

How Unreasonable Are Long Working Hours?*

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Melbourne Institute Working Paper No. 1/02

ISSN 1328-4991

ISBN 0 7340 1525 9

February 2001

* This paper draws, in part, on research funded by the Australian Chamber of Commerce and Industry. The authors also thank Simon Freidin and Rosanna Scutella for their assistance with the preparation and/or interpretation of some of the data reported in this paper. The views expressed in this paper represent those of the authors and not necessarily the views of the Australian Chamber of Commerce and Industry. All remaining errors are those of the authors.

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Abstract

This paper examines whether there has been a significant trend towards longer working hours in Australia, and whether working arrangements involving long hours are unreasonable. Recent years have seen growing concern with the number of hours many Australians are spending in paid employment. While average hours worked per week have remained relatively stable since the early 1980s, the incidence of both long and short workweeks has increased. Overall, the conclusion is that working long hours is on many criteria, far from unreasonable. It would appear that the majority of long hours workers prefer such arrangements. Attempts to interfere with such preferences through regulation will thus, in most instances, either lead to workers feeling worse off or fail to have any affect on worker behaviour. It is recognised that there are many instances where the hours being worked by individuals are having serious adverse impacts on health and family life and hence may sensibly be judged unreasonable. Nevertheless, it seems that such cases are best dealt with on a case by case basis and not through the imposition of across-the-board limits on hours, which may make far more people worse off than it makes better off.

1. Introduction

This paper examines whether there has been a significant trend towards longer working hours in Australia, and whether working arrangements involving long hours are unreasonable. Recent years have seen growing concern with the number of hours many Australians are spending in paid employment. While average hours worked per week have remained relatively stable since the early 1980s, the incidence of both long and short workweeks has increased.

For many observers, such trends are further evidence of both continued polarisation in the Australian labour market and a general decline in working conditions among Australian workers. ACIRRT (1998, p. 23), for example, in a paper prepared for the Australian Council of Trade Unions (ACTU), identified a number of undesirable consequences that they argued arise from the erosion in working-time standards more generally, and from the extension of working hours in particular. These include the declining quality of working life; increased stress, fatigue and isolation, giving rise to adverse health consequences; a general deterioration in the quality of life outside of work as a result of both the encroachment of work on family, community and social life, and a decrease in the degradation of common leisure time; and an effective cut in pay as a result of the breakdown between hours worked and hours paid for.

Such concerns have led to a widespread call from both academic commentators and the union movement for the re-regulation of working time arrangements in Australia (e.g., ACIRRT 1998, 1999; Buchanan and Bearfield 1997; Burgess 1998; Campbell and Brosnan 1999; Healy 2000). It was thus against this background that in 2001, the ACTU submitted a claim to the Australian Industrial Relations Commission seeking to vary a number of industrial awards with a view to ensuring, among other things, that employers cannot require an employee to work “unreasonable hours” (ACTU 2001).

This paper is not directly concerned with the relative merits of this case. Rather, it takes a step back to consider the more general questions of how significant is the trend towards longer working hours in Australia, and how unreasonable are working arrangements involving long hours? The paper is thus primarily about the number of hours worked. It is not concerned with other aspects of working time arrangements identified in the ACTU claim as potentially contributing to unreasonable hours (such as the times at which those hours are

worked, the intensity with which they are worked, or the amount of control employees have over those hours). For expositional purposes, 'long hours' is defined here as in excess of 48 hours per week. This is consistent with the Working Time Directive introduced by the European Union in 1993 that, among other things, effectively required all member States to legislate for a maximum length working week of 48 hours.

The paper comprises five main sections, each of which addresses one of the following five questions; (1) How many Australians work more than 48 hours per week? (2) Are more Australians working these long workweeks than in the past? (3) To what extent are long hours inconsistent with worker preferences? (4) To what extent are long hours paid for and has the incidence of so-called 'unpaid' overtime been rising over time? (5) Are jobs involving long hours necessarily 'bad' or undesirable jobs?

2. How Many Australians Work More than 48 Hours in a Week?

The usual starting point for assessing the extent to which Australians are working long hours is data on hours actually worked collected each month by the Australian Bureau of Statistics (ABS) as part of its regular Labour Force Survey. As documented in the first panel within Table 1, in the August 2001 survey, 19 per cent of Australian workers reported working more than 48 hours in all jobs during the survey week.¹ This represents over 1.7 million Australians and hence provides prima facie evidence for the claim that many Australians do indeed work very long hours.

Note, however, that the distribution of working hours varies markedly with employment status. Unsurprisingly, long hours working is most prevalent among employers and own account workers (that is, the self-employed) and least common among employees. This distinction is especially relevant given the ACTU's Reasonable Hours Test Case would presumably only apply to employees. Further, it needs to be recognised that there are significant numbers of employees not covered by awards. Most obvious here are the many owner managers of incorporated businesses who are treated by the ABS as employees and many of the more highly paid salaried employees, groups who it can be expected will be over-represented among the population of long-hours workers.

¹ The Labour Force data are collected on an 'any responsible adult' basis, meaning that in many cases respondents will be answering on behalf of other members in the household, which will be the source of at least some measurement error.

Table 1: Composition of Employed Workforce by Weekly Hours Worked (%), August 2001

<i>Employment status</i>	<i>Zero hours^a</i>	<i>Less than 35 hours</i>	<i>35-40 hours</i>	<i>41-48 hours</i>	<i>49 hours or more</i>
<i>All jobs – Actual Hours</i>					
Employee	4.9	33.8	31.2	13.4	16.7
Employer	3.6	23.2	14.2	10.1	48.9
Own account worker	6.7	37.3	18.6	8.7	28.7
All employed ^b	5.0	34.0	29.2	12.8	19.0
<i>Main job – Actual hours</i>					
Employee	4.9	34.9	31.7	13.0	15.4
Employer	3.6	24.3	14.4	9.9	47.8
Own account worker	6.9	22.4	19.0	8.1	27.1
All employed ^b	5.0	35.1	29.7	12.4	17.7
<i>All jobs – Usual hours</i>					
Employee	0.2	28.7	43.4	11.7	15.9
Employer	**	20.2	18.0	9.7	52.0
Own account worker	0.6	34.1	24.2	9.4	31.7
All employed ^b	0.4	29.1	40.4	11.4	18.8

Note: a Includes, for example, persons on recreation leave, on sick leave, on strike, and those who did not work any hours during the reference week because of shift arrangements.
b Includes contributing family workers.
* Relative standard error too high (greater than 50%) to be of any practical use.

Sources: ABS, *The Labour Force, Australia, August 2001* (cat. no. 6203.0), and unpublished data purchased from the ABS.

Table 1 also makes a distinction between all jobs and the main job, revealing that a small proportion—about 7 per cent—of the long-hours workers are only working these hours because they choose to work in more than one job. This could be the result of either a strong preference for income relative to leisure or because of the inability to secure a full-time job, but it is clearly not the result of requirements imposed by individual employers.²

Finally, the data reported in Table 1 distinguish between actual hours worked in a specific week and usual hours worked. Most discussions focus only on the former, largely because prior to April 2001 the ABS did not collect data on usual hours of work on a regular basis. However, it is generally the latter concept that is considered the more appropriate. There are,

² These findings are consistent with data from the 2000 Survey of Employment Arrangements and Superannuation, which reveal that 7.3 per cent of all employees held two or more jobs during the week prior to interview.

for example, many workers recorded as working zero hours in a week because they are on leave, and hence, as noted by Campbell (2001), it can be expected that actual hours will understate usual hours of work. Campbell, however, goes further, arguing that actual hours will cause the incidence of long hours working to also be understated. This does not follow. There may, for example, be other persons who occasionally work very long hours for some short-term need, but for whom such hours are not typical. Rather differently, some shift workers will be recorded as working long hours in particular weeks when those hours averaged over longer periods are not especially long at all. This is confirmed by the data presented in the final panel of Table 1. A comparison of data on usual hours worked with actual hours worked for August 2001 reveals that actual hours overstate the incidence of short workweeks, but do not understate the incidence of long workweeks. Indeed, the incidence of long hours working is slightly reduced when using data on usual hours worked, especially among employees.

