

## 4. AWARD ENVIRONMENT

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### 4.1 PERFORMANCE OF AWARD-DEPENDENT INDUSTRIES

[4.1] ACCI submits that the Commission should place no weight on the ACTU’s assertions about the performance of award-dependent industries.

[4.2] Contrary to the ACTU’s submission at section 6, there is very little that can conclusively be said about the performance of the award-dependent industries – although it can be said that profits in these industries are lower in the short run.

[4.3] ACCI shows in this section, using proper econometric methodology that the ACTU’s at large and generalised assertions are largely unfounded and unsustainable. Properly assessed, award dependency is basically unrelated to:

- a. Short run and long run employment growth.
- b. Short run and long run output growth;
- c. Long run profit growth;
- d. Short run and long run total factor productivity growth; and
- e. Short run and long run labour productivity growth.

[4.4] The only significant relationship is between short run profit growth and award dependency – and this relationship is negative.

## General concerns with ACTU methodology

- [4.5] The ACTU only examines the performance of the three industries with the highest level of award dependence and does not conduct any econometric analysis of the relationship between award dependence and the dependent variables.
- [4.6] ACCI's analysis in this section shows that all of the relationships allegedly shown by the ACTU are spurious.
- [4.7] The ACTU conveniently uses averages on some measures (eg Figure 6.6 is a three year average) and not for others (eg Figure 6.7 covers only one year).
- [4.8] In contrast, ACCI has included both short run and long run data for all measures.

## Employment

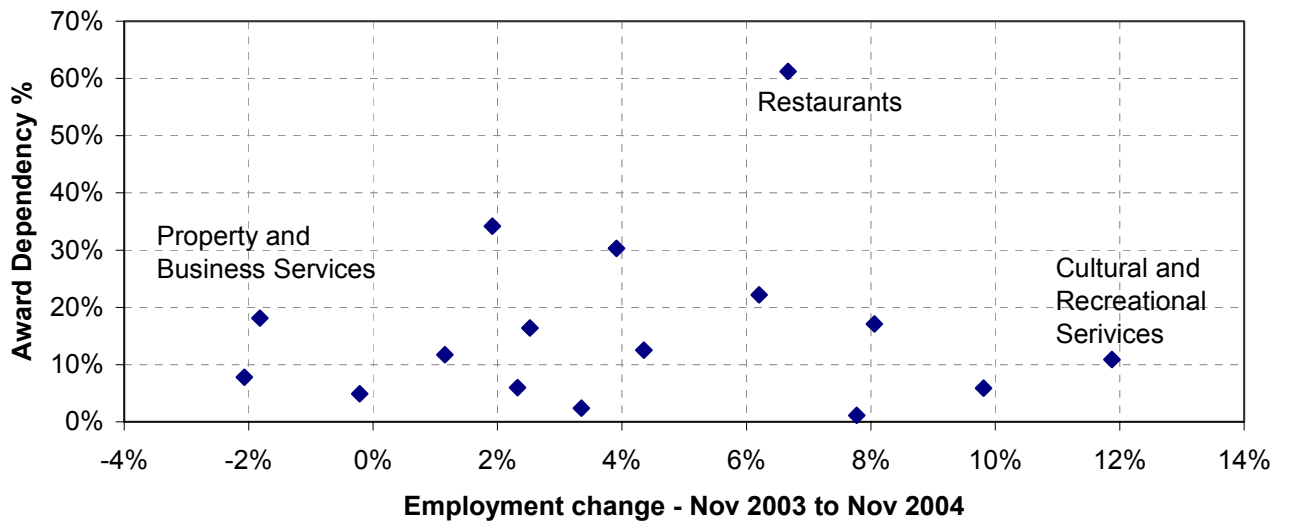
- [4.9] The ACTU argues that award dependent industries are experiencing good employment growth (paragraph 6.16-6.17).
- [4.10] However, ACCI's research shows there is very little relationship between recent employment changes and award dependency.<sup>1</sup> The chart below shows the (lack of) relationship between employment growth and award dependency.<sup>2</sup>
- [4.11] In this and other graphs in this chapter, the dots represent individual industries. If the dots lie on (or close to) a straight line, this indicates that there is a strong relationship between the two variables. If the dots are randomly scattered, then there is no relationship between the variables.

<sup>1</sup> From ACTU Submission 6.16 and figure 6.1.

<sup>2</sup> Source: ABS Labour Force, Australia, Detailed Cat No 6291.0.55.001, table 4 Employed persons by Industry, Seasonally adjusted.

Chart 4.1

Employment & award dependency 2004



[4.12] A more formal test of this relationship is a regression, which basically shows rigorously whether an apparent relationship actually exists. To avoid complexity, ACCI just reports on the goodness of fit measure, called R squared. In simple terms, this shows how close the relationship is to a straight line<sup>3</sup>. An R squared of 100 percent indicates a perfect relationship, whereas 0 percent means the variables are completely unrelated.

