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Paid Annual Leave and Working Hours

*Mark Wooden and Diana Warren*

MELBOURNE INSTITUTE
of Applied Economic and Social Research

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**Mark Wooden and Diana Warren**
**Melbourne Institute of Applied Economic and Social Research**
**The University of Melbourne**

**Abstract**

Using data from wave 5 of the Household, Income and Labour Dynamics in Australia (HILDA) Survey, this study examines: (i) the extent to which Australian employees use their annual leave entitlements; and (ii) the association between annual leave taking and weekly hours of work. After restricting attention to employees likely to have entitlement to at least four weeks of paid annual leave, it is found that the mean number of days of leave taken per year is around 16 and that the majority (63%) take less than 20. The incidence of annual leave taking is found to vary positively correlated with the number of usual weekly hours of work, but the size of this effect is small and weak. It is concluded that persons who regularly report long hours of work each week are mostly not compensating by taking extended periods of leave each year, but neither is there evidence to support the hypothesis that the pressures at work that might lead many people to regularly work very long hours each week also cause them to forego their annual leave entitlements).

## 1. Introduction

A key focal point in the recent debate about work-life balance has been the long hours many Australians appear to be working. Most of this debate has focused on the number of hours worked in a usual week, and only occasionally is any recognition given to the possibility that increases in the length of the working year as a result of not fully utilising annual leave entitlements might be just as important. Indeed, as observed by Dennis (2004), for the average full-time worker, foregoing four weeks annual leave is equivalent to working more than an additional three hours every week.

The relative lack of discussion of changing patterns of annual leave usage almost certainly reflects the absence of good quality data in Australia. This was not always so, with the Australian Bureau of Statistics (ABS) conducting three national surveys of annual leave usage during the 1960s and 1970s (see Steinke, 1983). However, it would be more than 25 years before another nationally representative population survey would collect data on the amount of annual leave taken by workers. This is not to say that other empirical evidence of relevance does not exist. Most notably, The Australia Institute commissioned Newspoll in 2003 to conduct a survey of annual leave usage among full-time employees (see Dennis, 2004). That survey, however, was based on a very small sample (just 345 respondents were in-scope) and did not directly measure annual leave usage. Instead, the key question was whether the respondent took all the paid leave to which they were entitled during the previous year. For the record, 39 per cent of full-time employees reported not using all the leave to which they were entitled during 2002. Other evidence that Australians have been building up large quantities of unused leave entitlements comes from a 2005 ACNielsen survey, the findings from which led to the conclusion that full-time workers aged 18 years or over had, in

aggregate, accrued over 67 million days of untaken holiday leave (ACNielsen, 2005).[1] Both of these studies thus produce evidence that is consistent with the hypothesis that many Australian workers do not use their full annual leave entitlement each year, but neither provides data that enable annual leave usage to be directly quantified.

This data deficiency, however, has been rectified through the inclusion of a short sequence of questions on usage of different types of leave from paid work in wave 5 of the Household, Income and Labour Dynamics in Australia (HILDA) Survey, conducted in 2005. A major objective of this paper is thus to use these data to report on the extent of usage of paid annual leave by Australia.

An addition, this paper also examines the extent to which annual leave use is correlated with usual weekly hours. A priori the direction of association between these two variables is difficult to predict. On the one hand, regularly working long hours should increase both the need and desire for an extended period of leave on the part of the individual employee. On the other hand, long hours of work are an indicator of time pressures in the workplace, which ultimately may be an obstacle to workers taking their leave entitlements. For example, the Newspoll data reported by Dennis (2004) indicated that around 42 per cent of full-time employees who did not take their full annual leave entitlement stated that this was because they were too busy at work or because the time they could take off did not suit their own plans. Such findings suggest that we might expect to see long hours of work inversely correlated with annual leave usage, which potentially could have serious ramifications for the debate about work-life balance. Most obviously, it would imply that a focus on weekly hours of work would understate the working time disparity between those working standard hours

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[1] The results are weighted to the Australian 'online population' (aged 18 years or over) and so are only representative of the population that regularly accesses the internet.