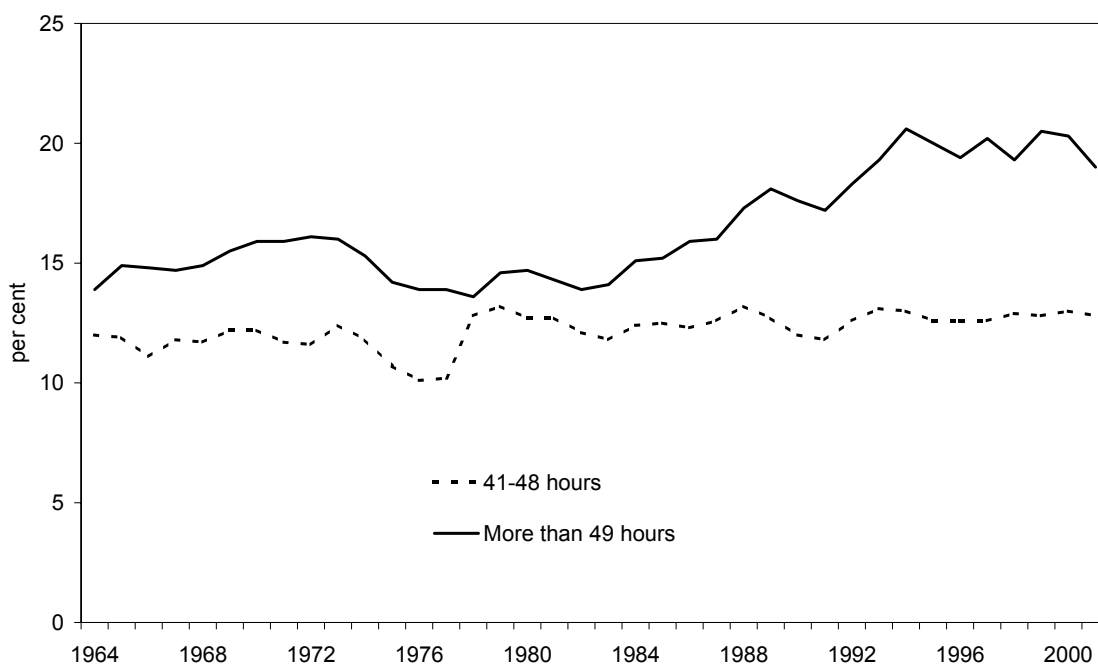
Overall, it is clear that a considerable number of Australians do work very long hours on a regular basis—about 1.7 million in August 2001. Nevertheless, the number who might be affected by award regulation is considerably less than this. Only about 1.3 million of these persons are employees, of whom a small proportion are only working long hours because they are working more than one job. More importantly, a much larger proportion is not covered by award regulation. The best guess is that there are perhaps around one million Australian workers who would potentially be affected by award regulation designed to limit the number of hours usually worked to a ceiling of 48 hours per week.

3. Are More Australians Working Longer Hours?

This section looks at trends in the incidence of long-hours working. In Figure 1, therefore, data on the proportions of persons working long hours are presented which cover the period 1964 to 2001. Note that the data relate to hours actually worked in all jobs. As can be seen, the incidence of persons working hours that are above what is generally regarded as ‘standard’ but below what may be thought ‘unreasonable’—that is, between 41 and 48 hours—has not changed much. The share of employment accounted for persons working such hours has varied between 12 and 13 per cent for most of the last two decades. In contrast, the incidence of persons working in excess of 48 hours per week has clearly been rising. After fluctuating at around 14 to 16 per cent for most of the 1960s and 1970s, the number of

persons reporting working more than 48 hours per week rose from a low of 13.6 per cent in 1978 to 20.6 per cent by 1994.

Figure 1: The Incidence of Long-Hours Working, 1964 to 2001 (% of all employed persons)



- Notes:
1. All figures are for August of each year.
 2. Due to a change in survey methodology, data collected prior to 1978 are not strictly comparable to data collected in later years. This change, however, appears to have had very little impact on the estimated share of employed persons working more than 48 hours each week.

Sources: ABS, *Labour Force, Australia*, Cat. Nos. 6203.0 and 6204.0, various issues.

Perhaps the most interesting feature of Figure 1, however, is what happened after 1994. Many commentators have explicitly connected the extension in working hours for many full-time employees to changes in the regulatory environment, and especially the decentralisation of bargaining structures (e.g., ACIRRT 1998, 1999; Burgess 1998; Campbell and Brosnan 1999; Heiler 1998). Enterprise agreement making, however, only became widespread after the introduction of the *Industrial Relations Reform Act 1993*. Further, many of the other regulatory reforms often highlighted as impacting on working time, such as non-union enterprise agreements and formalised individual agreements, only assumed any significance after the introduction of the *Workplace Relations Act 1996*. It thus follows that if decentralised bargaining were a factor behind the erosion of working time standards, then the trend towards long hours would have been expected to accelerate in the latter half of the 1990s. In fact, by 1994 the upward trend in the incidence of long hours working had come to

a halt. The growth in the incidence of long hours working would thus appear to be entirely concentrated into the period 1983 to 1994.

Further confirmation for this can be found in Table 2 which, following the OECD (1998), presents the results of a decomposition of the change in average annual hours actually worked by employed persons since 1983 into three components: (i) the change in the average annual hours worked by full-time employees; (ii) the change in the average annual hours worked by part-time employees; and (iii) the change in the share of part-time workers in total employment.³ Over the entire period considered, average annual hours worked has not changed. This is the result of two forces pulling in opposite directions. Annual hours worked by full-time workers have increased by close to 7 hours per annum, which is almost exactly offset by an increase in the share of the workforce employed part-time.

Table 2: Decomposition of the Sources of Change in Average Annual Hours of Employment, 1983-2000

<i>Period</i>	<i>Change attributable to:</i>				
	<i>Overall change in hours</i>	<i>Change in hours of FT workers</i>	<i>Change in hours of PT workers</i>	<i>Change in PT employment share</i>	<i>Interaction term</i>
1983-2000	0.0	6.7	0.4	-6.6	-0.5
1983-1994	1.8	10.2	0.2	-7.8	-0.8
1994-2000	-3.5	0.3	1.0	-4.9	0.1

Note: The annual hours concept is the total number of hours worked over the year divided by the average number of persons employed. Total hours are derived by obtaining an estimate of average weekly hours worked from monthly data and multiplying it by 52. Because of the variability in the timing of Easter and hence its impact on public holidays, data for the month of April in each year have been excluded from the calculations.

Source: Calculations by the authors based on ABS data from the monthly Labour Force Survey.