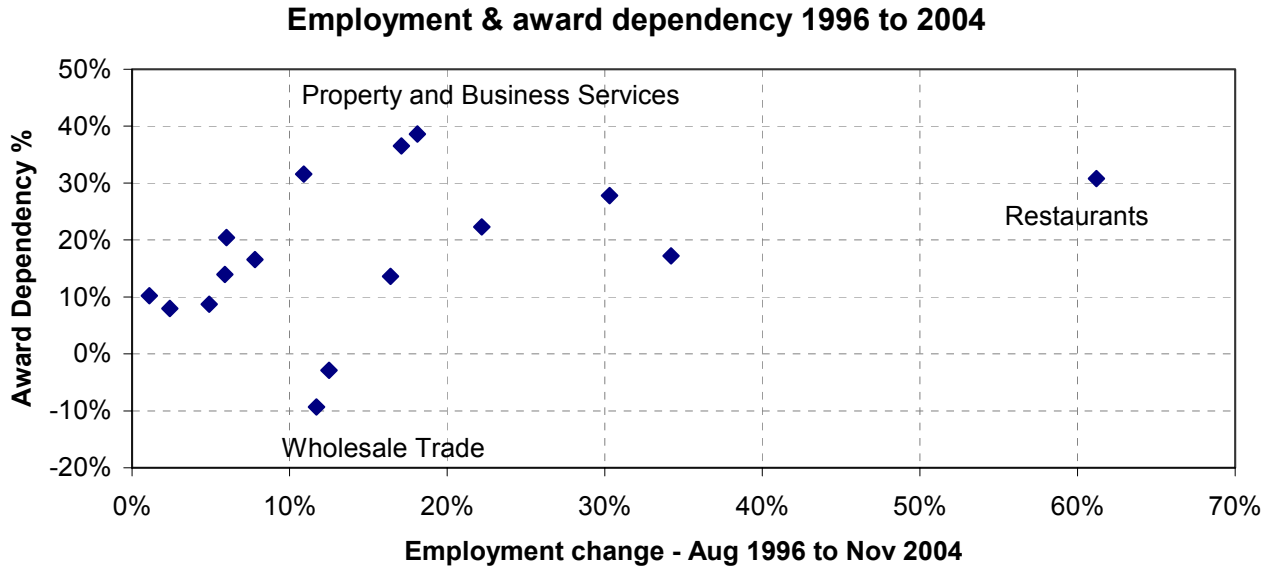
[4.13] Also of relevance is the nature of the relationship if one exists – it could be a positive or a negative relationship (award dependency may be associated with a higher or lower level of another variable). This is measured by the regression coefficient. If this number is close to zero, then again this indicates that the variables are mostly unrelated.

[4.14] For the above graph of award dependency against employment growth in 2004, the R squared is 0.4 percent - basically no relationship at all.

[4.15] While the longer run relationship appears to be positive, the R squared for this regression is only 17.9 percent, too low for any inference about the employment effects to be drawn – see graph below.

<sup>3</sup> It is possible that a relationship may exist, but it is not a straight line. This possibility is explored later in this Chapter.

**Chart 4.2**



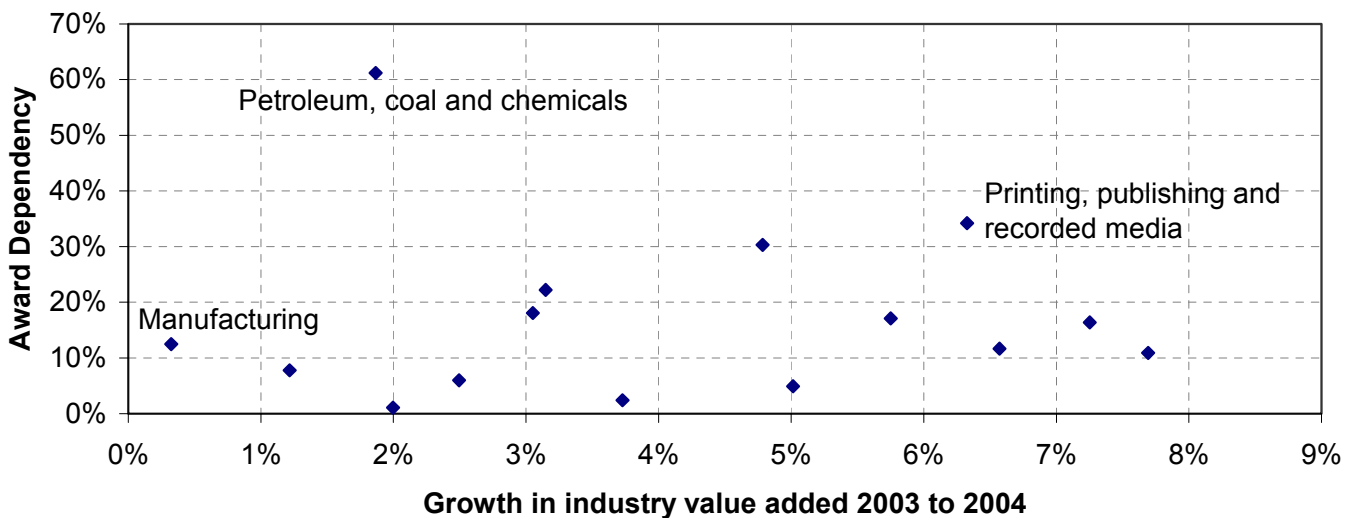
**Output**

[4.16] The ACTU argues that award dependent industries have had “dramatic improvement” in output (paragraph 6.18).

[4.17] However, ACCI’s research shows that there is virtually no statistical relationship between industry output and award dependence. The chart below shows award dependence plotted against change in industry value added from 2003 to 2004.