(i.e., between 35 and 40 hours per week) and those working much longer hours of work each week.

## 2.    Data

As noted in the introduction, the data used in this analysis come from wave 5 of the HILDA Survey (and more specifically, from the confidentialised unit record data file, release 5.1). Discussed in more detail in Wooden and Watson (2007), the HILDA Survey is a household panel survey that began, in 2001, with a large nationally representative sample of Australian household members occupying private dwellings. All members of responding households from wave 1 (n=19,194) form the basis of the panel to be followed over time, though interviews are only conducted with those household members aged 15 years or older.

While the survey has a longitudinal design, it employs following rules that, with one caveat, are designed to ensure the sample maintains its cross-sectional representativeness over time. This is achieved by adding other people who join households in which original sample members reside. Most important here are children of original sample members. The one obvious weakness in the sample generation process is that immigrants who arrive in Australia after the initial sample was selected have relatively little chance of being included in the sample. The sample composition is, of course, affected by attrition, with only 74 per cent of respondents from wave 1 still participating in wave 5.[2] The total number of completed interviews achieved in Wave 5 was 12,759, comprising 10,392 respondents who participated in Wave 1, 238 who were adult members of the original sample but did not respond in Wave 1, 909 persons who were members of the original sample but only turned 15 years of age after wave 1, and 1220 persons who joined the sample in subsequent waves.

To account for possible biases, sample weights have been constructed that both correct for observable differences in the probability of different individuals responding each wave and ensure population estimates on key selected variables (such as age, sex and labour force status) match known totals for the population of households in Australia. All analyses in this paper make use of weighted data.

The data on annual leave come from responses to two simple questions asked during the personal interview component of the survey. The first simply identifies whether a respondent had spent any time on paid annual leave during the 12 months preceding the interview (which in wave 5 could be any date between 25 August 2005 and 10 March 2006). All persons answering in the affirmative were then asked how many days (or weeks) they spent on paid annual leave during that 12 month period. As previously noted, these questions were included for the first time in wave 5. We thus only have information about patterns of usage of leave over a single one-year period.[3]

## 3. Annual Leave Usage

Table 1 presents summary statistics on both the proportion of workers taking any paid annual leave and the average number of days taken for all persons employed at the date of interview. Note that the HILDA Survey determines employment and labour force status using the same labour force framework employed by the ABS and hence definitions of employment should be close to identical.

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[2] Some of this attrition is due to death. Excluding sample members who are known to have died sees the five-wave response rate rise to 78 per cent.

[3] These questions, however, were also included in the wave 6 interview instrument with the expectation of being included every year in the future.

This table reveals that just over half of all employed persons reported taking at least one day of paid annual leave during the one-year reference period, with the mean number of days taken being just nine. It is, however, conventional to ignore what the ABS label own account workers (i.e., employers and the self-employed). For many of these workers the concept of paid leave is meaningless given they have to fund it themselves. Such arguments suggest that we should also ignore owner managers of incorporated businesses, which the ABS routinely classifies as employees (i.e., they are employees of their own business). However, to assist with comparisons with the results from the ABS data collections of the 1970s, figures for employees both with and without owner managers included are reported.

**Table 1** *Paid annual leave by current employment status, HILDA Survey Wave 5*

| Employment status | % taking any paid leave | Mean leave days | Mean leave days taken by those who took leave |
|---|---|---|---|
| Employees | 60.2 | 10.0 | 16.7 |
| Employees of own business | 39.9 | 6.9 | 17.4 |
| All employees (ABS definition) | 58.9 | 9.8 | 16.7 |
| Own account workers | 12.4 | 1.7 | 14.0 |
| All employed[a] | 53.8 | 8.9 | 16.6 |

a   Includes unpaid family workers.

