

**A reply to the report “Effects of penalty rates in the
restaurant sector” by Prof John Quiggin, University of
Queensland**

**(A Brief prepared for United Voice in relation to Fair Work
Commission review of penalty rates, August 2015)**

by

Prof Phil Lewis

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Introduction

In preparing this report, I have read, understood and complied with the Federal Court of Australia Practice Note CM 7 regarding Expert Witnesses in Proceedings in the Federal Court of Australia.

I have previously attached at Appendix A of my original report a summary of my training, study and experience which has allowed me to acquire specialised knowledge in relation to the subject matter contained in this report.

This response seeks to answer several questions raised by Prof Quiggin concerning my report related to proposed changes to industry awards, specifically those pertaining to the following (the Relevant Industries):

- the retail industry;
- the café and restaurant industry; and
- the hairdressing and beauty industry.

I have reproduced the substantive parts of Prof Quiggins's report in full with my responses to his comments in bold red type. I note that although Prof Quiggin's report relates only to the café and restaurant industries

Comments of Prof Quiggin (as originally numbered)

Summary

The main conclusions of this report are as follows:

- 1 The restaurant and cafe industry has expanded in response to increases in household incomes and discretionary expenditure. Wage costs are not a primary determinant of employment or profitability in the industry.
- 2 The literature survey provided by Professor Lewis is selective and misleading. The core finding of the mainstream literature on minimum wages is that the elasticity of employment with respect to minimum wages is either small or negligible.
- 3 Changes in penalty rates may lead to changes in patterns of employment, but are unlikely to have much effect on aggregate employment in the cafe and restaurant industry.

Glossary

4. The elasticity of employment with respect to wages is the ratio of the proportional change in employment to a given proportional change in wages. For example, if a 10 per cent increase in wages caused a 3 per cent reduction in employment, the elasticity would be -0.3.

Response to Question 1

5. *Question 1: Regarding Part 1 (pp 3-10) and Part 2 (pp 10-21) of Professor Lewis' report, address the overview of the labour market and economic profile of the retail, restaurant, and hair and beauty industries in Australia. Specifically:*
 - (a) *does Part 1 contain, in your opinion, an accurate description of the labour market in Australia?*
 - (b) *does Part 2 contain, in your opinion, an accurate description of the industries profiled by Professor Lewis?*
 - (c) *if the answer - either wholly or in part-to (a) and/or (b) is no, why not?*
6. Response to 1 (a): Yes: Professor Lewis gives a broadly accurate summary of developments in the labour market, and their responsiveness to income growth and

the expansion of the service sector. As Professor Lewis notes, the service sector has grown steadily and now accounts for around 70 per cent of all employment.

Agree

7. Response to 1(b). My response to this question is confined to the Cafe and Restaurant Industry. Background Data on this industry is provided in Appendix A. In my opinion, the description provided by Professor Lewis in pp 3-10 is only partly accurate.

Disagree that the description is only partly accurate

8. The following claim made by Professor Lewis is, in my view, inaccurate:

The industry is very labour intensive with wages accounting for 28 percent of total expenses and 69 percent of value added.

No basis is given on which an industry might be classified as 'very labour intensive'. In the discussion of the hairdressing sector, Lewis observes that labour in this sector accounts for 72 per cent of total expenses and 82 per cent of value added.

Disagree. See below

9. The share of wages in national income (equal to total value added, plus depreciation) has varied between 60 and 65 per cent since 2000. However, this figure has been distorted by the boom in mining, where the wage share is very low. Outside the mining sector, there is no reason to regard the wage share of value added in the restaurant and cafe sector as unusually large. A more reasonable conclusion is that the labour intensity of the restaurant and cafe sector is broadly comparable to that of the service sector as a whole, which accounts for the vast majority of employment in Australia.

Disagree. Labour intensive is used to describe any production process that requires higher labour input than capital input in terms of cost. The higher the proportion of labour costs required to produce goods or services, the more labour intensive the industry.

The table below shows the labour intensity of selected Australian industries. My statement that the cafes and restaurant industry is 'very labour intensive' is clearly accurate. The industry is more labour intensive than the economy as a whole (as are

most service sector industries).

Table: Wages as a percentage of total expenses and of total value added, 2013-14

Industry	% of expenses	% of value added
Cafes and Restaurants	27.6	69.1
Hairdressing and Beauty	72.3	82.9
Retail	10.9	55.6
Agriculture	10.0	24.8
Mining	15.0	21.3
Manufacturing	14.9	56.8
Elect, Gas, Water, etc.	9.7	24.7
Construction	18.5	55.6
Prof Services	36.7	64.3
Healthcare & Soc Services	47.3	62.8
All Selected	18.6	49.0

Source: Australian Bureau of Statistics (2015) Australian Industry, 2013-14, 81550DO001_201314

10. The claim that the restaurant and cafe industry is 'very labour intensive' would imply that, to a much greater extent than other industries, the performance of the restaurant and cafe industry is determined by labour costs. This implication is inconsistent with the description of the factors driving growth in the cafe and restaurant industry, cited in para 11 below, and with the following statement (pp 22-23):

In particular the economy has been growing very strongly for over 20 years and this would increase demand in minimum wage jobs even with increasing minimum wages. By contrast the Global Financial Crisis (GFC) and its aftermath had a negative effect on employment far greater than any effect of changes in award wages such as the freeze in the minimum wage for 2009/2010.

This statement only means that the GFC, a massive shock to most of the world's economies, had a very large impact on employment not that wages are not important.

11 Response to 1(c): Professor Lewis correctly notes that income growth and structural change have driven expansion of the service sector as a whole, including the restaurant and cafe sector. In particular, Lewis observes that these factors are more important than wages as a determinant of total employment. Lewis (p 11) states:

Household disposable income plus consumer and business confidence are very important to demand for output from the relevant industries. During the long period of trend growth from 1992 to just before the Global Financial Crisis (GFC) in 2007-08 there was strong trend growth in turnover for services industries but it is also noticeable that there has been significant fluctuation in turnover (Lewis 2015) implying increased business risk for these industries. The aftermath to the GFC has considerably increased risk for businesses. The GFC caused a marked fall in turnover in 2008 and the cash handouts given to households as part of the federal government in 2009 caused turnover to rise in 2009 (Garnett and Lewis 2010).

Again, yes the state of the economy, consumer confidence, income growth, changes in tastes etc. are all important. This does not mean that wages are unimportant.

Response to Question 2

12 *Question 2: Provide your opinion as to the literature review conducted by Professor Lewis in Part 3 (pp 22-23) of his report.*

13 Response to Question 2: Since there is little published literature directly applicable to the impact on penalty rates, the literature review conducted by Professor Lewis deals with studies of the impact of minimum wages. In my opinion, this literature review is selective and misleading.

Disagree. Very little of my literature review relates to the impact of minimum wages. My analysis relies on the principal that there is substitution between hired labour and other inputs, ie demand for hired labour is negatively related to wages. Minimum wage studies are only relevant in that they can establish this substitution. The penalty rate effects are quite different to minimum wage effects. Even Card and Krueger (cited below) assume wages affect labour demand and the main theoretical explanation for their observed lack of minimum wage effects in US fast food outlets is the theory of monopsony which is irrelevant to the case here.

14 The review cites international evidence, namely the book by Hamernlesh (1993). However, Professor Lewis fails to mention the radical change in views about the impact of minimum wages that has arisen since the work of Card and Krueger (1994, 1995a, 1995b, 2000) and subsequent studies showing that the impact of minimum wages on labour demand is much weaker than was previously believed and that, in many cases, no evidence of any adverse effect on employment can be found. This work, while still the subject of considerable research and debate has rendered obsolete the summary of the field presented by Hamermesh(1993).

I make reference to Hamermesh (1993) because it remains the seminal work on labour demand. I do not make use of the relatively small part of his book relating to minimum wages. I also review the considerable research from overseas and Australia on labour demand, all of which finds there is a negative relationship between wages and labour demand.

15 The summary of the Australian literature is similarly selective. Professor Lewis cites four empirical studies written by him, with a variety of co-authors, all finding high elasticities of labour demand (absolute value in excess of 0.5), and one other study, by Leigh (2003). Professor Lewis fails to mention numerous studies over the past 25 years that either find no effect or yield substantially lower estimates of the elasticity of labour demand (absolute value less than 0.3).

There has been no bias in the selection of the literature in my report. The results of my studies on the Australian aggregate labour market are similar to the results of other studies in Australia and overseas. The range of estimates of elasticity of aggregate demand for labour for Australia is -0.3 to -0.8 (slightly higher for hours) with most in the range -.6 to -.8 and my estimates are within this range.

16 Appendix B provides a more extensive, though not exhaustive, survey of the international and Australian literature on minimum wages, listing at least 20 relevant studies not considered in the literature survey provided by Professor Lewis. Nearly all of these yield lower estimates of the elasticity of labour demand with respect to minimum wages than do the studies cited by Professor Lewis.

Again Prof Quiggin has misunderstood the argument I put forward that the elasticity of demand for labour is negative and relatively large. My view is that establishing a relationship between the minimum wage and total employment is fraught with difficulty. This is precisely because an important characteristic of the multitude of

labour markets is *substitutability*. There is strong evidence (cited in my report) that, given the degree of substitutability, the demand for labour in more narrowly defined labour markets is highly responsive to *relative* wages. The imposition of minimum wages only directly affects those in or seeking low skilled, low paid jobs. These individuals are, generally, very poor substitutes for the majority of the workforce and, therefore, minimum wages have little impact on the wages and employment of most workers. However, those workers who have a market wage just above the minimum wage are highly substitutable for minimum wage workers. Firms employ less of those who would have earned below the minimum wage and, therefore, unemployment among this group rises. However, these workers are substituted for by more workers earning just above the minimum wage. The net effect on *total* employment may be difficult to detect.

Thus, the low impact of minimum wages on *total* employment is a result of high elasticities of substitution for labour.

17 Overall, the literature survey presented by Professor Lewis presents a view that is at variance with the conclusions of mainstream research on labour demand over the past 20 years, both in Australia and internationally. The mainstream view is that the impact of minimum wages on employment is small, and in some cases, that no impact is evident.

I agree that the effect of minimum wages on *total* employment is probably small but my view is that the impact on particular groups of workers is relatively large. I think Prof Quiggin's argument supports rather than refutes my view.

