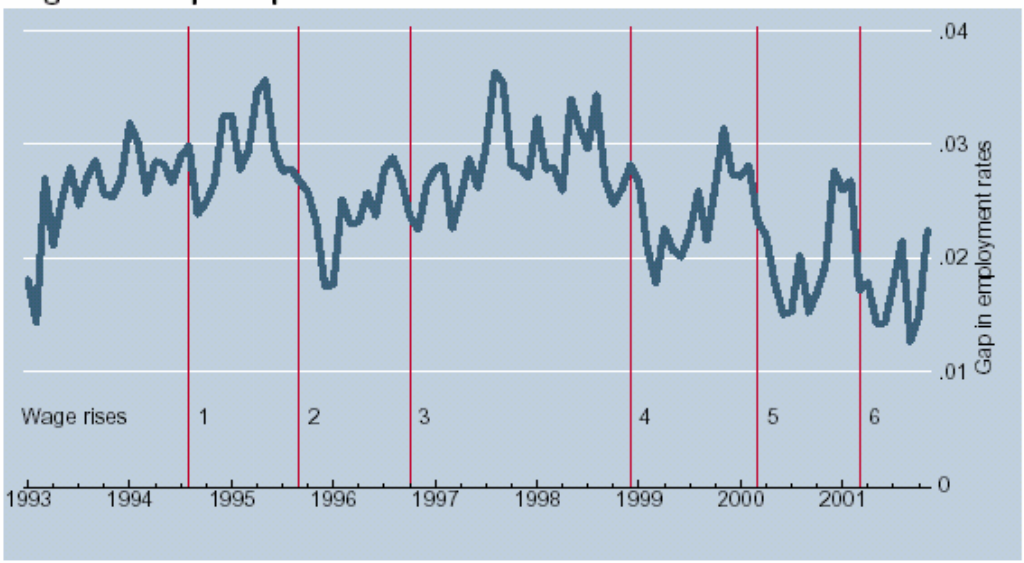
It is particularly important that trends over time do not diverge sharply between treatment and control groups, especially in the period leading up to the intervention being studied. As Card pointed out with respect to one of his early studies:

> If the comparison sample is a legitimate control group, there should be no trend in the pre-1987 gap between California and the comparison sample (1992, p. 3).

In other words, employment should not already be trending either down or up in ways which diverge significantly between the treatment group and the control group. If there are trends in the gap between these two groups, then the researcher should be controlling for this factor when modeling before-and-after changes. In Leigh's case, there is no attempt to control for this. All that he does is a sensitivity analysis to test whether any *one* of the six time periods has unduly influenced his results. He does not test the sensitivity of his estimates against different time periods. Figure 1 below shows a graph of the gap between employment rates in Western Australia and the rest of Australia during the latter part of Leigh's period of study. This graph, based on Leigh's data, shows upward movement when the gap favours Western Australia, and downward movement when the gap favours the rest of Australia. The superimposed wage rises indicate clearly that this gap was far from stable in the lead-up to the minimum wage 'interventions'. In at least four of these interventions, the gap was *already* trending strongly against Western Australia.

Considerations of time also bedevil Leigh's assumptions about cause and effect. A preliminary assumption for the natural experiments approach is that one should be able to organise the data in a clear temporal sequence. The data should provide a clear story about the situation before the intervention, the intervention itself, and then the aftermath. Economic phenomena can complicate this neat sequence: sometimes economic actors may anticipate the intervention and act beforehand; often the economic impact may have a lagged effect. Commonly researchers conducting natural experiments

Figure 1: Gap in employment-population ratios, WA and national with wage rises superimposed



Source: ABS Labour Force Survey data (modified according to Leigh's method). (Cat. 6202.0.55.001, Tables 1 and 8)

on policy interventions deal only with one major intervention, such as a single rise in the minimum wage as happened in New Jersey in 1992. This makes it relatively straightforward to grapple with anticipations and lagged effects.[8] Leigh, however, was looking at six (almost annual) interventions, and this leads to the obvious question: 'how do we really know what is a *before* and what is an *after*'? It is quite possible that the lagged effects of one minimum wage increase may feed into the precursors of the next wage rise. Leigh assumed that a six month period on either side a wage increase was sufficient to quarantine it, but he offered no evidence for this. As mentioned earlier, the issue of time lags is a critical element in analysing the behaviour of employers in responding to increases in minimum wages. One cannot just make arbitrary assumptions about questions of time.[9] The very foundation of the natural experiments approach hinges critically on being able to rigourously separate before and after. Leigh fails badly on this score.

Finally, distinguishing cause and effect in a natural experiments framework also requires that problems of endogeneity be properly resolved. In

[8] Though it is interesting that some of the more penetrating criticisms of Card and Krueger's New Jersey study include the claim that their before-and-after periodisation was flawed (Hamermesh, 1995).