Now consider how different the trends are for the two sub-periods reported. Between 1983 and 1994 the pattern was much the same as described above, but with an even more dramatic rise in hours worked by full-time workers. In contrast, since 1994, and despite very strong rates of output growth, there has been almost no growth in the number of hours being worked

³ The decomposition is calculated from the following identity:

$$\Delta h_t = (1-s_0)\Delta hf_t + s_0\Delta hp_t - \Delta p_t(hf_0-hp_0) + \Delta s_t(\Delta hp_t - \Delta hf_t)$$
 where h is total hours worked, hf is full-time hours, hp is part-time hours and s is the share of part-time employment in total employment.

by full-time employees, and hence continued increases in the part-time employment share have meant that total average annual hours of employment have been falling.

It is interesting to conjecture what might explain these changing trends. In an earlier commentary on the growth in average hours being worked by full-time workers during the 1980s and early 1990s, Wooden *et al* (1994) posited three possible explanations. First, changes in the composition of employment favouring jobs traditionally associated with long hours of work. Second, a general shift in bargaining power towards employers as a result of rising competitive pressures and greater job insecurity. Third, the impact of the Accord, by restraining real wages growth, in providing workers with incentives to use increased hours as a mechanism for obtaining higher incomes, whether it be immediate, via taking second jobs, or deferred, through enhanced promotion prospects. Only the latter explanation now appears to be consistent with the evidence.

The first explanation is most easily disposed of. As reported in Table 3, over the period 1986 to 1995, the proportion of persons working long hours increased in all major occupation categories.⁴ More importantly, the size of the increase in each occupation was not correlated with its share in total employment. Indeed, if the proportion of persons within each occupation category working in excess of 48 hours had remained unchanged at its 1986 level, the changes in the occupational composition of employment that occurred over the next decade would actually have led to a slight fall in the overall incidence of long-hours workers. In other words, none of the increase in the incidence of long-hours work over this period was the result of changes in the occupational composition of employment (at least not when calculated at a very broad level of occupation aggregation).

The second explanation is also less than convincing. As remarked upon elsewhere (for example, Wooden 2000, 2001), there is very little evidence that levels of perceived job security among Australian workers have been deteriorating over time. Indeed, the opinion poll data collected regularly by Roy Morgan Research reveal that since 1975 the proportion of workers who believe that their own jobs are at risk has not changed much. Fears about job loss vary with the economic cycle, but the long-term trend has been largely time invariant. This explanation can thus help explain the short-term cyclicity in hours of work, but it

⁴ The choice of this time period is dictated by major changes in the occupation classification system used by the ABS in both 1986 and 1996. Nevertheless, it is roughly coincident with the period when the incidence of long-hours working was rising.

cannot explain both the sustained rise in long-hours working in the 1980s and the cessation and possible reversal of that trend over the last 5 to 6 years.

Table 3: The Incidence of Long Hours Working and the Occupational Composition of the Workforce, 1986 and 1995

Occupation group	August 1986		August 1995	
	% working >48 hours	Employment share (%)	% working >48 hours	Employment share (%)
Managers and administrators	48.8	11.0	51.6	10.4
Professionals	19.1	12.0	26.5	14.1
Para-professionals	9.9	5.9	14.2	5.8
Tradespersons	15.6	16.8	22.5	14.5
Clerks	3.7	17.3	7.6	16.6
Salespersons and personal service workers	12.7	13.8	13.2	16.7
Plant and machine operators and drivers	17.8	7.9	24.6	7.2
Labourers and related workers	8.4	15.4	10.3	14.8
TOTAL	15.9	100.0	20.0	100.0

Source: ABS, *The Labour Force, Australia* (cat. no. 6203.0), August 1986 and August 1995 issues.

This leaves what is essentially a supply-side explanation. Working hours rose during the 1980s and early 1990s in response to the lack of other mechanisms for obtaining increases in income. Once real (hourly) wages again began to rise, these pressures subsided. In other words, changes in hours worked may reflect nothing more than movements along a backward-bending labour supply curve. This too, however, seems overly simplistic. Real earnings for full-time employees, for example, did not fall much during the 1980s, suggesting that labour supply must have been increasing. A theory is therefore needed to explain why the labour supply curve might have been gradually shifting to the right during this period. One answer is suggested by the work of George (1997) that, in turn, drew on work by Brack and Cowling (1983). In explaining trends in working time in the USA, he argued that in the absence of sustained increases in real wages, workers found it necessary to work longer hours in order to satisfy increased preferences for goods and services, preferences that are continuously being stimulated by product marketing and advertising.

It is thus this latter explanation that is held out here as offering most potential for explaining the recent Australian experience. It helps explain why working hours rose when real wages were held in check in the 1980s and it also helps explain why, when real wages began rising

again, the number of hours being worked levelled off but did not actually fall, at least not for quite a long time. Of course, if this explanation is accepted, then it also follows that most persons working long hours are not being forced to work more than they would wish, which in turn must surely undermine the hypothesis implicit in the ACTU submission that long hours are also unreasonable. To investigate this further, the next section considers empirical evidence on worker preferences for hours.

4. Are Long Hours Inconsistent with Worker Preferences?

A major problem that those in favour of the imposition of statutory limits on working hours have to confront is that survey evidence in Australia generally suggests that there is a high degree of consistency between hours currently being worked and preferred working hours. A much cited source of data here is the employee component of the 1995 Australian Workplace Industrial Relations Survey (AWIRS), conducted at a time when the incidence of long hours working appears to have reached its zenith. Data from this survey are presented in Table 4 and reveal a high degree of satisfaction with hours worked among full-time employees. About three-quarters of all full-time employees covered by this survey indicated that they were ‘happy’ with the hours they usually worked, and only one in five expressed both dissatisfaction and a preference for fewer hours.⁵ Of course, the likelihood of expressing a preference for fewer hours rises with the number of hours worked. Nevertheless, even among those reporting usually working in excess of 48 hours each week, the majority still reported that they were content with the hours they were working.

Table 4: Working Hours Preferences by Hours Usually Worked: 1995 AWIRS (% of employees)

<i>Hours usually worked each week</i>	<i>Happy with hours</i>	<i>Prefer fewer hours</i>	<i>Prefer more hours</i>
35-40	81.9	11.0	7.1
41-44	79.3	15.8	4.8
45-48	68.7	26.5	4.8
49+	58.6	38.1	3.3
All full-time workers	74.8	19.5	5.6

Note: Data are weighted to the population of employees persons who usually work 35 hours or more at non-farm workplaces with 20 or more employees.

Source: 1995 AWIRS employee survey.

⁵ The employee component of the AWIRS sample was restricted to employees working at non-farm workplaces with 20 or more employees.

More recent information about working hours preferences comes from an ABS survey—the 2000 Survey of Employment Arrangements and Superannuation. Involving a sample representative of almost all residents of private dwellings aged 15 to 69 years, in this survey employees were asked to consider which of the following options they would choose if it were possible to change the number of hours they usually worked in their main job: (i) to work less hours and earn less; (ii) to work more hours and earn more; or (iii) to work the same amount as currently. This question thus sought to obtain data about working hours preferences that were directly conditioned on the expected impact on earnings of any variation in hours worked. Note that some respondents were uncomfortable with any of these options, and indicated a preference to work fewer hours for the same pay. Persons responding in this way were coded as such, but this response category was not an explicit option available on the showcard (otherwise it could be expected that virtually all respondents would choose this category, given work is inferior to leisure).

The key findings from this survey are summarised in Table 5. As can be seen, just 8.3 per cent of full-time employees reported that they would prefer to work fewer hours *and* receive less pay. Indeed, the proportion desiring more hours and more pay was about double the proportion willing to work less and receive less pay. Further, this proportion is only slightly higher than the comparable proportion responding to a similar question asked in a 1986 ABS survey—7.3 per cent of full-time employees in that survey indicated that they would prefer to work less hours and receive commensurately less pay. Even among those working very long hours (in this case, more than 50 hours per week), the proportion indicating a desire to work fewer hours for less pay was relatively small—just 11.5 per cent.