**Chart 4.3**

**Industry output growth & award dependency**



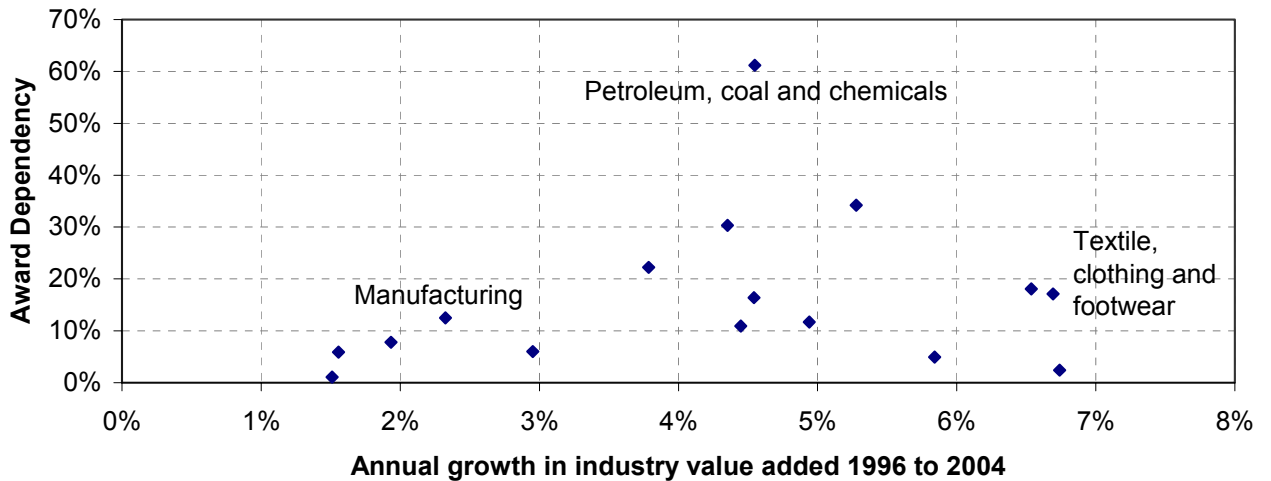
[4.18] A regression of industry value added against award dependency has

an R squared of just 0.8 percent – basically no relationship at all.

[4.19] Over the longer run, there is again no discernable trend. The following graph shows award dependence plotted against industry growth from 1996 to 2004.

**Chart 4.4**

**Long-run Industry output growth & award dependency**



[4.20] A regression on this data has an R squared of 4 percent, basically showing the two data sets are unrelated.

**Profits**

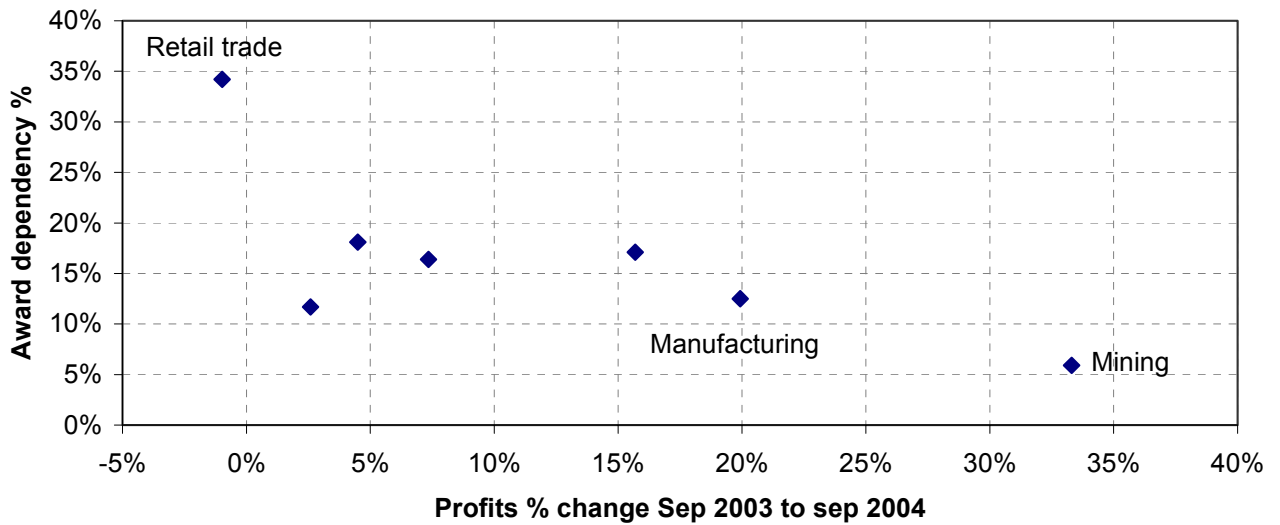
[4.21] The story on profits as put forward in the ACTU submission at paragraph 6.22, 6.23 and figure 6.6 is clearly not helpful to the ACTU’s case. The award industries performed poorly in 2004; and over the longer run there is no clear evidence on profitability.

[4.22] The chart below is a scatter diagram of award dependency against the change in profitability for industries<sup>4</sup>.

<sup>4</sup> The source data is ABS Business Indicators, Cat No 5676, table 11 (seasonally adjusted data). Note that the category “other selected industries” has been excluded as the award dependency for this catch-all category is not known.