Restricting our attention to the employee workforce, Table 1 confirms that a large proportion of employees do not take any paid annual leave in a one-year period, and appears to also indicate that average leave usage is only half what is generally accepted as the community standard (i.e., four weeks). Furthermore, comparison with ABS data from

1978/79 (some 27 years earlier), and reported in Steinke (1983), suggests that annual leave usage has, if anything, declined over time. In 1978/79 the ABS reported that 63 per cent of wage and salary earners took at least some paid leave (compared with 59 per cent in the HILDA Survey data for 2005), that the mean number of weeks of leave taken was 2.4 (which compares with about 2 weeks in 2005), and that the mean number of weeks of leave taken by anyone who took at least one day of leave was 3.9 (compared with about 3.3 weeks in 2005).

Such trends will not be surprising to many and will be seen as providing further evidence of the encroachment of work into family and leisure time. In contrast, others will (and should) view these results with some surprise. Given the well documented growth in casual employment, which is conventionally defined by the absence of entitlements to paid annual leave (and paid sick leave), we might well have expected much larger declines in both the proportion of employees using annual leave and the mean number of leave days taken. After all, the share of casual employment in total wage and salary earner employment is estimated to have risen from just under 16 per cent in 1984 (Dawkins and Norris, 1990) to almost 27 per cent in August 2006.[4]

A question of particular interest, and the one at the centre of the analysis reported by Dennis (2004), is the extent to which workers use all of the annual leave to which they are entitled. As mentioned above, many might be tempted to use the results presented in Table 1 to draw the conclusion that actual usage leave usage is about half the four-week standard for every year of completed service specified in State legislation and in most Federal industrial awards and agreements (see Creighton and Stewart, 2005: 341-342), and since 2006 by the Australian Fair Pay and Conditions Standard. The data presented in Table 1, however, do not

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[4] The figures for 2006 are derived from ABS, *Employee Earnings, Benefits and Trade Union Membership, Australia* (ABS cat. no. 6310.0).

provide a good guide to how actual usage of leave compares with entitlements. There are at least three reasons for this. First, and as already mentioned, over one-quarter of the employee workforce are employed on a casual basis and so do not have any annual leave entitlements. Second, leave entitlements for part-time workers (who are not employed on a casual basis) are allocated on a pro-rata basis and so non-casual part-time workers will typically be entitled to less than four weeks annual leave each year. Third, some of the workers covered by the data in Table 1 will not have been employed with their current employer for more than one year and so will not have accrued four weeks of leave.

A better guide to the extent to which leave entitlements are being used is provided by disaggregating our sample of employees based on: (i) access to annual leave entitlements;[5] (ii) length of tenure with the current employer; and (iii) the number of hours usually worked each week (in the main job). This is done in Table 2. Note that the data used here exclude all owner managers. The key information is presented in row (1), which covers employees who state that their employer provides them with paid annual leave, who report having been employed with their current employer for at least one year, and who also report usual weekly working hours of 35 or more. As can be seen, almost 90 per cent of this group of employees reported taking at least one day of paid annual leave during the year, with the mean leave taken being around 16 days. Further information on the pattern of leave usage for this group is provided in Figure 1, which reveals quite a wide distribution around the mean. While 20 days (or four weeks) is the most common response, the majority of employees (63%) reported taking less than 20 annual leave days during the year.

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[5] In line with the way the ABS defines casual employment, all persons responding that they do not know whether they have entitlements to paid annual leave are assumed to have none.

**Table 2**  *Paid annual leave by leave entitlements, length of service and hours worked: Employees*

| | Worker characteristics | | | % taking any paid annual leave | Mean leave days | Unweighted N |
|---|---|---|---|---|---|---|
| | Leave entitlements | One year's continuous service | Full-time vs Part-time | | | |
| (1) | Yes | Yes | FT | 89.6 | 16.1 | 3242 |
| (2) | No | Yes | FT | 6.7 | 0.9 | 260 |
| (3) | Yes | No | FT | 50.6 | 6.1 | 729 |
| (4) | No | No | FT | 16.5 | 1.9 | 219 |
| (5) | Yes | Yes | PT | 78.5 | 11.5 | 742 |
| (6) | No | Yes | PT | 3.1 | 0.3 | 796 |
| (7) | Yes | No | PT | 33.8 | 3.4 | 162 |
| (8) | No | No | PT | 6.0 | 0.5 | 597 |
| *Total* | | | | 60.2 | 10.0 | 6747 |