Response to Question 3

18 *Question 3. In your opinion is there a relationship between wages and rates of employment? If your answer is yes, please describe the relationship. If your answer is no, please provide reasons for your opinion. In answering this question, please address Part 4 (pp 23-32) and Part 5 (pp 32-39) of Professor Lewis' report.*

19 The relationship between wages and rates of employment is complex, involving interactions between labour supply, labour demand, industrial relations policies and workplace relations more generally. I will therefore confine my answer to the effects of minimum wages and conditions on employment, with a particular focus on the effects

of penalty rates.

Again. Very little of my analysis relates to the impact of minimum wages.

20. In my opinion, the effects of penalty rates on aggregate employment in the hospitality industry are limited, and outweighed by other factors affecting employment, such as the general state of the economy. My reasons for this answer are:

- (i) In general, as shown in Appendix A, the effect on employment of legislated or arbitrated minimum wages and conditions is small.

I agree this literature suggests that minimum wage legislation has a small effect on total employment but this is not the point. The small effect is due to the substantial degree of labour-labour substitution. Minimum wages legislation raises the wage of those who would otherwise have been employed at a wage below the minimum. This rise in relative wages reduces demand for these workers. Those who would have earned a wage above the minimum anyway experience a fall in their wages relative to those on the minimum wage. Therefore demand for these workers increases (one group of workers is substituted for another). The net effect on *total* employment (the difference between the respective rises and falls in demand for the two groups of workers) may be difficult to detect. However, there is a large fall in employment of workers who could otherwise have earned below the minimum wage.

The penalty rates in this case apply to all hired workers in the relevant industries. There is no ‘penalty rate’ group of hired workers and another ‘non penalty rate’ group of hired workers who can be substituted for them.

- (ii) The effect of penalty rates is to increase modestly the average wage rate of employees over a full week.

It is not legitimate to take the extra labour costs on Sunday or a public holiday and divide by all the days of the week to obtain an average cost per week – which will obviously be small. A firm’s decision of how many hours to operate, whether to open at all, how many workers to employ etc on a Sunday or public holiday, are independent of what has already occurred during the rest of the week. The firm has only to decide if the extra revenue received exceeds its extra cost from

operating on Sundays or public holidays. In the models in my report the question is what would firms' decisions be if wages were lower on a Sunday or public holiday.

- (iii) Penalty rates represent compensation for working at times which are generally regarded as unsocial. It is therefore likely that, even in the absence of penalty rates as an award condition, bargaining on equal terms between workers and employers would result in higher rates of pay on weekends and public holidays.

The results of Rose (2015) presented to this review suggests that some increase in pay would be required to induce those already working in the relevant industries to work on Sundays and Public holidays. However, the high degree of unemployment among the unskilled and youth in Australia suggests many would be willing to work for lower rates of pay.

- (iv) The primary avenue by which employment in the industry might be increased is an increase in the number of establishments opening on Sundays and public holidays. However, any increase in consumer expenditure on such days would be likely to come at the expense of expenditure at other times. Moreover, the fact that many establishments close on Mondays, when there are no penalty rates, suggests that pay rates are not a primary determinant of opening hours.

This statement is contradictory. On the one hand it says that consumers will shift demand to other days if they cannot eat on Sundays then, on the other hand, the day of the week is important as evidenced people are revealed to prefer not to eat out on Mondays. This implies that for consumers the day of the week is important and that demand shifting to other days to make up for Sunday and public holiday closing is low.

21 A quantitative basis for this conclusion may be provided as follows. For most award categories it is proposed to reduce penalty rates on Sundays by 25 percentage points, from 200 per cent of the standard hourly rate to 175 per cent, or from 175 per cent to 150 per cent. The impact may be considered for the case of a business that is open seven days a week. Assuming that employment levels are

constant through the week, the average hourly wage rate for a firm paying 150 per cent penalty rates on Saturdays and 200 per cent on Sundays is equal to 135 per cent of the standard rate. It follows that the proposed cut will reduce the average wage by around 2.6 per cent. As stated by Professor Lewis, wages account for around 28 per cent of operating costs in the restaurant and cafe industry. Hence, the implied reduction in operating costs is approximately 0.8 per cent (that is, 2.6 per cent of 28 per cent).

Again it is not legitimate to take the extra labour costs on Sunday or a public holiday and divide by all the days of the week to obtain an average cost per week – which will obviously be small. A firm’s decision of how many hours to operate, whether to open at all, how many workers to employ etc on a Sunday or public holiday, are independent of what has already occurred during the rest of the week. Firm’s decisions are made at the margin. The firm has only to decide if the extra revenue received exceeds its extra cost from operating on Sundays or public holidays. It is the additional cost of hired labour on these days which is relevant.

- 22 Based on these estimates, I do not believe that the reduction in penalty rates will have a substantial impact on the ability of employers to offer longer hours or work or to take on new employees. Assuming a demand elasticity of 0.1, for example, the implied change in hours demanded is 0.3 per cent, which is too small to be observed within the range of statistical error associated with employment surveys, and would be swamped, in any given period by random fluctuations in operating conditions. For example, for a firm with 10 full-time-equivalent employees, the implied change in hours demanded over a month is around 5 hours, less than a single shift.

Notwithstanding any dispute over the size of the relevant elasticity the method of calculating changes in costs is fundamentally flawed for the reasons above.

- 23 Professor Lewis provides estimates of the likely increase in the employment of hired labour on Sundays arising from a reduction in penalty rates. Professor Lewis relies heavily on the idea that a reduction in penalty rates will promote substitution between different types of labour, in particular between hired labour and the labour of owners and operators labour. No empirical estimates of this substitution elasticity are provided. Rather, Professor Lewis adopts estimates of the elasticity of substitution between younger and older workers, and assumes that these are applicable to the quite

different case of hired and owner labour.

I present a range of estimates of elasticities of substitution based on previous studies which suggest this parameter is large. There are to my knowledge no estimates of the elasticity between hired labour and family/owner operator labour but good reasons to think this is high.

24 There are several major problems with Professor Lewis' analysis. Most importantly, Professor Lewis fails to consider a range of offsetting effects. Changes in penalty rates are likely to change the time profile of employment, and its distribution between hired and operator/family labour. In particular, a reduction in penalty rates for Sundays is likely to increase the employment of hired labour, and reduce the employment of operator/family labour on Sundays. This change will be offset by an increase in the employment of operator/family labour on days other than Sundays and a reduction in the employment of hired labour on those days.

I am pleased that Prof Quiggin agrees with me that a reduction in penalty rates on Sundays and public holidays will increase employment of hired labour. The decision of owner operators and family of hours worked depends on the opportunity cost of leisure foregone. The opportunity cost of leisure for family labour is the wage that would otherwise need to be paid to hired labour (not accounting for the possibility that family labour might be more productive). Because penalty rates apply on Sundays and public holidays the opportunity cost of leisure is higher on these days and family labour will be used more (substitution of family for hired labour). There is little reason to think with reduced penalty rates that because family labour is reduced on Sundays and public holidays that families will increase work during the rest of the week. It is more likely that owner operators and family will maintain a pattern of work which maintains their business, family wealth, consumption of goods, service and leisure.

25 Similarly, to the extent that reductions in penalty rates lead to the removal or reduction of Sunday surcharges, this would lead to an increase in the demand for cafe and restaurant services on Sundays, and an offsetting reduction in demand on other days. This offsetting effect reflects the fact that cafe and restaurant services represent a discretionary/luxury expenditure. There is little reason to suppose that total

expenditure on cafe and restaurant services would increase substantially as a result of a shift of demand towards Sundays.

If Sunday and public holiday are popular dining out days (or would be if restaurants were open) and opportunities to dine out are restricted (or more expensive) on these days they are unlikely to choose another day instead as evidenced by the unpopularity of Mondays. If restrictions are relaxed through reduced penalty rates on these popular days it would be expected that total expenditure on restaurants would increase

26 A further problem with the analysis presented by Professor Lewis is his assumption that employment of hired labour, rather than total employment, should be a primary concern. In determining the economic effect of penalty rates, it is total employment that matters, not the terms on which labour is employed. If the effect of reducing penalty rates is to change the mix of wage employment, self-employment and family labour in the industries concerned, but not to change total employment significantly, there is no obvious reason why this should be a concern. In the long run, it is possible that the result of penalty rates will be an increase in the share of operator labour, which implies more establishments, each with fewer hired staff. Again, there is no obvious reason why this should be a matter of concern.

I have made no normative judgements as to whether employment of hired labour is more important than family labour. I simply point out that reductions in penalty rates would create greater employment opportunities for hired labour and reduce the burden on family labour. As the Productivity Commission (2015, p25) reports:

“Lower penalty rates would also be likely to reduce the incidence of weekend work by small business owner-managers, who often work long hours to avoid high labour costs.”

Productivity Commission (2015), *Workplace Relations Framework, Draft Report* (Canberra).

27 The second problem is analytical. Professor Lewis' analysis implicitly assumes that the supply of operator labour is perfectly elastic. This is obviously false for any given business. The operator's capacity for work is limited, as is the number of family members that can be called on to supply labour. If the operator and family members work more hours on Sunday as a result of penalty rates, they will, in all probability, work less hours

at other times of the week, requiring the employment of more hired labour at those times.

See above

28 Finally, Professor Lewis implicitly assumes that owners and family members are indifferent between work on Sundays and work on other days. To the extent that owners and family members resemble the community as a whole, it is reasonable to assume that they would prefer to work similar hours. Taking this into account would reduce the estimated substitution effects.

I don't agree that people in family businesses have the same preferences for hours and days of work as hired employees. Entrepreneurs (business owners) are characterised by the profit motive, work ethic and willingness to take risks. The success of their businesses depends far more on hard work than for employees and they are more willing to be flexible in balancing work and leisure.

29 The third effect identified by Professor Lewis is the impact of penalty rates on demand for restaurant meals. Professor Lewis' analysis of this point is inconsistent with his treatment of the elasticity of substitution for labour, since he takes no account of the fact that patrons can respond to penalty rates, and the surcharges commonly associated with those rates, by choosing to dine at different times. In economic terminology, restaurant meals consumed on other days represent a close substitute for meals consumed on Sundays. So, much of the demand effect of penalty rates will be simply to shift the time at which restaurant meals are consumed, rather than to shift expenditure to other goods and services.