**Chart 4.5**

**Profits & award dependency in 2004**

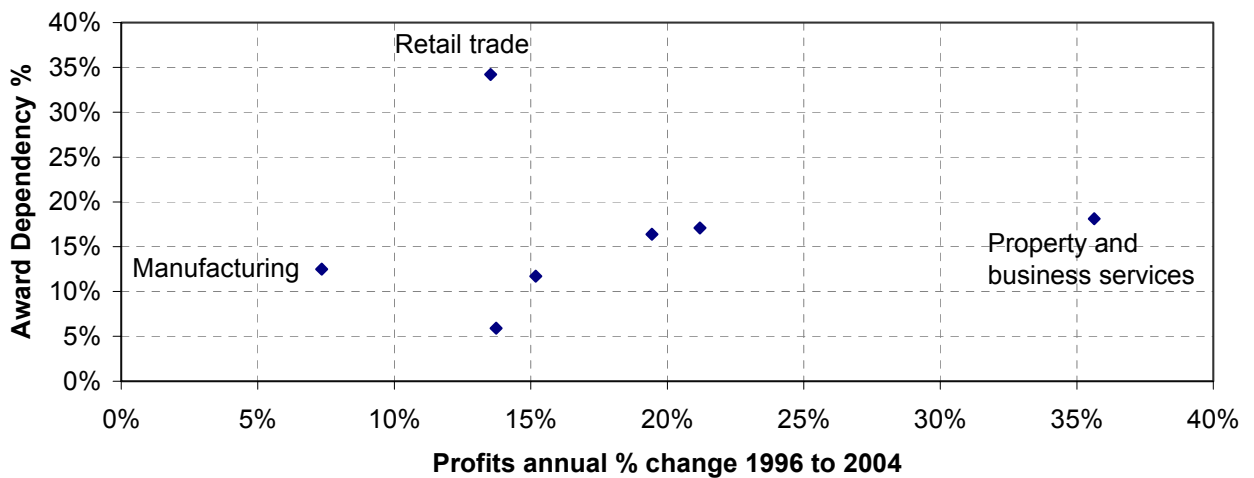


[4.23] The negative relationship is clearly evident. On a regression of profits against award dependency, every 1 percent increase in award dependency reduces profits by 0.96 percent. The fit is reasonably good – with an R squared of 50 percent.

[4.24] Looking at profitability over the long term, there is no clear relationship between award dependency and profitability<sup>5</sup>.

**Chart 4.6**

**Profits & award dependency - 1996 to 2004**



<sup>5</sup> The source data is ABS Business Indicators, Cat No 5676, table 11 (seasonally adjusted data).

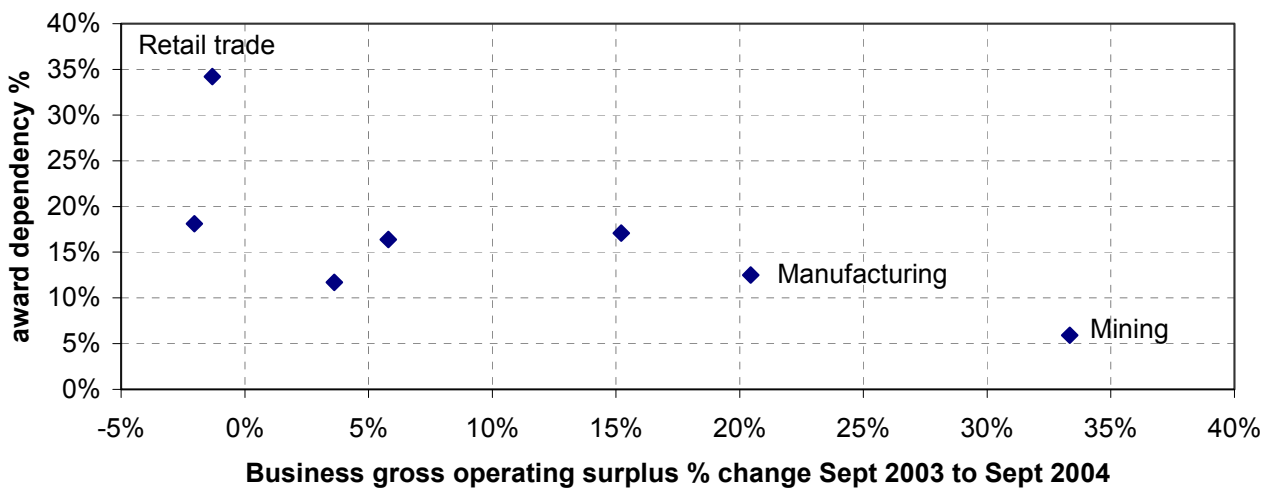
[4.25] A regression of longer run profits against award dependency indicates that the values are very much unrelated – the R squared for the regression is 1 percent<sup>6</sup>.

[4.26] The above data only involves companies. Data on profits for unincorporated businesses is only available from 2001. Inclusion of this data does not change the story much: profits are negatively related to award dependency for 2004 and unrelated over the longer run.

[4.27] The graph below shows gross operating surplus (which includes profit of unincorporated businesses) plotted against award dependency for 2004.