**Figure 1**  *Distribution of paid annual leave days: Full-time employees with leave entitlements and with at least one year's service*
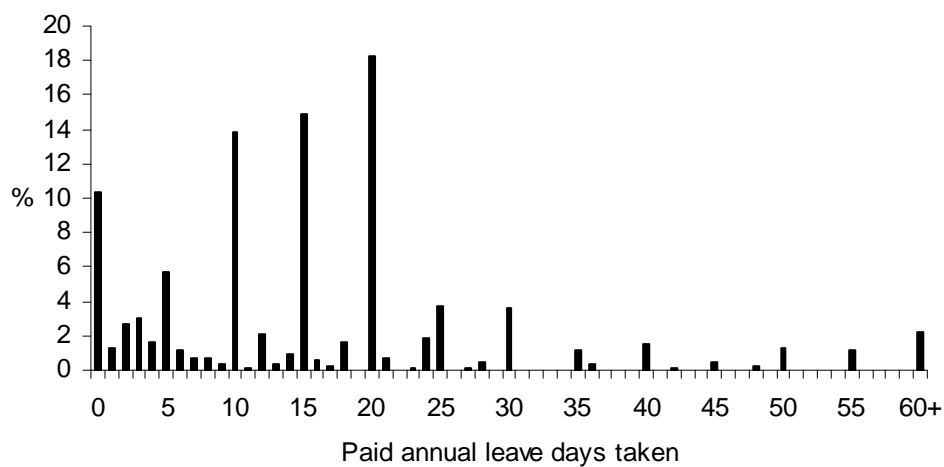
The other information in Table 2 is more difficult to interpret and is presented mainly for completeness. For example, row (2) presents the seemingly anomalous statistic that almost 7 per cent of full-time employees without any paid leave entitlements and who have worked for the same employer for at least one year also report having taken some time off on paid annual leave. While the possibility that this simply reflects measurement errors cannot be discounted, it can also be explained by changes in employment status during the year or as a result of multiple job holding.

## 4.   Annual Leave and Weekly Work Hours

We now turn to the question of whether or not annual leave usage is correlated with the usual number of hours worked each week. We again restrict all analyses in this section to the sub-group of employees who have leave entitlements, who work full-time hours in their main job and who, at the time of the wave 5 interview, had been employed with their current employer for at least one year. Furthermore, in an effort to minimize the impact of variations in hours worked over the course of the year, we further restrict our sample to employees working full-time hours at the time of both the wave 4 interview and wave 5 interview.

At first glance the HILDA Survey data indicate that any association between weekly hours of work and annual leave usage is very small. The simple Pearson correlation coefficient with days of annual leave taken is just 0.04. Perhaps larger associations are being masked by intervening associations with other variables such as occupation, length of job tenure or personal characteristics. Simple regression equations were therefore estimated that held constant a small number of worker and job characteristics.

The dependent variable is the total number of annual leave days taken during the preceding 12 months. It is close to continuous and hence linear least squares regression methods are used.[6]

We initially experimented with four different specifications. The first specification restricts the explanatory variables to usual weekly hours of work (in all jobs)[7] and a small number of personal characteristics. The characteristics controlled for are sex, which was interacted with both marital status and the presence of dependent children to obtain a total of 7 dummy variables, age (4 dummy variables), Aboriginality, country of birth (two dummy variables identifying persons born overseas and distinguishing between those born in the main English-speaking countries and those born elsewhere) and location (three dummies which differentiate between respondents based on far away they reside from a major city). The second specification adds a range of employment-related controls for job tenure (a continuous measure of years of tenure together with a dummy variable identifying persons with less than one year tenure at the time of the wave 4 interview), occupation (nine dummies)[8], fixed-term contract and (self-defined) casual employment (but bear in mind that most casual are excluded from this analysis), labour hire workers, public sector employment, union membership and firm size (two dummies). In the third specification, variables measuring the amount of time workers spent on other forms of paid and unpaid leave during the 12-month reference period are included. In the final specification we allow for the

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[6] The relatively large number of zero cases suggests least squares regression methods may be inappropriate. Estimation of a Tobit model, which is designed for censored data, however, produced qualitatively similar results to the least squares estimates reported here.