I disagree for the reasons I have outlined above. I addressed the issue of production and demand shifting in my report. Studies (see, for instance Cardoso et al 2012) have considered the substitution of labour over times of the day or week as a result of differences in labour costs. For instance, firms may redirect production to those periods when overtime or penalty rates are not paid in order to reduce labour costs. The degree of substitution has been found to be small for industries as a whole and the possibilities for reorganising production in most service sector industries like cafes and restaurants would appear to be low.

Unfortunately there are little available data on demand shifting in Australian cafes and restaurants and so it is difficult to predict what the effect on employment. Nevertheless, it is highly likely that the inconvenience imposed on customers of not

being able to dine at times they prefer does impose costs and would reduce demand. Anecdotal evidence, which is supported by Prof Quiggin in his evidence (p7, para 20 (iv)), informs us that many establishments close on Mondays presumably because consumer demand is low on that day. This implies that for consumers the day of the week is important and that demand shifting to other days to make up for Sunday and public holiday closing is low.

**Penalty rates and the retail, cafe and restaurant; and hairdressing
and beauty industries: a reply to a report by Prof Jeff Borland of
3rd September 2015**

by

Prof Phil Lewis

Director, Centre for Labour Market Research

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Introduction

In preparing this report, I have read, understood and complied with the Federal Court of Australia Practice Note CM 7 regarding Expert Witnesses in Proceedings in the Federal Court of Australia.

I have previously attached at Appendix A of my original report a summary of my training, study and experience which has allowed me to acquire specialised knowledge in relation to the subject matter contained in this report.

This response seeks to answer several questions raised by Prof Borland concerning my report related to proposed changes to industry awards, specifically those pertaining to the following (the Relevant Industries):

- the retail industry;
- the cafe and restaurant industry; and
- the hairdressing and beauty industry.

I have reproduced the substantive parts of Prof Borland's report in full with my responses to his comments in red bold type. I note that although Prof Borland's report purports to cover "retail, cafe and restaurant; and hairdressing and beauty industries" his report relates almost entirely to the café and restaurant industries

Comments of Prof Borland (as originally numbered)

7. A summary of the main conclusions in my report is as follows. In my opinion:
- (a) The previous studies of the wage elasticity of employment reviewed by Professor Lewis do not provide evidence that is relevant to the question of how penalty rates affect employment. In addition, there are major methodological problems with each the studies reviewed.
 - (b) The simulation modelling to predict the employment effects of penalty rates that is undertaken by Professor Lewis has major deficiencies and should not be regarded as informative about the likely employment effects of penalty rates. The deficiencies are that:
 - (i) The method over-states the extent to which making decreases to penalty rates would decrease labour costs to employers;
 - (ii) By using a ‘single-day’ model of the labour market, rather than a more appropriate ‘multiple days’ model to represent the effect of penalty rates, the size of the elasticity of employment to a decrease in penalty rates is over-estimated; and
 - (iii) By considering a scenario that assumes penalty rates are being imposed (rather than reduced) the employment effects derived are an upper bound, and hence over-estimate, of the size of the effect of penalty rates on employment.

Together, these deficiencies imply that the modelling by Professor Lewis systematically over-estimates the employment effects from a decrease in penalty rates, and should not be regarded as informative on that issue.

- (c) The inference drawn by Professor Lewis regarding the findings from the study by Rose (2015) – that the study establishes that penalty rates could be reduced without affecting labour supply – is based on a flawed interpretation of the relation between labour supply and wages. Professor Lewis uses data on the average amounts that workers state they need to be paid to work on weekends and public holidays in order to make his

inference. But in the labour market (and in any theoretical model of the labour market) it is the amount that the marginal (last) worker hired needs to be paid to be willing to work on weekends or public holidays that will determine the wage rate that will be paid at that time. Hence, the analysis by Professor Rose, and the interpretation of that analysis by Professor Lewis, are not informative about the wage rate that would be needed to attract the existing workforce to supply their labour on weekends or public holidays.

- (d) Overall, the report by Professor Lewis does not provide information that is valid or valuable for assessing the employment effects of penalty rates.

I disagree with the proposition that my report is flawed for the reasons specified below and regard the conclusions drawn from my analysis as essentially correct.

2] Evidence on the wage elasticity of employment

8. Professor Lewis (pp.22-24) presents two main types of evidence on the elasticity of employment to a change in wages. One type of evidence (aggregate-level) relates to the effect of changes in the average wage on total employment in Australia (including what is described as the ‘controlled experiment’ of the Prices and Incomes Accord). The second type of evidence (minimum wage) relates to the effect of changes to the minimum wage on employment of affected workers in Australia.

My report makes extensive use of the international evidence on labour substitution (and hence elasticity) and the evidence of the limited cross-section studies in Australia which point to a large degree of labour substitution.

The evidence on minimum wage effects is not directly relevant rather it is the estimates of elasticities from minimum wage studies which are relevant.

9. In my opinion, the evidence cited by Professor Lewis is of little relevance to the question of how a change in penalty rates would affect employment. The empirical studies cited examine types of wage changes that are very different to changes in penalty rates, and examine effects on populations of workers who are different to

the workers who are affected by penalty rates. Penalty wages are an extra wage payment that is paid only on specific days of the week and is paid to all workers covered by awards with penalty wage provisions who supply their labour on those days. This contrasts with minimum wages which must be paid on all days, but which only apply to a subset of workers who would otherwise have earned less than the minimum. It also contrasts with average wages which are a measure of the average total cost of hiring labour across the whole workforce. These differences imply that estimates of the effects on employment of changes to the economy-wide average wage or to the minimum wage are unlikely to be informative about the effects of changes to penalty rates.

Prof Borland seems to miss the point that the review of evidence from a range of studies at the economy level, at the firm level and internationally is to support the view that demand for labour is responsive to wages. The precise magnitude of the elasticity for hired workers in retail, cafes, restaurants hairdressing and beauty are not known so a range of plausible estimates is proposed (based on these previous studies), all showing significant reductions in employment due to penalty rates ranging from 25 percent to 150 percent above 'normal' rates.

Also, family and owner/operator labour does not receive penalty rates so substantial substitution is possible if all hired workers (on awards) do receive penalty rates.

Even if it was accepted that the types of empirical studies cited by Professor Lewis were relevant to considering the effect of penalty rates on employment, in my opinion there are problems with those studies that make them of limited value for establishing how a change in penalty rates would affect employment.

I find it hard that to believe that Prof Borland could cast doubt on the wealth of international evidence (not to mention economic theory) that supports the view that the demand for labour falls as wages rise.

10. Professor Lewis (p.22) cites one aggregate-level study by Lewis and Kirby (1987). It is stated that "Modelling by Lewis and Kirby (1987) estimated that the Accord resulted in a growth in real wages of 10 percent less than would have

been the case without it and that this wage moderation raised employment by 8 percent above what it would have been without wage moderation.” In fact, my review of Lewis and Kirby (1987) indicates that:

- (a) Its main finding is that (p.136) “during the period of the Prices and Incomes Accord it is estimated that equilibrium real wages were over 5 percent [my underlining] below what would have been expected”; and
- (b) There is no analysis of effects of the Accord on employment.

My apologies, the correct reference is to Lewis and Kirby (1988) from which this quote is derived.

Lewis, P. and Kirby, M.G. (1988), ‘A New Approach to Modelling the Effects of Incomes Policies’, *Economics Letters*, Vol. 28, pp 81-95.

11. I believe that Professor Lewis may instead be referring to the paper by Lewis and Macdonald (2002) which concludes (p.28) “the total elasticity of demand for labour with respect to real wages is -0.8”; that is, a 10 percent increase in the average wage would cause an 8 percent decrease in total employment. With regard to this study by Lewis and Macdonald (2002), it is important to note that its results are not representative of subsequent aggregate-level studies. For example, the Productivity Commission (2015, p.855) concludes in its summary of evidence from aggregate-level studies on the wage elasticity of employment in Australia that “Estimates of the total elasticity of employment with respect to the average wage range from...-0.3 to -0.8 after one year (or -0.4 to -0.9 if employment is measured in hours worked)”. That is, the estimated elasticity cited by Professor Lewis is at the upper end of available estimates.

The Lewis and MacDonald study came to similar results to previous studies in Australia and overseas. Yes, the range of estimates of elasticity of aggregate demand for labour is -0.3 to -0.8 (slightly higher for hours) with most in the range -.6 to -.8 and our estimates are within this range. In my report I offer a range of plausible values for elasticities.

12. Professor Lewis (pp.23-24) cites several minimum wage studies: Lewis (2005), Leigh (2003), and Daly et al (1998). I address each of these studies in turn.

Two of these (Leigh, Lewis) are minimum wage studies. The other is a study of the elasticity of demand for labour at the national and industry level. I note that Prof Borland has omitted the BLMR study (cited in my report as Lewis 1985) which concludes that demand for labour is highly responsive to wages.

13. The study by Professor Lewis (2005) identifies a minimum wage effect by comparing percentage changes in average weekly earnings and in employment between industries identified as paying the minimum wage (accommodation, cafes and restaurants, health and community services) and the economy as a whole between 1994 and 2004. From this analysis he concludes that a 10 percent increase in real wages would cause a decrease in employment of 7.2 percent. There are several problems with the methodology in this study.

First, there is no justification for the industries that are identified as paying the minimum wage. While the industries chosen by Professor Lewis do have relatively high proportions of workers who are covered by awards, other industries such as retail trade and administrative and support services also have high proportions of workers who are covered by awards; and the total proportion of workers covered by awards who are in the industries classified as paying the minimum wage is only about 10 percent (see data on ‘Employment arrangements by industry’ in Productivity Commission, 2015, p.906).

The choice of accommodation, cafes and restaurants, health and community services as representing the “minimum wage industry” was because it was that chosen for the ACTU submission to the relevant safety net wage case in 2004. It is largely irrelevant that workers in these industries do not make up all or most minimum wage workers. It is relevant that a large proportion of workers in these industries are minimum wage workers as conceded by Prof Borland.

Second, it is possible that employment outcomes in the minimum wage sector and economy-wide between 1994 and 2004 may have been affected differently by

other influences than changes in average weekly earnings – such as relative growth in output. This is not controlled for in the analysis by Professor Lewis. Hence any other influences on employment would be reflected in bias in the estimated effect of wages on employment.

It is not possible to control for all variables in social sciences such as economics that don't lend themselves to experimental methods commonly used in the physical sciences. In this paper differences in growth in employment due to general increases in output in the economy are controlled for. Other reasons for different rates of growth such as differences in consumer tastes are unaccounted for and the extent of any bias due to this are unknown. This would be difficult (to say the least) to control for. Results of this study are taken to be the effects of relative price (wage) differences between employment growth of the two industry groups.