Overall, such findings suggest a high degree of consistency between worker preferences and actual working time arrangements, with only a minority of long-hours workers indicating a clear preference for fewer hours. Unfortunately, these data cannot support such a strong conclusion. The reason for this is that it may be unfair to expect those workers whose hours of work subsequently exceed the hours they expected to work when hired, to expect a pay cut to accompany a reduction in hours. Indeed, as reported in Table 5, almost 17 per cent of persons working more than 50 hours per week indicated a preference for fewer hours for the same pay. However, very little can be made of such responses given the way the question was constructed. Indeed, if this option had been made explicit, the expectation is that most workers would have opted for it. These data thus do not help identify working hours

preferences for those persons who are working additional hours that they had not expected and for which no extra pay is forthcoming. To get at this issue it would, therefore, be helpful to determine the incidence of unpaid hours and whether it has been rising over time.

Table 5: Preferred Hours of Work, Main Job: 2000 Survey of Employment Arrangements and Superannuation (% of employees)

<i>Hours usually worked each week</i>	<i>More hours for more pay</i>	<i>Same hours for same pay</i>	<i>Fewer hours for less pay</i>	<i>Fewer hours for same pay</i>
35-40	19.1	68.8	6.6	4.2
41-50	15.6	65.5	9.6	8.4
51+	8.3	62.4	11.5	16.9
All full-time employees	16.4	66.8	8.3	7.4
All part-time employees	35.1	59.4	3.6	1.5
All employees	21.9	64.6	6.9	5.7

Note: Rows may not sum to 100 due to incomplete information from persons who had not actually worked during the 4 weeks prior to interview.

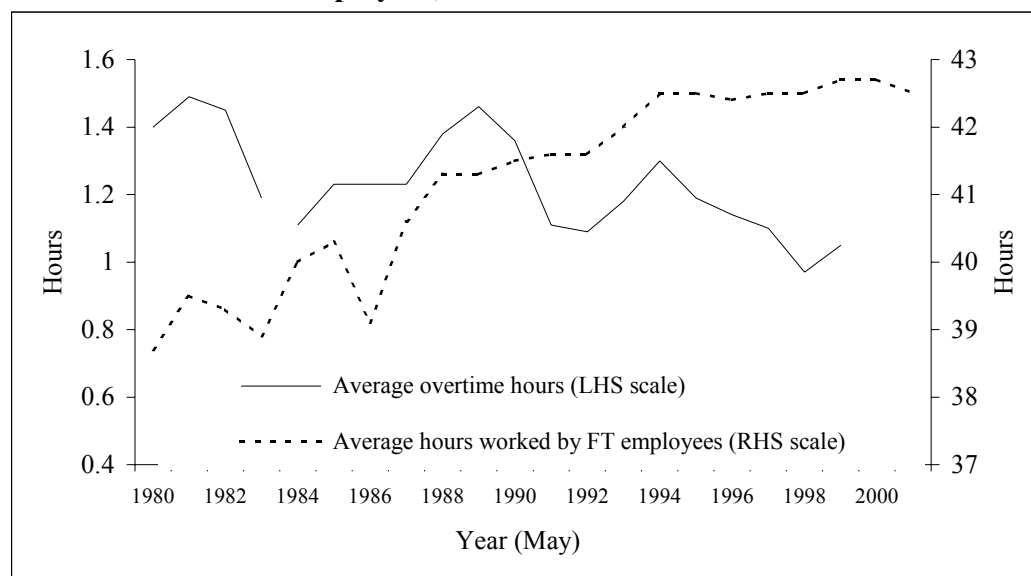
Source: ABS, *Employment Arrangements and Superannuation, Australia, April to June 2000* (Cat. No. 6361.0), Table 10.

5. Has the Incidence and Level of Unpaid Overtime Been Rising Over Time?

Recent survey evidence suggests that many Australians believe that, in recent years at least, they have been working increased levels of unpaid working time. For example, in a small nation-wide survey conducted by UMR Research (2001) for the ACTU, 42 per cent of full-time workers reported that they were working more unpaid overtime than five years earlier.⁶ Such findings are consistent with the juxtaposition of falling levels of paid overtime against rising levels of hours worked among full-time employees, depicted in Figure 2. Neither of the two data sources used in Figure 2, however, actually enables the extent of total overtime to be calculated. Overtime hours per se are never identified in the Labour Force Survey, while the overtime data collected from employers as part of the Job Vacancies and Overtime Survey are restricted only to overtime hours that are paid for on an hourly basis.

⁶ The total sample numbered just 600 persons. Assuming the sample was representative of all persons aged 18 years plus, then the total sample of full-time workers would only number around 270 to 280.

Figure 2: Trends in Paid Weekly Overtime and in Average Weekly Hours Worked by Full-time Employees, 1980–2001



- Notes:
1. The overtime data do not relate to employees employed in the agriculture, forestry and fishing industries.
 2. A break in the overtime hours series occurred in November 1983 when the former survey of employers registered to pay payroll tax was replaced by a new employer-based survey with a broader scope.

Sources: ABS, *Overtime* (Cat. No. 6330.0), various issues; ABS, *Job Vacancies and Overtime* (Cat. No. 6354.0), various issues; ABS, *The Labour Force, Australia* (Cat. No. 6203.0), various issues.

One source that does provide data on both paid and unpaid overtime hours is the Working Arrangements Survey (WAS), a household survey conducted by the ABS on four occasions to date—1993, 1995, 1997 and 2000.⁷ A summary of data from each round of this survey is reported in Table 6. The latest round of the WAS reveals that about one-third of all employees in November 2000 worked overtime hours on a regular basis, where overtime is defined as “work undertaken which is outside, or in addition to, ordinary working hours of the respondent in their main job, whether paid or unpaid”. This table also suggests that, despite the marked growth in business activity over this period, the underlying trend in the incidence of total overtime working has been quite flat. The incidence of overtime working rose between 1993 and 1995 before falling back to close to the 1993 levels in 1997 and 2000.

⁷ The Working Arrangements Survey is conducted in conjunction with a round of the regular monthly Labour Force Survey.

Table 6: The Incidence of Regular Overtime Working, 1993 to 2000: Working Arrangements Survey (% of employees)

<i>Employment status / Sex</i>	<i>1993</i>	<i>1995</i>	<i>1997</i>	<i>2000</i>
Full-time				
Male	41.9	46.3	44.2	43.5
Females	33.5	36.8	35.5	35.9
Persons	39.0	43.0	41.2	40.8
Part-time				
Male	10.7	10.2	9.7	12.1
Female	11.2	12.5	12.0	12.1
Persons	11.2	12.0	11.4	12.1
Total				
Male	39.2	42.9	40.3	39.3
Female	24.6	26.8	25.3	25.4
Persons	32.8	35.7	33.6	33.0

Sources: ABS, *Working Arrangements, Australia* (ABS Cat. No. 6342.0), August 1993, August 1995, August 1997 and November 2000 issues

It thus appears that the incidence of overtime working has not changed much during the 1990s. But are these data disguising diverging trends in the incidence of paid overtime and so-called unpaid overtime? As reported in Table 7, the WAS data reveal that about 38 per cent of those employees who usually work overtime indicated, with respect to their most recent episode of overtime, that they had received additional payment for each hour of overtime worked. This leaves 62 per cent, or about 20 per cent of all employees, who regularly worked overtime hours for no immediate pay benefits (though they may have received time off in lieu of such payment).