**Chart 4.7**

**Business gross operating surplus & award dependency in 2004**



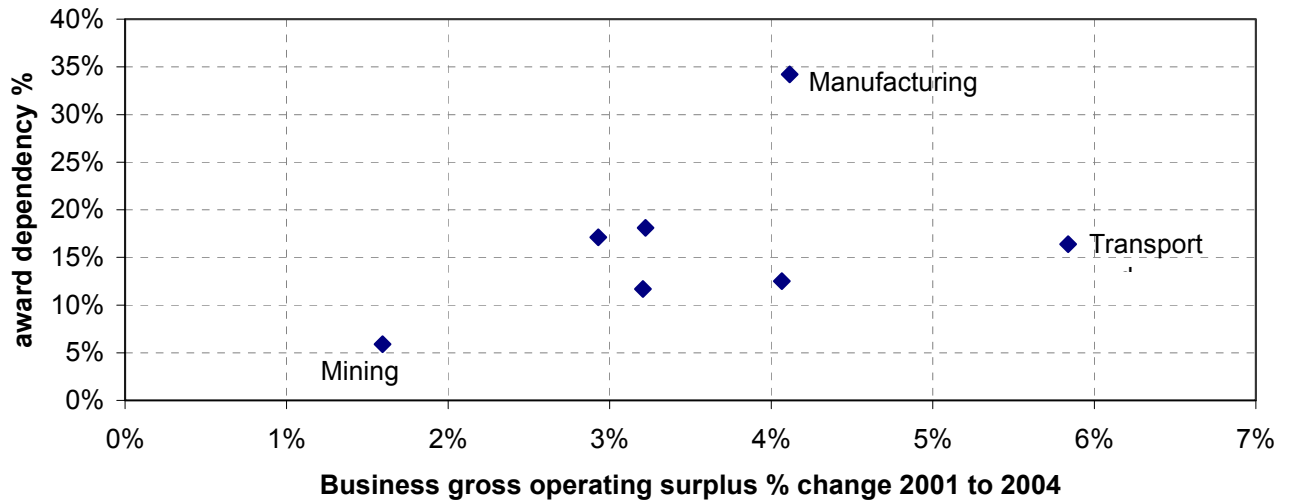
[4.28] The regression of gross operating surplus against award dependency has an R squared of 47 percent and the coefficient is 1.01 – so a one percent increase in award dependency tends to reduce profit by about the same amount.

[4.29] The graph below shows gross operating surplus (which includes profit of unincorporated businesses) plotted against award dependency for the period 2001-2004.

<sup>6</sup> The coefficient is positive (award dependency is associated with *higher* profits), but is very insignificant.

Chart 4.8

Business GOS & award dependency - 2001 to 2004



[4.30] While it may appear that there is an upward relationship, a regression shows that the R squared is low (17 percent) and the coefficient is low as well at 0.06.

**Productivity**

[4.31] The ACTU uses labour productivity at section 6 paragraphs 6.24 through 6.26, or output per hour worked, as the measure of productivity. This measure records the change in production if labour input is kept constant. However, it does not keep any other input (particularly capital) constant. The measure that does correct for capital productivity is called total factor productivity (TFP) or multifactor productivity (MFP).

**General Concerns Regarding Productivity Measures**

[4.32] There are a few concerns that productivity measures are overestimated.

[4.33] Unemployed labour is not counted in productivity measures. An unemployed person entering the labour force is counted as an increase in labour inputs. This means that if this person produces below the productivity average, measured productivity will fall.

- [4.34] However, in theory, an unemployed person producing any positive quantity (even very small) should increase the economy's productivity.
- [4.35] This problem exists for both labour and total factor productivity measures.
- [4.36] Given substantial falls in Australian unemployment in recent years, this problem means it is likely that labour and total factor productivity growth have both been underestimated. The previously unemployed labour is being added to the denominator of the productivity equation, whereas it should have always been included.
- [4.37] While productivity could be adjusted to correct for this problem, industry-level measures could not (to which industry for example should unemployed labour be allocated to, to correct productivity underestimation?).
- [4.38] Another problem with current measures of productivity is 'labour quality'<sup>7</sup>. Conceptually, changes in the quality of labour should be treated as changes in inputs, rather than changes in productivity<sup>8</sup>.
- [4.39] According to the ABS<sup>9</sup>, between 1983–84 and 2000–01, hours worked increased by 1.3 percent per year, while quality adjusted hours increased by 1.6 percent<sup>10</sup>.
- [4.40] Therefore, over this period, labour productivity growth has been overestimated by about 0.3 percent per year. TFP growth would have also been overestimated (but by a smaller amount).
- [4.41] According to ABS Australian System of National Accounts Cat No 5204 at table 22, adjusting for changes in labour quality reduces labour

<sup>7</sup> This concept is derived from ABS Productivity analysis – See [Attachment 4-1](#): ABS (2001) *Further Developments in the Analysis of Productivity Growth in Australia*, in Australian National Accounts, Cat No 5206, September 2001. The ABS in particular dissects the concept of "Quality Adjusted Index of Labour Input" in this feature article.

<sup>8</sup> ABS (2001) *Further Developments in the Analysis of Productivity Growth in Australia*, in Australian National Accounts, Cat No 5206, September 2001.

<sup>9</sup> ABS (2001) *Further Developments in the Analysis of Productivity Growth in Australia*, in Australian National Accounts, Cat No 5206, September 2001.