Third, by using a measure of weekly earnings it is possible that the difference in the changes in wages between the minimum wage sector and economy-wide is being driven by changes in hours of work rather than changes in the hourly wage.

It is possible that hours of work is more appropriate than weekly earnings but only if hours worked differ significantly between minimum wage industries and all industries but it is difficult to know in which industry average hours would have increased most.

Fourth, by using persons employed rather than hours worked, and because of the large share of part-time employment in accommodation, cafes and restaurants it is likely that the difference in employment changes between the minimum wage sector and economy-wide is exaggerated. In Table 2 below I show the percentage change in employment and hours worked between 1994 and 2004 (August) for the combination of accommodation and food services and health and community services industries, and all other industries. This does not exactly replicate the exercise undertaken by Professor Lewis (due to different industry classification definitions now available in ABS data on employment by industry); however, as found by Professor Lewis, there is a higher rate of growth in employment in the

minimum wage industries than all other industries. The fact that the difference in employment growth is smaller when the measure of employment is hours of work rather than persons employed confirms the argument that I have made.

Table 2: Employment growth -Replicating the Lewis (2005) study - amended to include Lewis's results

	Borland	Borland	Lewis (2005)
	Employment	Hours worked	Employment
Minimum wage sector	33.2	26.3	29.9
All other sectors	18.0	13.3	22.4
Difference	15.2	13.0	7.5

Sources: Data on employment by industry from ABS, Labour Force, Australia, Detailed, Quarterly, catalogue no.6291.0.55.003, Table 04. Data on hours of work by industry from ABS, Labour Force, Australia, Detailed, Quarterly, catalogue no.6291.0.55.003, Table 11.

I thank Prof Borland for his estimates in Table 2 above. I have included an extra column which contains the results of my 2005 study for comparison. There are two major conclusions to be drawn from this table. First, Prof Borland is correct that differences in hours worked are less than differences in employment but not by a significant margin. Second, The differences calculated by Borland for his representative industries are larger, implying the elasticity of demand for labour is greater than that suggested by Lewis (2005).

- The study by Leigh (2003; see also 2004) compares changes in employment in Western Australia to the rest of Australia between dates before and after six state-level minimum wage increases in Western Australia between 1994 and 2001. Leigh's study concludes that the effect of a 10 percent increase in the minimum wage is to decrease total employment by 2.9 percent. Some aspects of Leigh's methodology have been questioned – primarily whether the labour market in the rest of Australia is a suitable control group for comparing against outcomes in the Western Australian labour market; and whether changes in the Western Australian

minimum wage might have reflected anticipated effects on employment (for example, Watson, 2004). In their review of the international literature on minimum wages, Neumark and Wascher (2006, p.90) argue that Leigh's estimated elasticity of employment is high compared to other studies: "The elasticities that Leigh reports for aggregate employment of young individuals are quite large relative to those found for other industrialized countries, especially given his estimate that only about 4 percent of workers were affected by these changes in the minimum wage. Unfortunately he does not offer a potential explanation for the size of his estimates, and in the absence of such an explanation, the magnitudes of these estimates, at least, might be regarded skeptically."

The study by Leigh has undergone much critical review since its publication but is highly regarded by the economics profession. Leigh's results are mainly of interest to the debate on minimum wages. The major interest from the perspective of my report is that it indicates that employment is responsive to wages.

15. The study by Daly et al. (1998) used workplace-level data to examine how the share of youth hours of employment in total employment was affected by the ratio of youth average weekly earnings to adult average weekly earnings. Daly et al. (1998) estimate that a 10 percent increase in the average wage would cause a 20 percent decrease in employment in the retail sector and a 50 percent decrease in the accommodation sector. These estimates are substantially larger than estimated by other studies; and, in my opinion, must be regarded as reflecting shortcomings of the methodology used. First, the measure of average weekly earnings that is used is derived as the total wage bill divided by hours worked. Hence, in the regression method that is applied, the variable for hours worked is effectively the dependent variable and the denominator of the average earnings explanatory variable, which will induce a spurious negative correlation between those variables. Second, there were 203 out of 410 workplaces included in the study where no youth were employed and average earnings were imputed for these workplaces using data on average earnings at other workplaces with the same size and industry classifications. Given that workplaces that do not employ youth are likely to have had above-average labour costs, the imputation method will have

under-estimated the labour costs of those workplaces, causing the estimated effect of earnings on employment to be biased upwards. Third, the study was not able to rule out the possibility that differences in the average youth earnings by workplace were due to differences in the age composition of the youth workforce between workplaces.

I find it somewhat puzzling that Prof Borland finds so much fault with this report (Daly et al 1998). It was thoroughly peer reviewed by leading academics and government economists within the Productivity Commission; and the subject of a workshop of Australian and international labour market experts, before publication. It is also over fifteen years since its publication and I know of no peer-reviewed journal which has published a substantive criticism of the study.

3] Simulation modelling of the employment effects of penalty rates

Overview

17. Professor Lewis (pp.24-32) presents the results from simulation modelling of the employment effects of changes to penalty rates. He calculates and presents predicted short-run and long-run changes to employment using a range of scenarios.
18. The estimated employment effects that Professor Lewis presents in Tables 4a and 4b are calculated as:
 - (a) **Short run change in employment** = (Percentage change in wages (labour costs) due to change in penalty rates)*(Effect of a one percent change in wages on employment in the short run)

Where: Effect of a one percent change in wages on employment in the short run (SR Elasticity of employment) =

$$e = \sigma \eta / (\sigma s - [1-s] \eta)$$

- (b) **Long run change in employment** = (Percentage change in wages (labour

costs) due to change in penalty rates)*(Effect of a one percent change in wages on employment in the long run)

Where: Effect of a one percent change in wages on employment in the long run (LR elasticity of employment) =

$$-[1 - s]\sigma + s\eta;$$

And:

σ = Elasticity of substitution between paid labour and other inputs;

η = Elasticity of demand for output; and

s = Proportion of total cost of production accounted for by paid labour. In applying this method of calculating the employment effects of penalty rates Professor Lewis makes two main types of assumptions which in my opinion are not valid:

- (1) It is assumed that any change in penalty rates will translate dollar for dollar into a reduction in the wage rate paid to workers (and hence labour costs to the employer).
- (2) The calculation of the elasticities of employment assume that the organisation hiring workers is a profit maximising firm operating for a single time period in an environment with perfectly competitive product and labour markets.

20. I address each of these assumptions below.

Assumption (1)

21. The assumption that any reduction in penalty rates will cause an equivalent decrease in the cost of labour derives from a particular conception of how penalty rates affect labour costs. For this assumption to be correct it is required first, that penalty rates are entirely a regulatory addition to what would otherwise be the equilibrium wage rate in the labour market, and second, that there is no downward adjustment in the non-penalty rate component of wages in response to penalty rates. In my opinion both these conditions are unlikely to hold.

22. First, penalty rates are not entirely a regulatory addition to labour costs. Even critics of penalty rates acknowledge that some part of penalty rates is a compensating differential for the disutility of working on weekends or public holidays which are necessary in order to induce sufficient labour supply on those days. Professor Lewis himself (p. 39) implicitly acknowledges this point in citing the study by Professor (2015) which provides estimates of the extra amounts that workers need to be paid to be willing to work on weekends and public holidays. Hence, prior to the imposition of penalty rates, the wage rate on weekends and public holidays would already need to be above the base weekday wage rate. That component would be absorbed into penalty rates that are imposed by regulation, implying that labour costs would not increase by the whole amount of the difference between the regulated penalty rate and the base weekday wage rate. Therefore, the exercise that is performed by Professor Lewis, simulating the effect of imposing penalty rates, and assuming that the imposition of penalty rates would increase labour costs by the same amount, over-estimates the effect of penalty rates on labour costs. For this reason alone, in my opinion, his estimates of the employment effects of removing penalty rates are likely to be a substantial over-estimate.

It is clear from the text of my report that the estimates I present in Table 4a are for the fall in labour demand due to a rise from normal rates of pay to penalty rates of pay. That is, the employment effect assuming a rise in pay of exactly the penalty rate. To the extent that the actual market rates of pay, as determined by supply and demand, for work on Sundays and public holidays might be somewhat greater than the market rate for work in non-penalty time then the estimates are biased upwards.

The results of Rose suggests that some increase in pay would be required to induce those already working in the relevant industries to work on Sundays and Public holidays which would reduce labour demand and, hence, employment. However, the high degree of unemployment among the unskilled and youth in Australia suggests many would be willing to work for non-penalty rates and the employment estimates in Table 4a are appropriate.

23. Second, supposing that some part of penalty rates is a regulatory addition to what would be the equilibrium wage, it is important to take into account that employers have ways to offset this regulatory addition that mitigates the effect on their labour costs. For example, firms can seek to adjust downwards (or adjust upwards more slowly) the base wage rate that workers receive; or workers may be required to exert extra effort or to work extra unpaid time. There are also other explanations for why labour costs may not rise exactly in step with any regulatory addition to wages. For example, to the extent that a higher wage reduces worker quits, it follows that turnover costs to a firm (costs of training and hiring new workers) will be reduced by penalty rates (see Manning, 2015).

There is no evidence that firms lower the base wage to compensate for higher wage costs of penalty rates. Also, the base rates, as are penalty rates, are set by awards not determined by employers. Is there any evidence that employers respond to increased awards and penalties by making employees work harder or do unpaid work? Protective conditions of employment, not just rates of pay, are contained in awards. Efficiency wages, roughly described as paying people extra to improve productivity, may reduce labour costs in individual firms but reduce total employment.

24. More specifically, for the case of restaurant workers in Australia, it does seem that firms have the scope to adjust base wage rates of their workers in a way that allows some offsetting of penalty rates. Figures 1 and 2 present data respectively on the average ordinary time weekly earnings of full-time male employees in the accommodation and food services industry from May 1995 to November 2014, and on ordinary time hourly rates of pay excluding bonuses in private sector jobs in the accommodation and food services industry from September 1997 to June 2015. In each case earnings of the employees in the accommodation and food services industry are expressed relative to the national average. The figures show that there has been a considerable decrease in the relative earnings of these employees. I present

these data not to claim that there has definitely been a downward adjustment in the base rate of pay in the restaurant industry due to penalty rates; but instead to show that there is certainly sufficient flexibility in wages in the industry for that adjustment to occur. To the extent that firms are able to offset regulatory effects of penalty rates this will reduce the extent to which reducing or removing penalty rates will reduce labour costs for firms. The scope for firms to offset any component of penalty rates that is a regulatory addition to wages also implies that the assumption by Professor Lewis that a reduction in penalty rates will bring an equivalent decrease in labour costs will cause his estimates of the employment effects of removing penalty rates to be an over-estimate.