[7] Use of the number of hours usually worked in the main job results in a slightly larger coefficient but otherwise results are unaffected.

[8] The occupation controls distinguish between the nine major occupation groups as defined in the Australian Standard Classification of Occupations. However, within the professional group we also distinguish between education professionals (given the high incidence of paid annual leave reported by school teachers) and all other professionals.

possibility that the association between weekly hours of work and annual leave usage is non-linear, and replace the continuous hours variable with three dummy variables distinguishing employees who report usually working 41 to 41 hours per week, those who usually work 50 to 59 hours, and those who work 60 hours or more, leaving workers who work standard hours (i.e., 35 to 40 hours per week) to form the control group.[9] With the exception of the measures of leave, all control variables are measured at the wave 4 interview, and thus prior to the taking of annual leave days measured here.

Given our interest here is in the estimated coefficients on the hours variables, only a summary of the main results are presented.[10] These can be found in Table 3. The top half of this table presents the results using the 'full sample' and show that the relationship between usual weekly hours of work and the number of paid annual leave days taken during the year is positive but relatively small in magnitude. In specification (1), which only includes demographic controls, the coefficient on usual hours is statistically significant and indicates that every additional ten hours worked per week is associated with one additional day of annual leave taken during the year. Adding job-related controls, however, makes a marked difference. Not only does the overall explanatory power of the model improve markedly, as indicated by the noticeable jump in the value of the adjusted R-squared term, but the coefficient on the usual hours variable more than halves in size while its significance declines to a point where it is no longer significant at the conventional 95 per cent confidence level. This finding is also robust to the inclusion of variables measuring the extent of other types of leave taken.

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[9] We also tested whether a quadratic specification for hours of work was preferred to the linear specification. The quadratic form was insignificant in all equations.

[10] The full regression results are available, on request, from the author.

**Table 3**   *The effect of weekly hours of work on the taking of annual leave: OLS regression results (dependent variable = number of annual leave days taken)*

| | Demographic controls | Add job-related controls | Add other types of leave | |
|---|---|---|---|---|
| *Full sample[a]* | (1) | (2) | (3) | (4) |
| Coefficient (robust s.e.) on usual weekly hours of work | 0.108** (0.040) | 0.049 (0.036) | 0.048 (0.036) | |
| Coefficient (robust s.e.) on 41-49 hours dummy | | | | 0.661 (0.665) |
| Coefficient (robust s.e.) on 50-59 hours dummy | | | | 1.811* (0.774) |
| Coefficient (robust s.e.) on 60 or more hours dummy | | | | 0.311 (1.087) |
| N | 2761 | 2710 | 2708 | 2708 |
| F | 8.58** | 16.65** | 15.26** | 15.04** |
| Adjusted R-squared | 0.056 | 0.252 | 0.257 | 0.258 |
| Reset statistic (F) | 1.01 | 3.77** | 9.57** | 8.36** |
| *Excluding employees taking 50 days or more annual leave* | (5) | (6) | (7) | (8) |
| Coefficient (robust s.e.) on usual weekly hours of work | 0.043 (0.030) | 0.048 (0.030) | 0.047 (0.029) | |
| Coefficient (robust s.e.) on 41-49 hours dummy | | | | 0.632 (0.532) |
| Coefficient (robust s.e.) on 50-59 hours dummy | | | | 1.552** (0.573) |
| Coefficient (robust s.e.) on 60 or more hours dummy | | | | 0.474 (0.941) |
| N | 2598 | 2547 | 2546 | 2546 |
| F | 9.36** | 8.11** | 7.63** | 7.56** |
| Adjusted R-squared | 0.040 | 0.107 | 0.111 | 0.112 |
| Reset statistic (F) | 1.98 | 0.92 | 0.68 | 0.69 |

Notes:   * and ** indicate significance at the 5 and 1 per cent levels, respectively (in a 2-tailed test).