Table 7: Overtime Payment Method by Sex, 1993 and 2000: Working Arrangements Survey (% of employees regularly working overtime)

<i>Overtime payment method^(a)</i>	<i>1993</i>	<i>1995</i>	<i>1997</i>	<i>2000</i>		
				<i>Males</i>	<i>Females</i>	<i>Persons</i>
Paid overtime	40.1	40.7	37.7	43.2	29.7	38.4
Included in salary package	(b)	19.7	22.7	23.6	16.8	21.2
Time off in lieu	5.3	4.0	3.8	3.6	8.1	5.2
Unpaid overtime	53.4	34.8	34.9	27.6	44.3	33.5
Other arrangements	1.1	0.8	0.9	2.0	1.1	1.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Notes: a As determined by the method of remuneration that applied to the most recent episode of overtime.
b Not separately identified. Presumably included under 'unpaid overtime'.

Source: ABS, *Working Arrangements, Australia* (ABS Cat. No. 6342.0), various issues.

Note here the use of the word *immediate*. This was intentional. While earnings may not vary across pay periods with variations in overtime hours worked, this does not mean that the overtime hours are not remunerated. Salary packages, for example, may be negotiated which build in some expectation of regular hours beyond the minimum specified in an award or agreement, and which may compensate the employee accordingly. According to the data presented in Table 7, for example, about 21 per cent of employees working regular overtime in 2000 indicated that overtime pay had been included in their salary package, while a further 5 per cent stated that they received time off in lieu.

This, however, still leaves a substantial number of employees—around 850 000 in November 2000—who were not aware of any compensation that they had received for the overtime hours they had worked. Such workers are described by the ABS as working unpaid overtime. Again, caution needs to be exercised when interpreting the data in this way. It is suspected that there still may be many persons who are reasonably well paid on the implicit assumption that their job will involve hours of work beyond the contractual norm, but which were not explicitly accounted for when negotiating the annual salary package. Included here, for example, would be many highly paid managers and many persons working in the better-paid professions (for example, doctors and lawyers).

Leaving aside the issue of whether or not unpaid overtime hours as recorded by the ABS are in fact unpaid, what do these data imply about the veracity of the claim that unpaid overtime hours is trending upwards in recent years (as suggested for example in the attitudinal survey data reported in UMR Research 2001)? The figures in Table 7 do not suggest an upward trend. Indeed, the trend is downwards. This is even clearer when the incidence of reported unpaid overtime working is calculated as a proportion of total employment. A summary of these data for the years 1995, 1997 and 2000 is provided in Table 8.⁸ In August 1995, persons working unpaid overtime hours represented 12.4 of all employees. By August 1997 this had fallen to 11.7 per cent and by November 2000 to 11.0 per cent. Moreover, this decline is just as marked among full-time employees, the group for whom the assumed growth in unpaid working is supposed to be most problematic (see, for example, UMR Research 2001).

⁸ Unpaid overtime hours were not explicitly identified in the 1993 Working Arrangements Survey.

Critics might point to data from the 2000 Survey of Employment Arrangements and Superannuation (SEAS), which suggest a greater fraction of employees work unpaid hours. According to that survey, almost 18 per cent of employees worked extra hours during the previous four weeks that were not compensated.⁹ Such criticisms are justified. The WAS does indeed understate the incidence of unpaid overtime. There are at least two reasons for this. First, the measure of the incidence of unpaid work from SEAS is based on at least one hour being worked without pay during the last four weeks. In contrast, the measure from the WAS is based on whether or not the most recent period of overtime was remunerated. Second, the WAS data relate to *regular* overtime hours and not irregular overtime hours.¹⁰ The SEAS data thus probably provide a better guide to the level of ‘unpaid’ working. Note, however, that just because the WAS data understates the level of unpaid working, it does not follow that the trends identified in the WAS data are affected.

Table 8: The Incidence of Regular ‘Unpaid’ Overtime Working, 1995, 1997 and 2000 (% of employees)

	1995	1997	2000
Males			
Full-time employees	13.6	12.5	12.1
Part-time employees	2.5	2.5	2.5
All employees	12.5	11.4	10.8
Females			
Full-time employees	17.1	16.5	16.1
Part-time employees	5.6	6.4	5.0
All employees	12.4	12.2	11.3
Persons			
Full-time employees	14.8	13.9	13.5
Part-time employees	4.9	5.5	4.3
All employees	12.4	11.7	11.0

Source: ABS, *Working Arrangements, Australia* (ABS Cat. No. 6342.0), various issues, and unpublished data purchased from the ABS.

To summarise, there are sound reasons to be sceptical about claims that unpaid overtime is both widespread and trending upwards. At most, less than one-in-five employees work any

⁹ See ABS, *Employment Arrangements and Superannuation, Australia, April to June 2000* (cat. no. 6361.0).

¹⁰ While the ABS publication includes a figure for overtime being worked on an irregular basis, which is quite small – just 120 800 persons – the WAS does not actually measure the extent of irregular overtime. The relevant question simply asks whether an employee, in their main job, “works overtime either paid or unpaid on a regular basis”. Persons who answer ‘yes’ are then asked how many hours of overtime do they usually work in a week, and it is at this point that persons working irregular overtime hours are identified.

so-called unpaid overtime during a four-week period, and as stressed earlier, in many of these cases it is doubtful whether 'unpaid' is an accurate descriptor of the working arrangements that actually apply. Even more clearly, there is no evidence that the incidence of unpaid working time has been trending upwards, at least not since the mid-1990s.

6. Are Jobs Involving Long Hours 'Bad' Jobs?

The final issue canvassed in this paper is how the characteristics of these long-hours jobs compare with other jobs. As noted earlier, the majority of Australians working long hours appear to want to work these hours, suggesting the possibility that these jobs have other compensating characteristics that make them relatively attractive. Indeed, and as shown in Table 9, on most indicators, the sorts of jobs held by long-hours workers appear to possess many desirable characteristics. Compared with persons working more 'standard hours' (that is, between 35 and 40 hours each week), persons working very long hours (in excess of 48 per week) are more likely to have jobs which offer greater levels of control over their work situation, greater task variety and greater job security, are more likely to receive job-related training, and are generally more satisfied with their jobs. They also tend to be relatively well paid. Even when their gross earnings are deflated by the large number of hours they report working, long-hours workers still earn more on average than those working between 35 and 40 hours per week do. This reflects both their concentration in high-paying occupations and the fact that they are indeed paid for most hours they work.

On the downside, working long hours does appear to be relatively more stressful. Almost 54 per cent of long-hours workers described their jobs as stressful, which compares with only 39 per cent of persons working standard hours. Stress per se, however, is not necessarily harmful to individuals. Instead, the consequences of stress depend on how individuals cope with it. A better measure of the impact that stress might have on workers, and how that impact varies with hours of work, is provided by examining the incidence of stress-related illness among employees.