Figures 1 and 2 are not evidence of downward flexibility of wages. They only show that wages have risen by a smaller percentage rate in the accommodation and food industry than in the economy as a whole. It is more likely due to award rates of pay not keeping pace with the non-award sector of the economy during a period of unprecedented economic growth and wages growth from 1992.

Assumption (2)

25. The assumption that the organisation hiring workers is a profit maximising firm operating for a single time period in an environment with perfectly competitive product and labour markets, in my opinion, is questionable in several ways, each of which will cause the estimates made by Professor Lewis to over-estimate the effect on employment of removing penalty rates.

26. In my opinion, the main issue is the specific assumption that the firm is operating for a single time period. Adopting this assumption means that any regulated change in the wage rate applies to labour for the whole of the time period for which the firms is operating. However, this is clearly not the case with penalty rates. Penalty rates involve a differential in the regulated wage between different days; that is, if the regulated wage rate on weekdays is $\$x$, then the regulated wage on a day with penalty rates is $\$x(1+p)$ where p is the percent penalty rate.

To properly study the effect of penalty rates therefore requires having a model of the labour market where a firm operates for at least two days – one day without penalty rates and the other day with penalty rates. In my opinion, adopting this type of model of the labour market leads to quite different conclusions about the effect of penalty rates than the one-day model used by Professor Lewis.

A firm's decision of how many hours to operate, whether to open at all, how many workers to employ etc. on a Sunday or public holiday, are independent of what has already occurred during the rest of the week. The firm has only to decide if the extra revenue received exceeds its extra cost from operating on Sundays or public holidays. In the models in my report the question is what would firms' decisions be if wages were $\$x$ rather than $\$x(1+p)$ on a Sunday or public holiday.

27. The employment effects that happen due to a change to the wage are of two types: a substitution effect; and a scale effect. The **substitution effect** is the change in use of paid labour by a firm that happens because a change in the wage causes a change in the relative cost of using labour compared to other inputs. The **scale effect** is the change in use of paid labour by a firm due to a change in its level of output following a change in the wage rate – for example, when there is a wage increase a firm may have to pass this onto consumers in the form of a higher price, which causes a decrease in demand for the firm's product. The scale effect may involve existing firms changing the amount of paid labour they employ, or it may involve exit by existing firms or entry by new firms, which will also change the level of employment of paid labour. I now discuss in turn the substitution and scale effects on employment due to changes to penalty rates, adopting a model where a firm operates for multiple days.

See below

Substitution effect

28. Paid labour can be substituted for capital or for unpaid labour. The extent to which the substitution effect of penalty rates causes firms to make this adjustment will depend on

(a) the effect of penalty rates on the relative cost of paid labour and the potential

substitutes; and (b) the technological scope for substitution.

See below

29. First, I consider the substitution of paid labour with capital. In my opinion, the critical point here is that capital is an input that a firm uses across all the days it is operating. Hence, a firm decides on the level of capital it will use across the whole week, not on a day-by-day basis. It follows that when a firm considers whether to substitute capital for labour it will consider the relative costs of using paid labour and capital across the whole week. Therefore, the relevant consideration in thinking about the likely extent of substitution of capital for labour due to penalty rates is how those penalty rates affect the average cost of labour across the whole week. This effect is obviously much less than the effect on the relative cost of paid labour and capital on the day on which penalty rates apply. This establishes a critical weakness of the one-day model used by Professor Lewis. It takes the amount by which penalty rates increase the cost of labour relative to capital on the day on which penalty rates apply, and then effectively assumes that this is the amount by which the cost of labour is increased on every day. This assumption is not appropriate for the case of penalty rates. The main conclusion that follows is that penalty rates increase the relative cost of paid labour to capital much less than assumed by Professor Lewis, and much less than in the empirical studies of elasticities of substitution that he describes (pp.26-27) (since all of those studies are about wage changes that apply to every day that firms operate). Hence the estimated change in employment due to substitution of capital for labour will be much less than assumed by Professor Lewis.

A firm's optimal capital stock is determined by the cost of capital (strongly related to the interest rate) and the expected average cost of labour (mostly wages). This is a long-run decision in that once the level of capital stock is established it remains fixed for some time. The firm's decision of how much labour to hire is determined by the cost of employing extra labour. Firms hire extra labour when the value of the extra output produced is greater than the wage. Firms will only increase output if activities, which were not previously profitable, are made profitable.

One of the corner-stones of economics is the Law of Diminishing Returns. This states that each extra worker employed produces less output than the worker previously employed given that all other inputs are held constant. In the case of most service sector businesses such as shop, hairdressing salon or restaurant, for example, if the size of the premises, number of cash registers, tables, counters, or driers etc. remain fixed each successive employee hired (or extra hour worked) will result in a lower increase in output than the one before. Businesses will employ more people (or increase hours of employment) as long as the extra revenue generated exceeds the extra cost of employing them. Therefore, extra output and extra employment requires a fall in labour costs and conversely a rise in labour costs will make otherwise profitable activities no longer profitable so firms hire less people and produce less.

The Law of Diminishing Returns only operates if there is substitution between labour and capital. It applies to the decision of whether to employ extra labour on the day and is independent of employment on other days. The stock of capital is the same no matter what the day.

Second, I consider the substitution of paid labour with unpaid labour. Professor Lewis (pp.23-24) suggests there is scope for this to occur. However, little supporting evidence is provided. Moreover, a Productivity Commission analysis (2015, p.492) concludes that labour supply by owners and family members in the accommodation and food services industry is limited, accounting for 11.6 percent of total labour. What is also important to take into account is that where substitution involves owners and family members increasing their hours of work on days when penalty rates are imposed, they are also likely to decrease their own hours of work and use more paid labour on other days. Hence, taken over a whole week, the effect on employment of hired labour will be more limited than is suggested by only examining the days on which penalty rates are paid.

Family labour and owner/operator labour are willing to undertake work that is “unpaid” in terms of wages but which adds to family income, wealth and consumption through increased revenue for the business. They are vitally important in maintaining the viability and flexibility of small businesses. The figure

of 11.6 percent of total labour is quoted by Prof Borland (no estimates are presented for cafes and restaurants, retail or hairdressing and beauty) in the accommodation and food industries is likely to be an underestimate of their contribution since their share of average hours worked are likely to be in excess of the their share of people employed. Also, the incidence of unpaid labour is likely to be under reported.

As the Productivity Commission (2015, p25) reports:

“Lower penalty rates would also be likely to reduce the incidence of weekend work by small business owner-managers, who often work long hours to avoid high labour costs.”

The decision of owner operators and family of hours worked depends on the opportunity cost of leisure foregone. The opportunity cost of leisure for family labour is the wage that would otherwise need to be paid to hired labour (not accounting for the possibility that family labour might be more productive). Because penalty rates apply on Sundays and public holidays the opportunity cost of leisure is higher on these days and family labour will be used more (substitution of family for hired labour). There is little reason to think that because family labour works on Sundays and public holidays that they will reduce work during the rest of the week. It is more likely that owner operators and family will maintain a pattern of work which maintains their business, family wealth, consumption of goods, service and leisure.

Prof Borland ignores the ability of firms to substitute tasks and people assigned to these tasks. In my report on p24 on I use the example of a café where the owner manager does a whole range of tasks such as keeping the accounts and other paper work, collecting supplies, hiring staff and doing virtually any of the jobs of other staff should the need arise. On a Sunday and public holiday the owner manager is likely to substitute out of most of his/her daily tasks and devote more time to tasks which would normally be done by hired labour such as waiting on table or cooking.

I also consider the example of hair and beauty salons owners can substitute more of their own labour for that of employees when needed. In addition, it would be

expected that less skilled workers, such as apprentices could be substituted, where possible, for skilled hairdressers undertaking certain tasks.

In another example from retail, according to an industry manager, Sundays are effectively a "service-only day", meaning there are no stock deliveries and limited administrative tasks.

"Taking into account the higher Sunday labour costs, Sunday employees engage entirely in selling activities and operating hours are restricted to busy periods to ensure turnover can cover the additional labour cost.

Reduced Sunday penalty rates would allow us to open additional stores and provide more hours of work in existing stores on Sundays, while engaging employees to work beyond purely selling activities."

Sussan Group chief operating officer Barry Barron quoted in the Age 12-13th September 2015.

- 31. In my opinion, applying the appropriate model of a multiple day labour market, it follows that the substitution effect of penalty rates on employment will be much more limited than assumed by Professor Lewis.**

In my opinion the proposition of a high degree of substitution in the modelling exercise is valid.

Scale effect

32. The scale effect on employment at a firm will depend on (a) the extent to which penalty rates affect the price of its output; and (b) how demand for its output responds to a change in its price (and how that change affects the firm's decisions on whether to operate, and if it chooses to operate, how much paid labour it is necessary to hire).
33. Consider the example of removing or reducing penalty rates. The first effect is on the price of output. Reducing penalty rates reduces a firm's cost of production, and hence its profit-maximising price will decrease. By assuming that the product market in which a firm operates is perfectly competitive, it

follows that Professor Lewis is assuming that the entire decrease in costs will be passed onto consumers. However, in a market which is not perfectly competitive, the pass-through of a decrease in costs to prices will not be complete – the firm will decrease the price of its output by less than the decrease in its costs. While not wanting to make a judgement on the exact degree of competition in the restaurant market, it seems safe to say that this is not a perfectly competitive market. Individual restaurants will have some degree of market power due to product differentiation. That product differentiation might derive from their location; style or quality of cuisine; or brand name. By assuming a complete pass-through of any decrease in costs to prices, Professor Lewis is therefore over-estimating the size of any scale effect on employment due to a reduction in penalty rates.

Monopolistic competition is a market structure in which barriers to entry are low, and many firms compete by selling similar, but not identical, products.