<sup>10</sup> Over the 18 year period, hours worked increased by 26.2 percent while quality adjusted hours increased by 33.1 percent – a difference of almost 7 percent.

productivity growth for 2003-04 from 3.4 percent to 3.1 percent. Multifactor productivity growth falls from 2.3 percent to 2.2 percent.

[4.42] An important problem is that productivity measures by industry are only available by financial year. This means the latest data on both measures are for 2003-04, when economic conditions were significantly different.

[4.43] In particular, since June 2004 economic growth has slowed while investment has continued and unemployment has reduced. So output growth has slowed while (measured) input growth has continued – implying that productivity measures would have fallen. In the latest National Accounts, overall labour productivity in the 2004 calendar year fell by 0.4 percent<sup>11</sup>.

### **ACCI analysis of productivity**

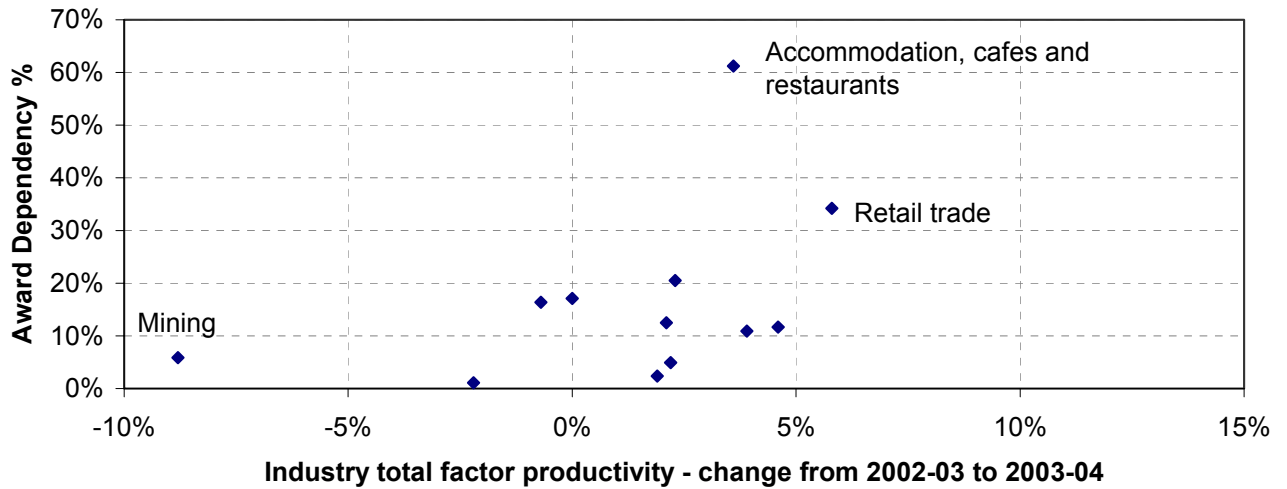
[4.44] Acknowledging the concerns noted above, ACCI has undertaken a more careful analysis of the relationship between productivity changes and award dependence than that conducted at paragraph 6.24 of the ACTU submission.

[4.45] The diagram below shows the relationship between total factor productivity growth and award dependency between the 2002-03 and 2003-04 financial years.

<sup>11</sup> Source: ABS Australian National Accounts Cat No 5206 table 2.

**Chart 4.9**

**Industry total factor productivity growth & award dependency  
2002-03 to 2003-04**

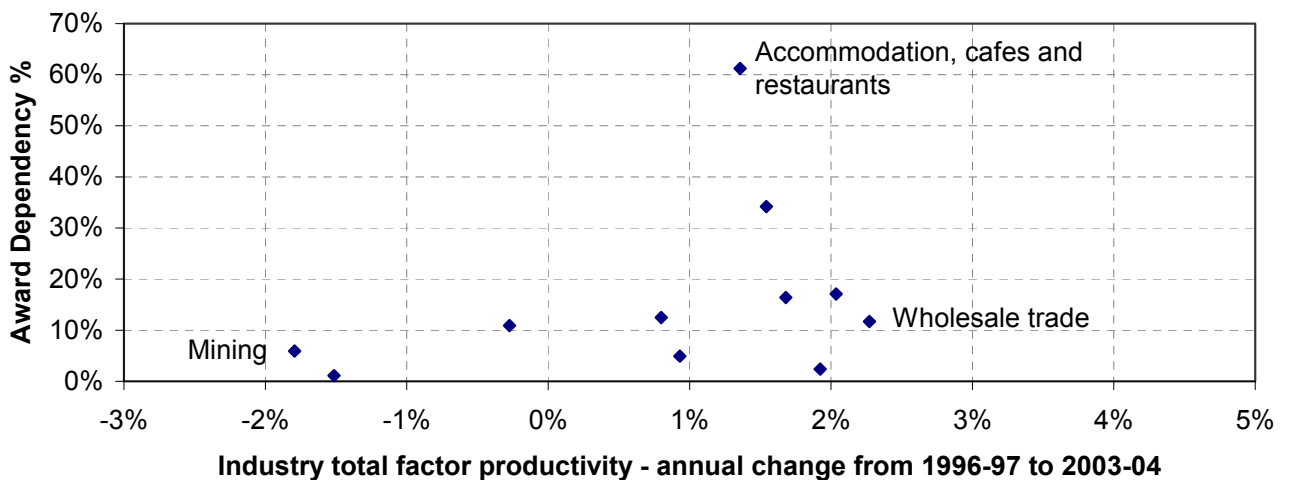


[4.46] No clear trend is evident. A regression of TFP against award dependence has an R squared of 16 percent – which is low enough to state that the relationship between the data sets is negligible<sup>12</sup>.