[9] In his critique of Leigh's paper, Junankar (2004, p. 66) argued that increases in minimum wages were 'most likely to affect *new hires only*', not the existing workforce. This could mean that the impact of increases in minimum wages on employment 'could be spread over two or more years'.

any model which seeks to explore the impact of a policy on an outcome, the right hand side variables must include that policy as part of its explanatory framework, while the dependent variable consists of the outcome. The problem is that the policy itself may be partly determined by some of the other right hand side variables which are also involved in determining the outcome. In this case, the same economic conditions which partly determine employment levels may also play a role in determining the policy (that is, increases in the minimum wage). For example, a downturn in economic growth may lead to a drop in employment, whilst also leading to greater caution by policy makers involved in handing down minimum wage decisions. Endogeneity can lead to bias in the model's estimates, so its presence cannot be simply ignored.

Leigh considered the question of endogeneity, both in terms of the timing of the minimum wage increases, and in terms of their size. He concluded that four out of the six increases may have been endogenous, but dismissed this problem with the argument that 'this would only affect the experiment if the Western Australian economy outperformed the Rest of Australia during that period' (Leigh, 2003, p. 366). The rationale for this defence was not presented, neither was any evidence. It seems clear that endogeneity remains a severe weakness in Leigh's analysis.

Empirical weaknesses

Empirically, Leigh's paper is very weak. Four of his six difference-in-difference estimates were statistically significant, but he discussed the results *in toto*, and regarded them as findings of equivalent worth.[10] Leigh presented his findings with spurious precision. Results were presented to three decimal places, yet the size of the standard errors attached to this kind of analysis makes such precision misleading. Consulting the ABS data which forms the basis for Leigh's analysis shows that the employment numbers which change from month to month are numbered in the hundreds, and six month changes are at most in the low thousands. Yet examining the tables of standard errors for Western Australia shows that figures of about 1000 persons are subject to standard errors of around 450 persons. If we want confidence levels of 95 per cent (which equates to two standard errors), then we are dealing with the quite ludicrous situation where the the margin of error around the estimate is almost comparable to the estimate itself.

It stretches credibility to believe that the kind of employment changes which Leigh was expecting to find in the data could actually be discerned

[10] This is a somewhat awkward sentence because it 'spans' both Leigh's paper and his erratum. In the main paper, only two of Leigh's estimates were statistically significant, but he discussed the estimates as if all of them were of equivalent worth. The erratum showed that four of the estimates were statistically significant, but there was obviously no discussion in the erratum.

among the noise. This becomes evident if we convert Leigh's regression findings into real world figures. Leigh suggested that about 4.4 per cent of employees would be likely to be affected by minimum wage increases.[11] This amounts to between 30,000 to 40,000 persons in Western Australia. If one then assumes an elasticity of labour demand of -0.5 (accepting Leigh's point that the elasticity would be higher for minimum wage workers compared to the workforce as a whole), one should expect to find that a 10 per cent wage increase should lead to the loss of about 5 per cent, or 1500 to 2000 persons. A 5 per cent wage increase should lead to a loss of about 750 to 1000 persons. The six minimum wage increases in Western Australia which Leigh examined never went above 10 per cent, and averaged about 6.3 per cent over the whole period. In other words, we are looking for employment losses of around 1300 persons. Given the month-to-month variability in employment, is it conceivable that one could actually discern such an impact? As Kennan points out, with regard to studies of the elasticity of labour demand for teenagers:

> we are looking for employment rate changes of about one percentage point, and such changes happen all the time, even from one month to the next. In short, [when looking for the impact of minimum wage increases] we are looking for a needle in a haystack (1995, p. 1955).

Finally, the empirical base of Leigh's paper is severely weakened by the poor regression model he developed, a model which largely failed to explain the variability in his dependent variable. As mentioned earlier the main model he presented had an R^2 of only .04, which means that increases in the minimum wage in Western Australia accounted for only 4 per cent of the variability in the dependent variable (the difference-in-difference estimates for Western Australia and the rest of Australia). In other words, 96 per cent of this variability was being driven by factors other than the increases in the minimum wage. As mentioned earlier, Leigh failed to control for other factors which might have been driving this variability.