The hairdressing, cafes and restaurant industries are classic example of this as evidenced by IBISWorld industry profiles (Gargano 2015a,b,c):

“The hairdressing industry is highly fragmented and diverse, with a large number of small, independent operators. It is, therefore, characterised by a low level of market share concentration. Some chains exist within the industry, but usually with no more than two or three shops. A number of franchises have also emerged recently, which is a trend that is expected to continue. It is estimated that the top four players hold a combined market share of just over 10.0 percent. Low industry barriers to entry, little regulation and licensing, and the relatively small capital outlay required to commence operations will continue to be the main factors contributing to low market share concentration.”

and, with respect to cafes:

“ The café and coffee shops industry has a low level of market share concentration, with only one company holding over 5.0 percent of the market. The industry is highly fragmented and traditionally

encompasses a large number of single-establishment owner-operated cafes. This fragmentation is not expected to change much over the next five years. Consumers are expected to drive the trend towards smaller operators and niche providers, continuing to choose independent cafes and coffee shops over chain stores.

While independent operators dominate the market, there are some franchised coffee shop or cafe operators in the industry. The most prominent chains include the Coffee Club, Gloria Jean's Coffees and Michel's Patisserie. While these chains operate a number of stores, they have limited market power and are unable to influence the industry in terms of price or product trends. The strong independent coffee culture in Australia, which places an emphasis on quality over quantity, has restricted the influence and growth of chain stores.”

and , with respect to restaurants:

“The restaurants industry is characterised by a low level of market share concentration. The industry is highly fragmented, with a large number of single establishments and owner-operated restaurants. IBISWorld expects that the industry's four largest players account for less than 5.0 percent of revenue, and this is not expected to change over the next five years. The industry is comprised mainly of small businesses, with the majority employing fewer than 20 people. Very few businesses in the industry employ more than 100 people.

The low level of concentration in the industry has resulted in fierce competition among operators. The industry has low barriers to entry and owners typically compete on price, menu offerings, cuisine and customer service. Owner-operators are prominent in the industry, putting a significant proportion of their own time and effort into running their restaurants. This discourages widespread expansion as owners may not be able to effectively manage multiple locations.”

In monopolistic competition although there is some product differentiation, the high degree of competition forces price to equal average cost of production.

Therefore, any savings in costs such as lower wages will be passed on in lower prices.

The retail sector has a very diverse mix of market structures. For instance much of the sector is characterized by oligopolies such as the Wesfarmers and Woolworths groups where union membership is high and enterprise bargaining the main form of wage determination. It also includes many small businesses producing a range of products and services which, although having a degree of product differentiation are operating in a highly competitive environment. Awards apply mainly to these small businesses.

It is to be expected that the award sector in retailing is characterized by monopolistic competition and therefore lower wage costs will be passed on in lower prices.

34. The second effect is on the demand for output due to a decrease in price. To consider this effect properly it is again necessary to adopt a multiple-day model. One way in which demand for output can be affected is where a firm keeps the same opening days, and due to the price decrease, sells more output across those opening days. (Note that, since restaurants generally appear not to charge different prices by day of the week, any effect on prices due to reducing penalty rates, will be spread over the whole week.) With regard to this channel of effect, it is important to note that some of the increased demand for output from firms in the industry where penalty rates have been reduced will be expenditure that would otherwise have been made on products from firms in other industries. In this sense, the effect on employment in the restaurant that Professor Lewis calculates is partial equilibrium. It ignores the reduction in employment in other industries that will occur when there is an increase in employment in the restaurant industry. effect on prices due to reducing penalty rates, will be spread over the whole week.) With regard to this channel of effect, it is important to note that some of the increased demand for output from firms in the industry where penalty rates have been reduced will be expenditure that would otherwise have been made on products from firms in other industries. In this sense, the effect on employment in the restaurant that

Professor Lewis calculates is partial equilibrium. It ignores the reduction in employment in other industries that will occur when there is an increase in employment in the restaurant industry. A second way in which demand for output can be affected is where the reduction in penalty rates makes it profitable for a firm to open on a day on which it did not previously open. The size of this effect will depend on the extent to which consumers who were not able to buy from a firm on the day on which it was not open instead shifted their demand to the same firm on another day, or shifted their demand to an alternative firm which was already open on that day. For example, if when a firm opens for an extra day, all of the consumers who now buy from it on that day previously bought from another firm on that day, then there is a zero net effect on employment. There does not appear to be empirical evidence regarding the extent to which consumers are able to shift their demand in the cafe and restaurant industry. Note, however, that the capacity to switch to buy from the same supplier on a different day does not exist in the one-day model adopted by Professor Lewis. If a firm is open then a consumer can buy from it, and if it is closed then the consumer cannot buy. By not taking account of the scope for consumers to switch to buy from the same firm on a different day, the approach taken by Professor Lewis will over-estimate the size of the scale effect on employment when penalty rates are reduced.

Prof Borland suggests that any decrease in the wage rate on Sundays and public holidays would result in price falls spread over the whole week. To the extent that firms are maximizing profits on each day of the week reducing prices below what they are now with no decrease in costs (on normal days) would mean firms would no longer be maximising profits which is counter intuitive. If firms open on Sundays and public holidays (it may be unprofitable to open at all for some businesses) they will arrange their production, mostly their deployment of labour, in order to maximise profits (minimise losses). Reduced penalty rates will result in firms restructuring their production arrangements, including increased use of labour to maximize profits under new set of prices. There is no reason to believe that the profit maximizing behaviour during the rest of the week would need to change.

Prof Borland suggests that an increase in employment in restaurants (and I presume in retail and hairdressing and beauty which again he does not discuss) will result in less expenditure on the products of other industries and hence reduced employment. While this may be correct it is difficult to determine without a complex general equilibrium model of the economy. My analysis relates only to the relevant industries which are the subject of my report.

I addressed the issue of production and demand shifting in my report. Studies (see, for instance Cardoso et al 2012) have considered the substitution of labour over times of the day or week as a result of differences in labour costs. For instance, firms may redirect production to those periods when overtime or penalty rates are not paid in order to reduce labour costs. The degree of substitution has been found to be small (Cardoso et al) for industries as a whole and the possibilities for reorganising production in most service sector industries like those in questions would appear to be low.

It is possible that some ‘demand shifting’ of output takes place to weekdays and away from Sundays and public holiday demand by consumers. For instance, if a restaurant or hairdresser is closed on Sunday, or charges higher prices, customers may shift their demand to a weekday. In this case the impact of penalty rates is to reallocate employment to weekdays. Unfortunately there are little available data on this and so it is difficult to predict what the effect of ‘demand shifting’ is on employment. Nevertheless, it is highly likely that the inconvenience imposed on customers of not being able to purchase goods and services at times they prefer does impose costs and would reduce demand. Anecdotal evidence on this, which is supported by Prof Quiggin in his evidence to this case (p7, para 20 (iv)), informs us that many establishments close on Mondays presumably because consumer demand is low on that day. This implies that for consumers the day of the week is important and that demand shifting to other days to make up for Sunday and public holiday closing is low.

Summary of discussion on assumptions (1) and (2)

35. Professor Lewis (p.28) concludes that: “we can reasonably assume that σ , the

elasticity of substitution for hired labour, is between 1 and 3; however, for completeness an elasticity of 0.5 is included in the analysis to account for the possibility that there is a lesser degree of substitution than suggested by the above studies; and η , the price elasticity demand for the relevant industries is between -0.1 and -3.”

36. In my opinion, these are not reasonable assumptions to make. By failing to use a multiple-day model of the labour market, where penalty rates apply on a subset of days of the week, and instead using a model that treats penalty rates as applying on every day, Professor Lewis has over-estimated the size of substitution and scale effects on employment due to a change in penalty rates. In my opinion, the elasticity of substitution in the restaurant industry is likely to be lower than the lowest size assumed by Professor Lewis, and the price elasticity of demand is likely to be at the lower end of the values assumed by Professor Lewis. It follows that I regard the entire set of Professor Lewis’s simulated predicted effects on employment – generated using higher values of the elasticity of substitution and price elasticity of demand – as unreliable and as a poor guide to what the actual employment effects of changing penalty rates would be.

There will always be some disagreement about the size of the relevant elasticities of substitution and of demand. Nevertheless, on the basis of published studies and knowledge of the relevant industries I believe the values used in the modelling are reasonable and in any case I present a wide range of plausible values in the simulations. Whatever, the conclusion is that penalty rates have reduced employment in the relevant industries

Imposing or removing penalty rates?

37. Even putting aside the problems I have just described, in my opinion, there is another major problem with the way that Professor Lewis undertakes the simulations reported in Tables 4a and 4b.
38. The formulae for predicting changes in employment when a change in wages occurs are intended to be applied for relatively small changes in wage rates. This is

because – once large changes in wages are considered – exactly the same absolute change in wages will convert into very different percentage changes in wages depending on whether an increase or decrease in wages is assumed.

39. To illustrate this point, consider two examples. First, suppose that the base wage rate is \$100 and the penalty rate is \$1. Then adding the penalty rate would increase the wage rate by 1 percent; and removing penalty rates would decrease the wage rate by 0.99 percent. With a relatively small change in the wage rate, the percentage changes from increasing and decreasing the wage are very close. Second, suppose that the base wage rate is \$100 and the penalty rate is \$100. In this case adding the penalty rate increases the wage rate by 100 percent (100 to 200), whereas removing the penalty rate would decrease the wage rate by 50 percent (200 to 100). Now, with a relatively large change in the wage rate, the percentage changes from increasing and decreasing wages differ substantially. As these examples illustrate, the percentage change in the wage rate will always be largest when the case of imposing penalty rates is considered, and the lowest when the case of removing penalty rates is considered. It follows that the employment effects of penalty rates will always be calculated to be largest when the case of imposing penalty rates is assumed, and lowest when the case of removing penalty rates is assumed. In other words, the assumption that penalty rates are being imposed gives an upper bound predicted employment effect of penalty rates, and the assumption that penalty rates are being removed gives a lower bound on the predicted employment effect of penalty rates. In this case, of course, it is known that the change under consideration is to reduce penalty rates.

This problem of interpretation of elasticities (whereby the value of the responsiveness to price depends on whether this is a price rise or price fall) is well known and is usually addressed by use of the so-called mid point formula. In Prof Borland's example increasing the wage by 100 percent (from \$100 to \$200) would be a percentage rise of $100/150 = 67$ percent (150 is the midpoint of 100 and 200). A decrease in the wage from \$200 to \$100 would also be a percentage fall of $100/150 = 67$ percent. So under this formula there is only one value for a price rise or fall of the same absolute magnitude. This is not exactly obvious and of course the actual penalty wage rise is 100 percent of the non-penalty rate and the actual non-penalty rate is 50 percent of the non-penalty rate. To see how this affects the estimated

employment effects see the examples below.