[4.47] The diagram below shows the longer run relationship of TFP with award dependency.

**Chart 4.10**

**Industry total factor productivity growth & award dependency  
1996-97 to 2003-04**



<sup>12</sup> The coefficient is only 0.09.

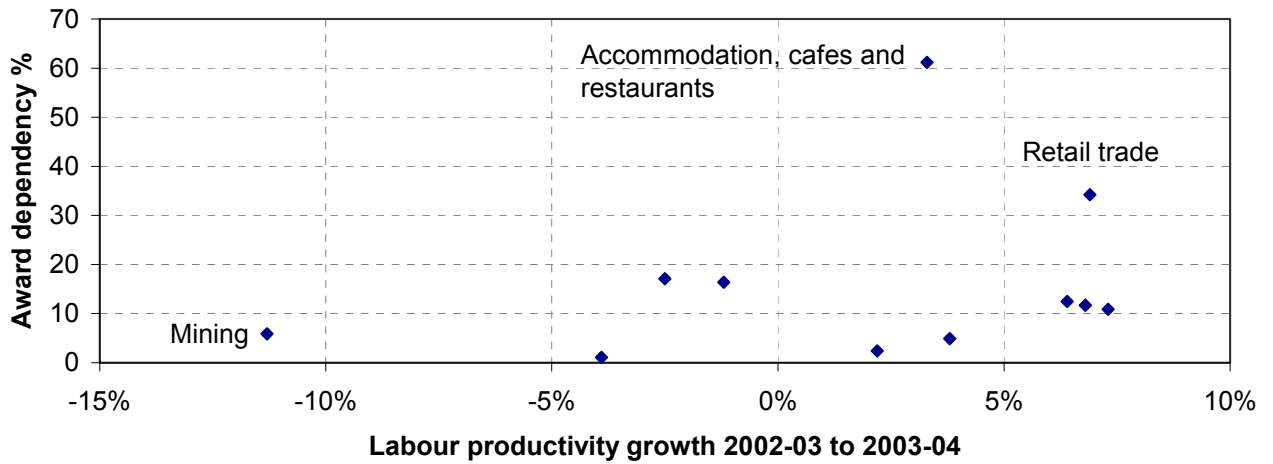
[4.48] Again, no clear trend is evident. A regression of TFP against award dependence has an R squared of 11 percent – the data sets are basically unrelated<sup>13</sup>.

**Labour productivity**

[4.49] Noting the problems with using productivity outlined above, this measure does not support the ACTU’s case as made at paragraph 6.25 of the ACTU submission. The plot below shows labour productivity growth between 2002-03 and 2003-04 plotted against award dependence.

**Chart 4.11**

**Industry labour productivity growth & award dependency 2002-03 to 2003-04**



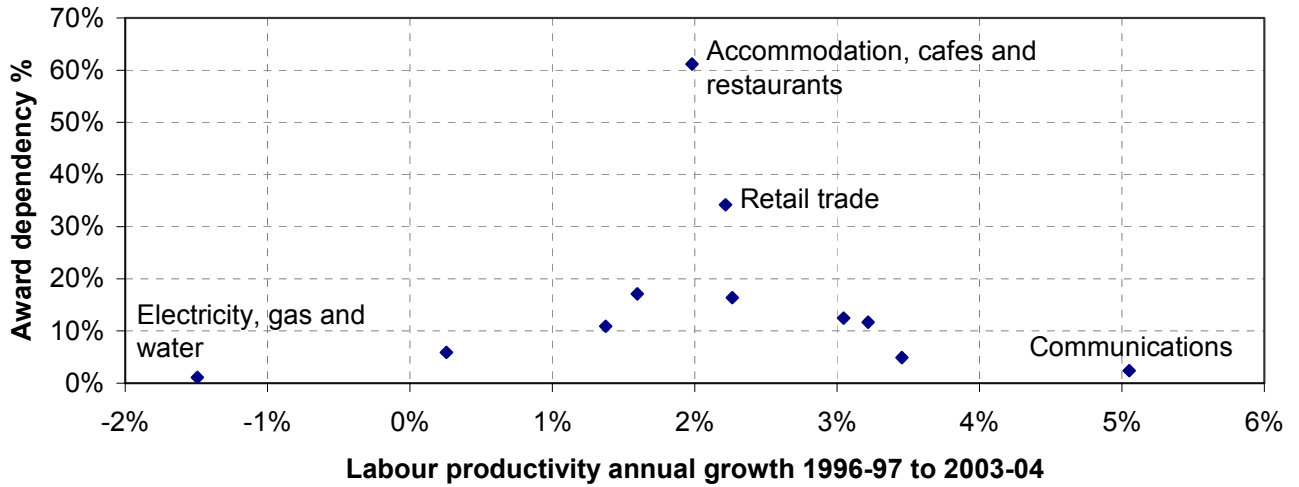
[4.50] Again, no trend is evident. A regression of labour productivity growth 2002-03 to 2003-04 against award dependence has an R squared of 7 percent which is insignificant.