All regressions are estimated using the appropriate sampling weight.

a  By full sample we mean all employees who have leave entitlements, who work full-time hours in their main job and who, at the time of the wave 5 interview, had been employed with their current employer for at least one year.

Using dummy variables instead of the continuous hours variable leads to a slight modification of this conclusion. It now appears that the incidence of annual leave does not rise monotonically with hours worked. Instead, days of annual leave taken peak for those reporting working 50 to 59 hours per week. Employees in this group are estimated to take 1.8 more days of leave per year than otherwise comparable workers that work a 35 to 40 hour week. Those working even longer work weeks (i.e., 60 hours or more), however, appear to take no more annual leave days than persons working a 35 to 40 hour week (possibly reflecting the impact of relatively greater time pressures for employees in this group).

The relatively high value on the Ramsey Reset test, however, suggests at least three of our equations are misspecified. Experimentation with different functional forms indicates that the source of the misspecification most likely lies in the outlying cases at the upper end of the distribution. This should not be surprising. These cases are distinctly different from other cases and are dominated by two distinct groups: (i) school teachers, who often report taking up to 12 weeks annual leave each year; and (ii) employees taking a large block of accumulated leave. Apparently our simple model does not work well at explaining variation in leave taking among employees in these groups. We thus re-estimated our four specifications after omitting cases where annual leave days equalled 50 or more. The results are summarised in the bottom half of Table 3 (specifications 5 to 8). In these specifications the Reset test statistics are all small and insignificant suggesting misspecification is no longer a source of bias. But more importantly, the results on the hours terms are not greatly different. Our conclusions thus are largely unaffected, though the size of the coefficient on the 50 to 59 hours dummy in specification (8) is, at 1.55, slightly smaller than its counterpart in specification (4).

## 5.    Conclusions

The data collected as part of wave 5 of the HILDA Survey confirm that a great many Australian employees do not take any paid annual leave during a one-year period and that average leave usage is only about half what is generally accepted as the community standard (i.e., four weeks). Much of this, however, simply reflects the presence of a relatively large number of casual employees who do not have paid annual leave entitlements. In addition, there are sizeable groups of employees – part-time workers and workers who have been working for their current employment for less than one year – for whom the 4-weeks benchmark is inappropriate. Nevertheless, even when attention is restricted to those employees who almost certainly will have entitlement to at least 4 weeks of paid annual leave each year, it is still found that the mean number of days taken is only around 16 days and that the majority (63%) report taking less than 20 annual leave days during the year.

Such findings lead logically to the question of whether or not the taking of annual leave is inversely or positively correlated with the number of weekly hours worked. The evidence presented here suggests that the relationship is positive. The number of days of annual leave taken during a year rises with the number of hours worked per week. The size of this effect, however, is both very small and weak (in a statistical sense). Larger effects, however, are found when the hours variable is specified in discrete form. Specifically, the results suggest that a person who regularly works between 50 and 59 hours per week takes about an extra one and a half days of paid annual leave during the year than an otherwise comparable person who regularly works between 35 and 40 hours each week. This finding stands in contrast to recent results reported with US data where the relationship between leave taken and weekly hours of work is found to be negative (Altonji and Usui, 2007). However, as with the results reported here, this estimated relationship was both small and weak.

On balance, the evidence presented here does not suggest that persons who regularly report long hours of work each week are compensating by taking extended periods of leave each year. Any compensation effect is relatively modest. Nevertheless, the data also provide no evidence at all to support the hypothesis that the pressures at work that might lead many people to regularly work very long hours each week also cause them to forego their annual leave entitlements.

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