40. In his application of the formulae for predicting changes in employment in the cafe and restaurant industry, Professor Lewis has assumed that penalty rates are being imposed; that is, he has assumed that the change in the wage rate due to penalty rates is 50 percent on Sunday (100 to 150) and 150 percent on public holidays (100 to 250). For example, consider the top row of simulations of employment effects of penalty rates for the cafe and restaurant industry in Table 4a (where $\sigma = 0.5$ and $\eta = -0.5$). The 'Sunday' LR and SR predicted employment effects are calculated as:

$$\text{LR: } (50)*(-1-.691)*(0.5)+(.691)*(-0.5) = -25\%; \text{ and}$$

$$\text{SR: } (50)*((0.5)*(-0.5))/((0.691)*(0.5)-[1-.691]*(-0.5)) = -25\%.$$

For Sundays using the mid point formula the mid point of 100 and 150 is 125. The percentage change in wages is $50/125 = 40$ percent. Plugging 40 into the above formulae yields the employment fall of 20 percent

$$\text{LR: } (40)*(-1-.691)*(0.5)+(.691)*(-0.5) = -20\%; \text{ and}$$

$$\text{SR: } (40)*((0.5)*(-0.5))/((0.691)*(0.5)-[1-.691]*(-0.5)) = -20\%.$$

Notice that this is not the actual percentage change in employment but the percentage change for the mid point of the change in employment. Clearly, this is relatively difficult to put over so the change in employment relative to the initial employment level has been used in the modelling. The estimates using the midpoint formula will be a little less than that in the modelling.

41. Suppose instead that the case of removing penalty rates is considered. Now the change in the wage rate on Sunday will be -33.3 percent (from 150 to 100). Therefore the 'Sunday' LR and SR predicted employment effects become:

$$\text{LR: } (-33.3)*(-1-.691)*(0.5)+(.691)*(-0.5) = +16.65\%; \text{ and}$$

$$\text{SR: } (-33.3)*((0.5)*(-0.5))/((0.691)*(0.5)-[1-.691]*(-0.5)) = +16.65\%.$$

Adopting the mid point formula, the percentage change for a wage rise is the same

as for a wage fall, that is 40 percent. Thus,

$$\text{LR: } (40) * (-1 - .691) * (0.5) + (.691) * (-0.5) = -20\%; \text{ and}$$

$$\text{SR: } (40) * ((0.5) * (-0.5) / ((0.691) * (0.5) - [1 - .691] * (-0.5))) = -20\%.$$

The result is the same as before but in this case this is not the actual percentage change in employment but the percentage change for the mid point of the change in employment.

42. The size of effect of the change in penalty rates has been reduced by one-third by switching from the assumption of imposing penalty rates to the assumption of removing penalty rates. The same conclusion applies to every predicted employment effect for the cafe and restaurant industry for Sunday that is reported in Table 4a. Switching from the assumption of imposing penalty rates to removing penalty rates would reduce the size of the estimated employment effect by one-third.

If the above formulae were to be used to show the employment effects of removing penalty rates the results would be significantly higher than for those using the midpoint formula. However, the modelling relates to the effect of the imposition of penalty rates and not removal.

43. The same point applies to the 'Public holiday' LR and SR employment effects for the cafe and restaurant industry reported in Table 4a. In this case Professor Lewis applies a percentage wage change of 150 percent. Switching to the assumption of removing penalty rates (250 to 100) implies a wage change of -60 percent. It follows that, considering the case of removing penalty rates would reduce the predicted size of employment effects by three-fifths. For example, the top row in Table 4a for the cafe and restaurant industry reports employment effects of negative 75 percent. Switching to the case of removing penalty rates would reduce the size of the employment effect to 30 percent.

See above

44. In my opinion, there are several conclusions from this discussion. First, by considering the case of imposing penalty rates, Professor Lewis has applied the approach that gives the upper bound of estimated employment effects due to

penalty rates. Second, switching to consider the case of removing penalty rates would substantially reduce the predicted effects of penalty rates – by one-third on Sunday and by three-fifths on public holidays. Third, it is important to note that this approach by Professor Lewis is compounding the other sources of over-estimates of employment effects of penalty rates that I have already described.

45. As a final point, in evaluating the results from the simulations by Professor Lewis presented in Tables 4a and 4b it is also necessary to keep in mind that these results are the effects of imposing the entire current amounts of penalty rates. Hence, even putting aside all the other reasons why I have shown that Professor Lewis has over-estimated the employment effects of penalty rates, the employment effects reported in the Tables over-states the effect of the changes in penalty rates being proposed. Considering the case of Sunday in the cafe and restaurant industry, and for example applying the assumptions made by Professor Lewis in the top row of his analysis for that industry (elasticity of substitution equal to 0.5 and price elasticity of demand equal to -0.5), when the proposal to reduce penalty rates from 50 percent to 25 percent is used in doing the simulation, the effect on employment is -8.33 percent (lower bound) or -12.5 percent (upper bound) rather than -25 percent.

These calculations should have used the midpoint formula, in which case the numbers would be larger. The table contains a range of estimates and in my view represent a very conservative scenario. Prof Borland is very selective in the choice of numerical values of elasticities. The ones he chooses to use are very modest given the literature. Also, the penalty rates in cafes and restaurants are the smallest of all the relevant industries. In retail, hair dressing and beauty penalty rates are a much higher percentage of standard rates and would be expected to have greater impacts on employment. Prof Borland does not discuss these industries.

It is worth repeating that my modelling relates to the employment effects of imposing penalty rates and as such the conclusions are valid – large increases in wages over and above standard rates (up to 250 of the standard wage rate) would have had large impacts on employment.

Whether the Lewis, Borland or midpoint estimates are adopted the employment effects of penalty rates are significant.

Conclusion on simulation analysis

46. In my opinion, the simulation modelling of the employment effects of penalty rates undertaken by Professor Lewis has major deficiencies and should not be regarded as informative about the likely employment effects of penalty rates. First, the method used over-states the extent to which changes to penalty rates will affect labour costs. Second, by using a 'single-day' model of the labour market, rather than a more appropriate 'multiple days' model to represent the effect of penalty rates, the size of the elasticity of employment to penalty rates is over-estimated. Third, by considering the case of imposing penalty rates the employment effects derived are an upper bound on the size of the effect of penalty rates on employment, and not relevant to the proposal under consideration which is to reduce penalty rates.

I believe I have addressed these conclusions in my responses above. The imposition of penalty rates has reduced unemployment in the relevant industries significantly.

4] Relevance of penalty rates

47. Professor Lewis (pp.32-39) questions whether penalty rates are relevant to the modern Australian economy. He describes the historical origins of penalty rates; describes current patterns of religious affiliation and church attendance; describes time spent on leisure activities by day of the week; and summarises findings from a report by Rose (2015).

Time spent on leisure

48. In my opinion, Professor Lewis under-states the extent of differences in time use between weekdays and weekends in his analysis of data from the Australian Bureau of Statistics 2006 Time Use Survey. From data presented in Table 5 he concludes (p.38) 'Clearly for most working on weekends would not significantly impose on their time spent on sport and outdoor activities'. There are three

problems with this statement. First, by expressing differences in units of minutes, the actual extent of difference between leisure activity on weekdays and weekends is obscured. For example, the average amount of time spent on sport on the weekends may only be 17 minutes more than on weekdays, but in percentage terms this is a difference of 85 percent. Second, from the data presented by Professor Lewis it appears that the population is already spending most of its free time on weekends on recreation and leisure activities: for males 332 minutes out of 403 free minutes; and for females 273 minutes out of 346 free minutes. This suggests that it would not take much increase in working time and consequent reduction in free time before there was a constraint on recreation and leisure activities. Third, it is important to recognise that the data reported in Table 5 are averages, and hence disguise significant heterogeneity in the population. Underlying the averages will be, for example, some people who are not doing much sport, and others who may be doing a lot of sport. Any judgement about how extra work on weekends would affect time spent on recreation and leisure activities can, therefore, really only be made based on individual-level information about time spent on recreation and leisure activities. For example, if it is the people who are not doing sport who are currently working, then it may be that any increase in work on weekends could only occur by reducing the time spent on recreation and leisure by those who are playing sport; whereas if it is those who are playing sport who are also working on weekends, there might not be implications for time spent on recreation and leisure activities.

While the majority may work standard hours and the weekends are the traditional periods for “socialising, recreation, participating in sport and worship”, this is not true for a large minority of workers. The ABS Time Use data are averages and the fact that these averages are relatively low is indicative that large numbers of people are not participating in an activity. This is true for sport participation and worship. For someone working Monday to Friday full-time no doubt weekends are important and it would be onerous to also work weekends. However, just because people work weekends does not mean they do not have “free time” or time for “socialising, recreation, participating in sport and worship”. Rather, since these workers are mostly employed part-time they even have more time to spend on these activities than those working full-time.

For some, such as students, weekends may be virtually the only time they can do a full shift and for others, like parents with young children, the weekdays may well be the best time for socialising or being with family.

The ABS Time Use data are averages and of course individuals may have quite different uses of time throughout the week than these averages. However, a low average does indicate that large proportion of the sample, from which the average is calculated, have low amounts of time devoted to that use.

I make the point that for those working Monday to Friday full-time having to work on weekends will disrupt their leisure patterns and leisure time. However, for many working weekends allows them to earn income from paid employment while meeting commitments to unpaid activities as study or household duties.

Report by Professor Rose

49. In my opinion, Professor Lewis makes incorrect inferences from the study by Rose (2015). The study by Professor Rose applies a discrete choice-based survey method to elicit information on the minimum wage at which workers are willing to supply their labour on weekends and public holidays. Professor Lewis (p.39) concludes from the Rose study that:

“What the results of Rose (2015) indicate is that there is some additional value attached to time on Sundays and public holidays above that attached to weekdays. While, generally, most employees would require a premium to work on Sundays and public holidays, particularly if the two days coincide, the current penalty rates are higher than those required to attract employees to work on those days.”

50. In my opinion, this conclusion by Lewis is incorrect and based on a flawed representation of how labour markets operate. There are three stages to my argument for this conclusion.