[4.51] The graph below shows longer run labour productivity growth (1996-97 to 2003-04) plotted against award dependence.

<sup>13</sup> The coefficient is only 0.02.

Chart 4.12

Industry labour productivity growth & award dependency  
1996-97 to 2003-04



[4.52] Yet again, no trend is evident – the R squared of the regression is 0.09 percent.

**More sophisticated tests of relationship**

[4.53] All of the above tests require that award dependency and the other variable (growth, productivity, employment etc) are normally distributed. To ensure that this is not biasing the results, ACCI undertook an Analysis of Variance (ANOVA) test on the same data. ANOVA tests do not require the variables to be normally distributed.

[4.54] The data is for 2000, 2002 and 2004. The table below shows the relationship between high award dependence and various variables.

Measure	Coefficient	Significance
Employment	-.21	.152
Labour Productivity	.063	.727
Capital Productivity	.166	.355
Prices	.149	.312
Profits	-.047	.830

[4.55] Significance is basically the probability that the relevant relationship happens just by chance. So:

- a. The probability that the relationship on profits is just chance is 83 percent – that is, it is far more likely to be chance than the causation being argued by the ACTU.
- b. The probability that the relationship on employment is chance is only 15 percent – it is more likely that a true relationship exists between employment change and award dependency. Note that the relationship is negative.

[4.56] Basically however, none of the relationships are significant, although award dependence may have somewhat negative relationship with employment.

[4.57] As shown, the relationships are either not significant or indicate that high award industries perform worse than average as opposed to the claims made in the ACTU submission particularly at paragraphs 6.18, 6.22, and 6.24.

## Conclusion

[4.58] By way of the preceding rigorous statistical analysis, ACCI has comprehensively shown that award industries perform no better than the average – and perform worse in some cases.

[4.59] Therefore, the ACTU's argument that "*the lack of real improvement in remuneration for award only employees is in stark contrast to their contribution to Australia's economic growth*" is unfounded (para 3.39).

## 4.2 AWARD WORKERS

### Real after tax wages

- [4.60] The time series on real after tax wages (ACTU Figure 3.4) is very unhelpful to the Commission, because it does not include benefits such as Family Tax Benefit.
- [4.61] Therefore it provides only a very partial picture of the amount of income an award employee receives after taxes and transfer payments.
- [4.62] In fact, Section 5 shows that the lower paid in the community receive most or a substantial proportion of their income from the Government.
- [4.63] Hence it is very misleading to include taxes only in figure 3.4 without welfare benefits.
- [4.64] Inclusion of welfare benefits may show that award incomes after tax and benefits have not changed dramatically over recent years. This is similar to the ACTU's argument in Figure 3.4 that award workers have not received much after-tax benefit from previous award increases.
- [4.65] This points towards ACCI's other concern with the ACTU's argument in this section – a lack of rising income after tax (and benefits) suggests that effective marginal tax rates (EMTRs) are high.
- [4.66] This appears to contradict the ACTU's claims in Section 7 that EMTRs for award workers are low.
- [4.67] If EMTRs for award workers are low, then the after-tax wages of employees would have increased due to previous rises in award wages.
- [4.68] On the other hand, if award workers did not obtain after-tax benefits from previous award increases, then this implies that their EMTRs are high.
- [4.69] ACCI would need access to the data underlying the ACTU's Figure 3.4 to examine this issue in more detail.

### **4.3 INCREASES SHOULD BE TARGETED TO LOWER PAID**

[4.70] ACCI reiterates our position that minimum wage increases should be targeted to the lower end of the pay scale. It is very difficult to see why the commission should be regulating pay for people earning over \$1,000 a week, when the median wage is around \$800 a week.

[4.71] Meanwhile, the ACTU has not shown that any increase is needed at the higher end of the scale.

[4.72] In theory, these employees:

- could hardly be called disadvantaged in the labour market compared to those at lower pay scales; and
- would be in a stronger bargaining position than those at the lower end of the pay scale.

[4.73] The ACTU has provided no evidence to counter these points.

### **4.4. OTHER MATTERS**

[4.74] The ACTU has argued that increases to higher awards are necessary to address skill shortages (para 5.28). ACCI disputes this claim:

- a. The ACTU argues that there are strong wage increases higher up the income distribution, and uses this to argue for its claim (paragraph 4.39 and following). This is a circular argument, as an increase to higher awards will add to wage increases higher up the income distribution. The ACTU's claim will add to the measures it uses to justify its claim!
- b. The ACTU has not provided evidence that increases to higher awards will address skill shortages in any industry. Alternatives need to be explored, such as that higher award wages will discourage training, making skill shortages worse.

- c. The ACTU argues that there are not systemic wages pressures (para 4.2) – a point that ACCI disputes (see Section 2). But if we assume for a moment that the ACTU is correct, this means that skills shortages are not leading to wage increases – current wage growth is not linked to the skill shortages. It is inconsistent to argue at the same time that wage increases will address the skill shortages.
  
- d. Skill shortages coexisting with unemployment suggest that the people who are currently unemployed are unable to meet the skill vacancies. Increasing the pay for these occupations will not increase the ability of the unemployed to meet skill shortages.