Table 9: Working Hours and Work-related Outcomes: 1995 AWIRS

<i>Outcome</i>	<i>1-34 hours</i>	<i>35-40 hours</i>	<i>41-48 hours</i>	<i>49 hours or more</i>
Average hours usually worked	18.3	38.3	44.2	58.2
Perceived influence over ^(a) (% of employees):				
Type of work	52.4	57.6	65.3	75.1
How work is done	70.0	76.3	82.6	86.6
Start and finish times	41.4	46.2	54.6	64.1
Pace of work	63.0	68.5	70.5	75.3
Way workplace is managed or organised	24.4	29.2	36.8	49.4
Decisions that affect them	34.4	38.1	46.0	55.7
Job satisfaction ^(b) (%):				
Overall job satisfaction	69.2	58.6	61.7	65.1
Chances of promotion	16.7	17.2	21.5	29.3
Treatment by management	52.7	40.6	42.4	45.2
Safety and comfort of conditions	63.4	61.4	61.3	63.0
Job insecurity ^(c) (%)	25.8	31.5	28.1	26.7
Job stress ^(d) (%)	28.1	36.6	45.7	57.3
Job variety ^(e) (%)	23.9	32.7	30.7	27.6
Satisfaction with hours ^(f)	74.0	82.1	74.4	58.2
Received training ^(g) (%)	56.2	60.9	63.6	64.1
Fairness of pay ^(h) (%)	55.4	43.3	43.0	45.0
Hourly pay (\$)	18.9	15.0	16.3	16.1

Notes: Data are weighted to the population of employees persons who usually work 35 hours or more at non-farm workplaces with 20 or more employees.

** and * denotes statistically significant difference from employees working 35 to 44 hours who do not prefer fewer hours at the 0.01 and 0.05 levels (2-tailed test), respectively.

a Percentage who said they had 'some' or 'a lot' of influence with listed issues.

b Percentage who said they were 'satisfied' with listed job characteristics (those who were coded as 'not relevant to me' were classified into the 'not satisfied' group).

c Percentage who agreed with statement: 'I feel insecure about my future here'.

d Percentage who agreed with statement: 'My job is very stressful'.

e Percentage who agreed with statement: 'I do a lot of different tasks in my job'.

f Percentage who indicated that they were happy with the hours they worked.

g Percentage who indicated their employer had provided work-related training during previous 12 months.

h Percentage who agreed with statement: 'I get paid fairly for the things I do in my job'.

Source: 1995 AWIRS employee survey.

Data of this type are available in the AWIRS and suggest that among men at least, the incidence of stress-related illness due to work is not significantly greater among long-hours workers than among those working between 35 and 44 hours each week (see Table 10).

Among the latter, 4.5 per cent reported suffering from a stress-related illness as a result of work over the 12-month reference period. Among men working longer hours, the percentage was only fractionally higher—4.6 per cent—suggesting that stress-related illness is not associated with hours worked. In contrast, women appear to be more susceptible to stress-related illnesses, and moreover, the incidence clearly rises with hours worked. This much stronger association between working time and stress among female employees is not unexpected and almost certainly reflects the double burden female employees face in attempting to combine paid work with their traditional roles in the home.¹¹

Overall, the data reported in Table 9 suggest that long hours workers tend to have relatively desirable jobs, and if long hours per se are a source of dissatisfaction and stress, it is offset by other more positive attributes. That said, part of the explanation for the reasonably high levels of job satisfaction being reported by this group might be the over-representation of managerial and professional employees. Workers in these occupations tend to have the better jobs (better promotion prospects, greater levels of autonomy, greater opportunities for skills utilisation and development, and so on). Thus once occupation and indeed other individual, job and workplace characteristics are controlled for, it may be that long hours are no longer associated with such positive outcomes.

Table 10: Incidence of Stress-related Illness by Hours Usually Worked and Sex: 1995 AWIRS (% of employees reporting stress-related illness during past 12 months)

<i>Sex</i>	<i><16 hours</i>	<i>16-34 hours</i>	<i>35-40 hours</i>	<i>41-44 hours</i>	<i>45-48 hours</i>	<i>49 hours or more</i>	<i>Total</i>
Males	3.2	3.1	4.6	4.3	4.6	4.6	4.4
Females	1.5	3.6	5.7	5.6	7.1	7.3	5.0
Persons	2.1	3.5	5.1	4.8	5.3	5.4	4.7

Source: 1995 AWIRS employee survey.

As a test of this hypothesis, the employee data from the 1995 AWIRS data were used to estimate a simple probit model of the probability of a respondent reporting being satisfied

¹¹ The data presented in Table 10, however, are far from conclusive. Long hours workers may have other characteristics (such as higher incomes) that help offset the adverse affects from long hours. Further, health problems may not become apparent until later in life (e.g., in the form of higher risk of heart disease) which would not be reflected in the data examined here. For a recent review of research into health problems associated with long working hours, see Spurgeon, Harrington and Cooper (1997).

with their job.¹² The specification used can be thought of as a reduced form model with wages substituted out through the inclusion of a large number of variables known to influence wage outcomes, such as age, education, tenure and occupation. Indeed, the list of explanatory variables used here to explain job satisfaction is very similar to that used in the work of Wooden and Bora (1999), who used the AWIRS data to estimate a wage equation.

The results of this probit estimation, together with variable definitions and summary statistics, are provided in an Appendix. The main feature of these results is that the incidence of job dissatisfaction is highest among persons working between 35 and 40 hours per week. After controlling for an extensive array of both individual and employer characteristics, it is part-time workers who emerge as by far the most satisfied. At the other end of the spectrum, however, the coefficient on a dummy variable for persons working 49 hours or more is also positively signed. The size of the effect, however, is arguably relatively small, with the difference in the probability of reporting being satisfied between persons working 49 hours or more and otherwise comparable persons working 35 to 40 hours being about 2.4 per cent. Furthermore, these conclusions were qualitatively unaffected by interacting hours with employment status. To summarise, there is no evidence in these data to suggest that long work hours is a significant contributor to job dissatisfaction. Indeed, if anything the direction of association is in the positive direction, though the magnitude of the effect would appear to be relatively small.

7. Summary and Conclusions

This paper set out to examine whether or not working long hours, defined here as regularly working in excess of 48 hours per week, can generally be described as ‘unreasonable’, as is argued in the ACTU Reasonable Hours Test Case submission. Five specific questions were posed and answered.

First, just how many Australians are working long hours? The answer to this question depends on how hours are measured, but in most household-based data it is very clear that the number is large. Around 1.7 million Australian workers, for example, reported usually

¹² In the AWIRS, respondents were only provided with three response options when assessing their job satisfaction: satisfied, neither satisfied nor dissatisfied and dissatisfied. As we are primarily interested in whether an employee is satisfied or not, the latter two categories have been combined.

working more than 48 hours each week. If employers and the self-employed are excluded, this number declines, but is still considerable—about 1.25 million.

Second, is this development a new trend, as implied by the ACTU submission? The evidence presented here suggests that the increase in the proportion of Australians working long hours was largely confined to the period 1983 to 1994. Since then the level of long-hours working has fluctuated but has not exhibited any clear trend either upwards or downwards. It is thus something of a puzzle that it was not until the late 1990s that long working hours re-emerged as significant issue for the trade union movement. Moreover, the coincidence of lengthening hours with the restraint in real wages growth is suggestive of the importance of supply-side explanations, rather than the usual demand-side explanations. Specifically, it is hypothesised that the operation of incomes policy in the 1980s and early 1990s led many workers to seek additional hours in an effort to support desired consumption patterns.

This leads to the third question—are actual working hours consistent with preferred working hours? Survey evidence indicates that the majority of long hours workers do not wish to work fewer hours. Moreover, the proportion declines further if the survey question conditions answers on desired earnings. Such findings provide further support for the hypothesis that much of the high incidence of long-hours working is supply generated.