51. First, the findings reported by Rose (2015, pp.39-43) are about the average

hourly wage that survey respondents indicate they would need to be paid to be willing to work on different days. That the data reported are on the average hourly wage is implied directly by the modelling approach of estimating the hourly wage required on different days through the estimated coefficient on dummy variables for those days in a regression model. It is also directly acknowledged by Rose – for example, in stating that “On average, employees under the Restaurant Industry Award 2010 are willing to accept an average \$21.50 per hour (highlighted light blue in the table) to work during a normal work week” (p.41).

52. Second, labour supply in any market will be determined by the marginal wage (the wage that needs to be paid to attract the last worker hired into work) rather than the average wage paid. It follows that for any existing group of workers, it is the marginal wage, and not the average wage, that determines the wage that must be paid for all those workers to be willing to work. For example, suppose there are 5 potential workers for whom the minimum wage at which they are willing to supply their labour is respectively \$1, \$2, \$3, \$4 and \$5 per hour. For this group of potential workers the average wage at which they are willing to work is \$3 per hour. But suppose an employer offers this average wage of \$3 per hour. Only 3 workers will be willing to work; that is, the 3 workers who need to be paid \$1, \$2 or \$3 per hour. In order to be able to hire all 5 workers it would be necessary instead to pay the marginal wage of \$5 per hour; that is, only by paying \$5 per hour will the wage be such that all potential workers are willing to work.

53. Third, it follows that the conclusions reached by Professor Lewis are incorrect. Professor Lewis examines the data on the average wage that workers state they need to be paid and argues that these data show that currently penalty rates are higher than necessary to attract the existing workforce. But it is invalid to draw conclusions on the level of penalty rates necessary to induce any level of labour supply from data on the average wage that workers state they require to be willing to work. It is only valid to draw inferences on the size of penalty rates required to maintain the existing workforce on weekends and public holidays from data on the minimum wage that the marginal (final) worker hired needs to

be paid to be willing to work.

It makes sense to work with the average values of wages workers are willing to accept since this may be interpreted as the wage at which an average worker will accept to work a shift. Obviously, some workers would require more, and others less to work certain shifts and this is modelled in Rose's report. The necessary wages follow a distribution which is assumed to be normal and therefore unbounded. However, the standard deviation is small so for a normal weekday the average hourly rate is \$21.50 and the standard deviation is \$ 3.60. Also, the estimated average wage that workers are willing to expect for most days/times reflects the actual current award rate, providing validity to the results given the fact that these are the hourly pay rates which the respondents have revealed to accept in the labour market. The respondents are actually working so are representative of the labour supply. In addition, there are people currently unemployed who would be willing to work at lower rates than those currently paid.

5 Economy-wide consequences of penalty rate

54. Professor Lewis (pp.39-40) discusses the effect of removing penalty rates on specific groups: business; workers; and consumers.

55. Professor Lewis argues (p.39) that "because the industry is very competitive ...most cost savings are eventually passed on to consumers via lower prices", and therefore "businesses would benefit but not necessarily greatly". The degree of competition in a market depends on the number of firms supplying to the market and on the extent of product differentiation between those firms. In making his argument Professor Lewis cites the large number of small firms in the industry, but ignores the extent of product differentiation – for example, due to cafes and restaurants having different locations, supplying different types of food and having different reputations and brand names. Professor Lewis also does not provide any empirical evidence on the extent of competition. Hence, in my opinion, while it is reasonable to expect that any decrease in costs would cause some decrease in prices, the conclusion by Professor Lewis that most cost savings would be passed onto consumers, must be regarded as speculative.

As I have argued above the restaurant and café and hairdressing and beauty industries are examples of monopolistically competitive industries with some

product differentiation but many firms and freedom of entry and exit. In monopolistically competitive markets in equilibrium price equals average costs of production implying that falls in costs are passed on in lower prices. Retail (which together with hairdressing and beauty receive no comment from Prof Borland) there are large oligopolies but many highly competitive firms paying award rates. These firms would also be characterised by monopolistic competition and hence would pass on falls in costs to consumers.

56. Professor Lewis argues (p.40) that reducing penalty rates would benefit those who get to work extra hours that are available and allow some workers to better match their hours of work to their lifestyles. He also argues (p.40) “Some employees, although their *wage rate* may fall, may even receive higher *total earnings* without penalty rates since the potential to work a greater numbers of hours will increase”. When a worker’s wage rate is reduced then the only way that their total earnings can increase is if there is a more than proportionate increase in hours worked. That is, workers who have penalty rates removed would need a more than proportionate increase in their hours of (previously penalty rate covered) work in order for their earnings to increase. This implies that the elasticity of labour demand with respect to employment would need to be elastic (where labour demand is defined as wage elastic if there is a more than proportionate increase in employment in response to a decrease in wages). I have already described why, in my opinion, Professor Lewis has failed to establish that there would be any effect on employment from reducing penalty rates. Moreover, even most of the simulated effects of the removal of penalty rates by Professor Lewis in Tables 4a and 4b (and certainly those that lower values of the elasticity of substitution and price elasticity of demand) show a less than proportionate effect of a change in wage rates on employment. This is shown in Table 3. Where the wage elasticity is less than -1 in absolute value are cases where the wage elasticity of demand is inelastic, and where the value is greater than -1 in absolute value are cases where the wage elasticity of demand is elastic. Hence, even on Professor Lewis’s own analysis, there is no possibility that total earnings would rise on average for workers whose penalty rates are decreased. The only way in which total earnings would rise for ‘*some employees*’ would be by other

workers experiencing even larger decreases in their total earnings.

Table 3: Wage elasticity of employment implied by cases studied by Professor Lewis in Table 4a

	Elasticity of substitution	Product price elasticity	Labour share	SR wage elasticity	LR wage elasticity
Retail					
	0.5	-0.1	0.581	-0.150	-0.267
	0.5	-0.5	0.581	-0.5	-0.5
	0.5	-1	0.581	-0.704	-0.790
	1	-0.1	0.581	-0.160	-0.477
	1	-0.5	0.581	-0.632	-0.709
	2	-1	0.581	-1.265	-1.419
Beauty					
	0.5	-0.5	0.829	-0.5	-0.5
	0.5	-1	0.829	-0.853	-0.914
	1	-0.1	0.829	-0.118	-0.253
	1	-0.5	0.829	-0.546	-0.585
	2	-1	0.829	-1.093	-1.171
Cafes/ Restaurant					
	0.5	-0.5	0.691	-0.5	-0.5
	0.5	-1	0.691	-0.763	-0.845
	0.5	-2	0.691	-1.037	-1.536
	1	-0.1	0.691	-0.138	-0.378
	1	-0.5	0.691	-0.591	-0.654
	1	-1	0.691	-1	-1
	1	-2	0.691	-1.527	-1.691
	2	-0.5	0.691	-0.650	-0.963
	2	-1	0.691	-1.182	-1.309
	2	-2	0.691	-2	-2

Note: Calculated using the formulae for SR and LR wage elasticity of employment; and applying data on labour shares from Tables 1 to 3 in Lewis (2015).

Prof Borland has not shown the full range of elasticities in my analysis. I present

these in the table below. In what I consider to be plausible scenarios the elasticity of demand for labour is greater than 1 in absolute magnitude and these are reflected in the full range of estimates found in Tables 4a and 4b in my report.

Table Wage elasticity of employment

Retail	s	σ	η	LR e	SR e
	0.581	0.5	-0.1	-0.27	-0.15
	0.581	0.5	-0.5	-0.50	-0.50
	0.581	0.5	-1	-0.79	-0.70
	0.581	1	-0.1	-0.48	-0.16
	0.581	1	-0.5	-0.71	-0.63
	0.581	1	-1	-1.00	-1.00
	0.581	2	-0.5	-1.13	-0.73
	0.581	2	-1	-1.42	-1.27
Hairdressing & Beauty	s	σ	η	LR e	SR e
	0.821	0.5	-0.1	-0.17	-0.12
	0.821	0.5	-0.5	-0.50	-0.50
	0.821	0.5	-1	-0.91	-0.85
	0.821	0.5	-2	-1.73	-1.30
	0.821	1	-0.1	-0.26	-0.12
	0.821	1	-0.5	-0.59	-0.55
	0.821	1	-1	-1.00	-1.00
	0.821	1	-2	-1.82	-1.70
	0.821	2	-0.5	-0.77	-0.58
	0.821	2	-1	-1.18	-1.10
	0.821	2	-2	-2.00	-2.00
Cafes & Restaurants	s	σ	η	LR e	SR e
	0.691	0.5	-0.1	-0.22	-0.13
	0.691	0.5	-0.5	-0.50	-0.50
	0.691	0.5	-1	-0.85	-0.76
	0.691	0.5	-2	-1.54	-1.04
	0.691	1	-0.1	-0.38	-0.14
	0.691	1	-0.5	-0.65	-0.59
	0.691	1	-1	-1.00	-1.00
	0.691	1	-2	-1.69	-1.53
	0.691	2	-0.5	-0.96	-0.65
	0.691	2	-1	-1.31	-1.18
	0.691	2	-2	-2.00	-2.00

I maintain that some workers who already work on Sundays and public holidays could get more hours and be better off. People who cannot get work at all

because there is insufficient demand for hired labour will be unambiguously better off.

57. Professor Lewis (p.40) argues that “The biggest beneficiaries from removing penalty rates would be consumers.” This is on the basis of them paying lower prices and having extra opportunities for shopping. I have already described my reservations about the effects on prices claimed by Professor Lewis. With regard to extra opportunities for shopping, as I have noted above, this will depend on the effect of any price change on product demand and on consequent changes to opening hours. Professor Lewis does not provide any empirical evidence on this issue, and therefore, the size of this effect remains uncertain.

I notice this is the first time Prof Borland has mentioned shopping in his report.

The exact effect of abolishing or reducing penalty rates is uncertain but in a competitive environment decreased costs will be passed on in lower prices, increased demand and higher employment particularly for youth for whom employment opportunities are poor. In my view he misses the point that consumers will be given the opportunity to eat out, have a hair or beauty treatment or make greater use a range of retail services on Sundays and public holidays. The effects will be beneficial to business operators, their families, consumers and workers (including those currently unemployed) as they are better able to balance work and leisure.

The impacts if penalty rates were to be reduced, rather than removed altogether, will be the same in substance but will differ in degree. The larger the fall in penalty rates the greater the economy-wide impacts.