Conclusion

During the last 15 years wage inequality in Australia has increased considerably, largely as a result of the introduction of enterprise-based bargaining

[11] It is important to note that Leigh's employment rate is based on employed persons (which also includes the self-employed), but his discussion of minimum wage coverage is based on employees (that is, wage and salary earners). Leigh himself ignores this distinction in his discussion. For simplicity, I also ignore this distinction in the following example. Presenting the figures in terms of employees would, if anything, strengthen the argument that the numbers involved are too small to be meaningful.

in the 1990s and the ongoing transformation of occupational and industry structures (Watson et al., 2003, ch. 8). While much of this increased dispersion has been the result of high-wage individuals earning much higher wages—the top of the labour market 'taking off'—it has also been due to low-wage individuals falling behind. Over the last seven years, wage increases handed down by the Australian Industrial Relations Commission as part of its Safety Net Adjustment (the Living Wage case) have prevented award-dependent workers falling even further behind, and have ensured that the floor of the labour market has been sustained. As overseas research has shown, increasing the minimum wage has beneficial effects on wage dispersion, helping to curtail the growth of wage inequality (Card and Krueger, 1995; Borland and Woodbridge, 1999; Machin and Manning, 1994).

It remains the case, however, that the employment aspects of minimum wages still dominates public debate. Some commentators invoke the supposed adverse employment impact of these Living Wage increases as part of their criticism of wage regulation at the bottom of the labour market. Some of these critics would prefer too see an American-style labour market, with minimal regulation for low-paid workers (see, for example Moore, 1998). By invoking the employment argument, they attempt to sway public opinion with a logic which appears humane: the unemployed are the losers from any Living Wage increase.

Clearly, the relationship between employment and minimum wages is of great policy importance. Unfortunately, Leigh's paper does not advance our understanding of this relationship. Despite his efforts, we remain largely ignorant about the real relationship between minimum wages and employment in Australia. Much research remains to be done, preferably using research designs which properly isolate before-and-after effects, which incorporate legitimate control groups, and which adequately control for confounding influences and compositional effects. Proper natural experiments along these lines still remain to be done in Australia.

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TAG 3

Impact of Minimum Wages on Employment: Some Comments

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March 2004

Impact of Minimum Wages on Employment: Some Comments on Andrew Leigh's paper and response to my critique

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Unfortunately I have not had time to provide a formal rebuttal to Andrew Leigh's response to my critique. However, I have some general comments on this issue:

1. The international literature on the impact of minimum wages on employment is still a very controversial area. In any case a summary of this literature would suggest that there are several problems with the theoretical and empirical argument that an increase in minimum wages leads to a decline in employment. The seminal work by Card and Krueger in the USA and Alan Manning of the London School of Economics has at least shown that the impact of minimum wages on employment does not necessarily lead to a decrease in employment. The basic theoretical case that minimum wage increases lead to a fall in employment is based on a simple competitive model. If we allow for imperfect markets, see Alan Manning, then the result breaks down. If we look at the data we see that many employers pay more than the minimum wages perhaps because of efficiency wage reasons (a better wage leads to a lower rate of turnover, increased productivity, etc.).
2. Although Andrew Leigh has acknowledged that his data were faulty he claims that his results stand with the corrected data. However, I still believe his econometric analysis is weak for the following reasons:

(a) His dependent variable is a continuous variable but his independent variable is zero for all periods except six points. *This means that his regression results are essentially based on six points* not the 247 data points. In that case there is a spurious degree of observations and degrees of freedom. If he were to take the relative minimum wages for WA relative to the other State(s) he could get a continuous independent variable. A better procedure may be to use panel data for firms.

(b) Any time series econometrician would look at the stationarity properties of the variables. The independent variable would clearly be I(0) but the dependent variable may be I(1), in which case there are problems. Again, any econometrician would provide some summary statistics like Lagrange Multiplier tests on serial correlation, tests for heteroscedasticity, normality of errors etc. Leigh simply provides a simple R squared which is so small that clearly he is explaining a negligible proportion of the variance of the dependent variable.

(c) He does not control for any other variables besides minimum wages. Clearly the employment population ratios would be affected by differential impacts of exchange rates, primary product prices, etc. on different states.

(d) The issue of time lags that I had raised is not really answered by Andrew Leigh. The problem is the following: an increase in minimum wages in the first instance would (in a competitive world) affect the hiring of new workers. Next, workers whose contracts are expiring would not be re-hired. Only as a last resort would employers fire existing workers. As a result the impact using conventional neoclassical economics would be spread out over a period of time (which much research suggests would be over *at least* 12 months). A simple six-month lag as used by Leigh is not appropriate.

(e) Traditional econometricians argue that if data are seasonally unadjusted we should use seasonal dummies. We could always check to see if there are any structural changes in seasonality. A simple moving average procedure may lead to arbitrary smoothing.
(f) His argument that an increase in minimum wages in WA would only affect the relative employment of WA (compared to some other state or states) is clearly not in accord with simple competitive neoclassical economics that emphasises a downward sloping demand curve for labour. In other words, the increase in employment in WA after an increase in minimum wages is counter intuitive in the neoclassical model.
(g) There is a significant problem about what is an appropriate control group for Western Australia.
(h) There is clearly a need for a much more systematic analysis of the data using better econometric techniques that allows for lags, has more independent variables, uses a continuous relative wage variable, etc.