The fourth question was concerned with the incidence and trend in so-called unpaid working time. The conventional wisdom is that unpaid hours are widespread and growing. In fact, the ABS evidence suggests that only a little more than one in ten employees regularly work overtime hours without some explicit form of remuneration or trade-off. Moreover, in recent years at least, the underlying trend is downwards.

Finally, it was questioned whether or not jobs involving long hours were ‘bad’ jobs. Analysis of data from the 1995 AWIRS suggested the contrary—on average, jobs involving long hours are reasonably well remunerated and have other desirable traits. Moreover, long hours per se were not found to impact adversely on job satisfaction independent of other person, job and firm characteristics. Indeed, long hours workers were, other things equal, more likely to express satisfaction with their jobs.

Overall, the conclusion is that working long hours is on many criteria, far from unreasonable. It would appear that the majority of long hours workers prefer such arrangements. Attempts

to interfere with such preferences through regulation will thus, in most instances, either lead to workers feeling worse off or fail to have any affect on worker behaviour.

Finally, it is recognised that there are many instances where the hours being worked by individuals are having serious adverse impacts on health and family life (see Pocock *et al*, 2001) and hence may sensibly be judged unreasonable. Nevertheless, it seems that such cases are best dealt with on a case by case basis and not through the imposition of across-the-board limits on hours, which may make far more people worse off than it makes better off.

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Appendix Table A1: Variable Definitions and Means (unweighted)

Variable	Definition	Mean (N=13898)
Dependent variable		
Satisfaction	Dummy variable: Equals 1 if the employee is satisfied with their job overall	0.63
Individual level variables		
Gender	Dummy variable: Equals 1 if male	0.56
Age:		
15-20	Dummy variable: Equals 1 if aged between 15 and 20 years	0.05
21-24	Dummy variable: Equals 1 if aged between 21 and 24 years	0.10
25-29	Dummy variable: Equals 1 if aged between 25 and 29 years	0.14
30-34 [reference group]	Dummy variable: Equals 1 if aged between 30 and 34 years	0.15
35-39	Dummy variable: Equals 1 if aged between 35 and 39 years	0.15
40-44	Dummy variable: Equals 1 if aged between 40 and 44 years	0.14
45-49	Dummy variable: Equals 1 if aged between 45 and 49 years	0.12
50-54	Dummy variable: Equals 1 if aged between 50 and 54 years	0.08
55+	Dummy variable: Equals 1 if aged 55 years or older	0.06
OS-born - English speaking country	Dummy variable: Equals 1 if born overseas in one of the main English-speaking countries (UK, Ireland, Canada, South Africa or USA)	0.11
OS-born - non-English speaking country	Dummy variable: Equals 1 if born overseas but not in one of the main English-speaking countries	0.12
Non-English speaking	Dummy variable: Equals 1 if	0.06
Aboriginal origin	Dummy variable: Equals 1 if of Aboriginal or Torres Strait Islander origin	0.01
No. of dependent children < 4 yrs	Number of dependent children aged 0 to 4 years	0.19
No. of dependent children 5-12 yrs	Number of dependent children aged 5 to 12 years	0.34
No. of dependent children 13+ yrs	Number of dependent children aged 13 years or over	0.31
Disabled	Dummy variable: Equals 1 if a health condition or disability exists which is likely to last for more than 6 months	0.08
Tenure	Years employed at the workplace	6.21
Union member	Dummy variable: Equals 1 if a member of a trade union	0.51
Educational attainment:		
Primary school	Dummy variable: Equals 1 if attended primary school but not secondary school	0.02
Some secondary school	Dummy variable: Equals 1 if attended secondary school but did not complete	0.28
Completed secondary school [reference group]	Dummy variable: Equals 1 if completed secondary school and have not obtained a higher qualification	0.19
Basic vocational qualification	Dummy variable: Equals 1 if highest education level is basic vocational qualification	0.04
Skilled vocational qualification	Dummy variable: Equals 1 if highest education level is skilled vocational qualification	0.12
Associate diploma	Dummy variable: Equals 1 if highest education level is associate diploma / advanced certificate	0.09
Degree	Dummy variable: Equals 1 if highest education level is undergraduate degree or diploma	0.14
Postgraduate qualification	Dummy variable: Equals 1 if highest education level is postgraduate degree or diploma	0.09
Occupation:		
Labourers	Dummy variable: Equals 1 if employed in the occupation group, Labourers	0.14
Plant & machine operators & drivers	Dummy variable: Equals 1 if employed in the occupation group, Plant & Machine Operators & Drivers	0.10

Variable	Definition	Mean (N=13898)
Clerks	Dummy variable: Equals 1 if employed in the occupation group, Clerks	0.19
Sales & personal service	Dummy variable: Equals 1 if employed in the occupation group, Sales & Personal Service Workers	0.13
Tradespersons [reference group]	Dummy variable: Equals 1 if employed in the occupation group, Tradespersons & Apprentices	0.08
Para-professionals	Dummy variable: Equals 1 if employed in the occupation group, Para-professionals	0.12
Professionals	Dummy variable: Equals 1 if employed in the occupation group, Professionals	0.16
Managers	Dummy variable: Equals 1 if employed in the occupation group, Managers	0.08
Workplace size	Total number of employees working at or from the workplace during the pay period ended on or before 18 August 1995	285.77
Unionisation	Proportion of employees at the workplace who are members of a trade union	50.27
Active union	Dummy variable: Equals 1 if the senior delegate from the union with most members spends one hour or more each week on union activities, and either a general meeting of members is held at least once every six months, a union committee exists and meets regularly with management, or delegates meet with management at least once a month	0.38
Labour intensity	Labour costs as a proportion of total costs	0.50
Sector:		
Private commercial [reference group]	Dummy variable: Equals 1 if workplace is private & undertakes activity for the purpose of making a profit	0.58
Private non-commercial	Dummy variable: Equals 1 if workplace is private & does not undertake activity for the purpose of making a profit	0.07
Public commercial	Dummy variable: Equals 1 if workplace is a government business enterprise or commercial statutory authority & undertakes activity for the purpose of making a profit	0.11
Public non-commercial	Dummy variable: Equals 1 if workplace is a government department or non-commercial statutory authority & does not undertake activity for the purpose of making a profit	0.24
Majority foreign owned	Dummy variable: Equals 1 if firm is predominantly or wholly foreign owned	0.14
Minority foreign owned	Dummy variable: Equals 1 if between 1 & 50 per cent of the firm is foreign owned	0.11
Competition:		
No competitors [reference group]	Dummy variable: Equals 1 if there are no competitors for this workplace's major product or service	0.52
Many competitors	Dummy variable: Equals 1 if there are many competitors for this workplace's major product or service	0.32
Few competitors	Dummy variable: Equals 1 if there are few competitors for this workplace's major product or service	0.16
Exporter	Dummy variable: Equals 1 if more than 50 per cent of workplace's major product or service is exported	0.04
Import competition	Dummy variable: Equals 1 if workplace faces import competition for its major product or service	0.20
Percentage shift workers	Proportion of employees who work shifts or are on call	0.29
Percentage female	Share of females in total workplace employment	0.42
Firm size:		
< 100 employees	Dummy variable: Equals 1 if less than 100 employees work for organisation	0.07
100-499 employees	Dummy variable: Equals 1 if between 100 and 499 employees work for organisation	0.19

Variable	Definition	Mean (N=13898)
500-999 employees [reference group]	Dummy variable: Equals 1 if between 500 and 999 employees work for organisation	0.09
1,000-4,999 employees	Dummy variable: Equals 1 if between 1000 and 4999 employees work for organisation	0.21
5,000-9,999 employees	Dummy variable: Equals 1 if between 5000 and 9999 employees work for organisation	0.06
10,000-19,999 employees	Dummy variable: Equals 1 if between 10000 and 19999 employees work for organisation	0.07
20,000 employees or more	Dummy variable: Equals 1 if 20000 employees or more work for organisation	0.16
Hours (includes overtime):		
1-34	Dummy variable: Equals 1 if the employee works between 1 & 34 hours per week	0.18
35-40 [reference group]	Dummy variable: Equals 1 if the employee works between 35 & 40 hours per week	0.39
41-48	Dummy variable: Equals 1 if the employee works between 41 & 48 hours per week	0.26
49+	Dummy variable: Equals 1 if the employee works 49 hours or more per week	0.17
Employment status:		
Permanent employee [reference group]	Dummy variable: Equals 1 if entitled to both paid holiday leave and paid sick leave	0.83
Casual employee	Dummy variable: Equals 1 if not entitled to both paid holiday leave or paid sick leave	0.09
Fixed term contract	Dummy variable: Equals 1 if employment contract ends on a particular date	0.08
Hours worked by permanent employees		
1-34 hours	Dummy variable: Equals 1 if a permanent employee and works between 1 & 34 hours	0.10
35-40 hours [reference group]	Dummy variable: Equals 1 if a permanent employee and works between 35 & 40 hours	0.35
41-48 hours	Dummy variable: Equals 1 if a permanent employee and works between 41 & 48 hours	0.23
49 or more hours	Dummy variable: Equals 1 if a permanent employee and works 49 or more hours	0.15
Hours worked by casual employees		
1-34 hours	Dummy variable: Equals 1 if a casual employee and works between 1 & 34 hours	0.07
35-40 hours [reference group]	Dummy variable: Equals 1 if a casual employee and works between 35 & 40 hours	0.02
41-48 hours	Dummy variable: Equals 1 if a casual employee and works between 41 & 48 hours	0.01
49 or more hours	Dummy variable: Equals 1 if a casual employee and works 49 or more hours	0.00
Hours worked by fixed-term contract employees:		
1-34 hours	Dummy variable: Equals 1 if a contract employee and works between 1 & 34 hours	0.02
35-40 hours [reference group]	Dummy variable: Equals 1 if a contract employee and works between 35 & 40 hours	0.03
41-48 hours	Dummy variable: Equals 1 if a contract employee and works between 41 & 48 hours	0.02
49 or more hours	Dummy variable: Equals 1 if a contract employee and works 49 or more hours	0.02

Table A2: Job Satisfaction and Hours (probit estimation), 1995 AWIRS Employee Sample

	(1)		(2)	
	Coefficient	t	Coefficient	t
Constant	0.322	2.95	0.317	2.90
Individual Characteristics				
Gender	-0.095	-3.23	-0.094	-3.21
Age:				
15-20	0.119	1.82	0.121	1.85
21-24	0.028	0.57	0.027	0.56
25-29	-0.049	-1.16	-0.049	-1.16
35-39	-0.076	-1.82	-0.075	-1.80
40-44	-0.029	-0.65	-0.028	-0.65
45-49	0.036	0.77	0.036	0.77
50-54	0.194	3.72	0.195	3.73
55+	0.398	6.71	0.400	6.73
OS-born - English speaking country	-0.112	-3.13	-0.113	-3.15
OS-born - non-English speaking country	0.004	0.10	0.003	0.08
Non-English speaking	-0.058	-1.11	-0.059	-1.13
Aboriginal origin	0.241	2.11	0.243	2.13
No. of dependent children < 4 yrs	-0.033	-1.41	-0.032	-1.38
No. of dependent children 5-12 yrs	0.039	2.28	0.039	2.28
No. of dependent children 13+ yrs	0.011	0.63	0.011	0.64
Disabled	-0.249	-6.09	-0.250	-6.10
Tenure	-0.007	-3.81	-0.007	-3.80
Union member	-0.215	-7.61	-0.215	-7.58
Educational attainment:				
Primary school	0.204	2.49	0.205	2.51
Some secondary school	0.147	4.41	0.147	4.40
Basic vocational qualification	-0.036	-0.62	-0.036	-0.62
Skilled vocational qualification	-0.086	-1.97	-0.085	-1.96
Associate diploma	-0.108	-2.39	-0.107	-2.36
Degree	-0.033	-0.70	-0.031	-0.66
Postgraduate qualification	-0.158	-2.90	-0.157	-2.87
Occupation:				
Labourers	-0.193	-3.62	-0.193	-3.61
Plant & machine operators & drivers	-0.117	-2.07	-0.117	-2.08
Clerks	-0.030	-0.56	-0.030	-0.56
Sales & personal service	-0.014	-0.24	-0.012	-0.21
Para-professionals	-0.021	-0.38	-0.020	-0.37
Professionals	0.119	1.90	0.120	1.92
Managers	0.317	5.03	0.318	5.04
Workplace Characteristics				
Workplace size	0.000	-0.85	0.000	-0.82
Unionisation	0.001	2.34	0.001	2.34
Active union	-0.023	-0.83	-0.023	-0.83
Labour intensity	-0.117	-1.98	-0.117	-1.97
Sector:				
Private non-commercial	-0.142	-2.14	-0.143	-2.15
Public commercial	-0.065	-1.14	-0.064	-1.12
Public non-commercial	-0.207	-3.50	-0.208	-3.52
Majority foreign owned	0.001	0.02	0.002	0.04

	(1)		(2)	
	Coefficient	t	Coefficient	t
Minority foreign owned	-0.005	-0.12	-0.005	-0.13
Competition:				
Many competitors	-0.070	-1.83	-0.071	-1.83
Few competitors	-0.048	-1.15	-0.048	-1.14
Exporter	0.084	1.25	0.079	1.17
Import competition	0.077	2.01	0.078	2.04
Percentage shift workers	0.014	0.31	0.016	0.34
Percentage female	0.041	0.55	0.040	0.54
Firm size:				
< 100 employees	0.018	0.34	0.016	0.31
100-499 employees	0.000	0.00	-0.001	-0.02
1,000-4,999 employees	-0.025	-0.68	-0.025	-0.68
5,000-9,999 employees	0.045	0.82	0.044	0.82
10,000-19,999 employees	-0.080	-1.51	-0.079	-1.49
20,000 employees or more	-0.108	-2.21	-0.107	-2.21
Hours:				
1-34	0.206	5.38		
41-48	0.070	2.42		
49+	0.064	1.79		
Employment status:				
Casual employee	0.040	0.85		
Fixed term contract	0.176	4.05		
Hours and employment status interacted:				
Permanent:				
1-34 hours			0.227	5.22
1-48 hours			0.070	2.30
9 or more hours			0.063	1.65
Casual:				
1-34 hours			0.224	3.98
35-40 hours			0.018	0.19
41-48 hours			0.363	2.38
49 or more hours			0.171	0.94
Fixed-term contract:				
1-34 hours			0.344	3.58
35-40 hours			0.223	3.11
41-48 hours			0.204	2.43
49 or more hours			0.259	2.77
Number of observations	13898		13898	
Pseudo R2	0.042		0.042	
Log likelihood	-8745.45		-8743.25	
Wald chi squared(105)	726.11		731.95	
Prob. > chi squared	0.00		0.00	

Note: Both specifications also include a set of 2-digit industry dummies.



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Date:

2002

Citation:

LOUNDES, J. E. & WOODEN, M. P. (2002). How unreasonable are long working hours?.
Melbourne Institute of Applied Economic and Social Research.

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