

Long Work Hours: Volunteers and Conscripts*

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ABSTRACT

Panel data from Australia are used to study the prevalence of work hours mismatch among long hours workers, how that mismatch persists and changes over time, and the factors associated with these changes. Both static and dynamic multinomial logit models are estimated, with the dependent variables distinguishing long hours workers from other workers, and within the former, between “volunteers”, who prefer long hours, and “conscripts”, who do not. Particular attention is paid to choice theoretic reasons for long hours, the role of bargaining power, and norms around consumerism and ideal workers. Consistent with earlier studies of working hours mismatch, the results suggest that labor markets function sluggishly at best, creating a large group of persistent long hours conscripts. Relatedly, choice theoretic considerations appear to be of little importance, although employed fathers in breadwinner/homemaker families are more likely to be long hours volunteers. Bargaining power, as indicated by union membership, public sector or self employment provides a superior explanation for the phenomena. Norms around work and spend and around ideal workers provide the strongest explanations, with high levels of debt and ideal worker status tending to drive and sustain long hours conscript status.

INTRODUCTION

Since the 1991 publication of Juliet Schor’s *The Overworked American*, a debate has raged across the developed world regarding the “problem” of long work hours (Jacobs and Gerson 2004: 119-147). This debate raises the underlying question of whether long hours are in fact problematic. Some researchers view long hours as troubling because they can induce poor psychological health, more frequent illnesses, and increased accident rates (Caruso 2006; Dembe et al. 2007). Others fear that long hours constrain opportunities to engage in family life (Wharton and Blair-Loy 2006) and may even inhibit family formation (Drago et al. 2006). It follows that many employees who regularly work long hours will prefer shorter hours and be willing to reduce their income in exchange for time off the job. We label this group “long hours conscripts”. Nevertheless, not all employees hold such preferences. Indeed, many people may prefer long hours. People who both work and prefer long hours are labelled “long hours volunteers”.

Studies of work hours mismatch imply that long hours conscripts are numerous. U.S. research, for example, reports evidence of extensive mismatch between actual and preferred working hours, with many employees claiming to prefer fewer hours (Golden 2006; Jacobs and Gerson 2004; Reynolds 2003). Similar findings have been reported in other countries (see Reynolds 2004; Stier and Lewin-Epstein 2003). None of these studies, however, have analyzed long hours employees *per se*. This paper seeks to redress that deficiency.

A distinctive feature of our study is the use of longitudinal data. A cross sectional analysis of volunteers and conscripts, like much of the mismatch literature (e.g., Bell 1998; Clarkberg and Moen 2001; Reynolds 2003; Jacobs and Gerson 2004), is subject to the criticism that mismatch might be temporary. If conscripts can achieve short hours over time,

we might conclude that labor markets are sluggish but ultimately effective for meeting employee preferences. Long hours conscripts may, therefore, be little more than an aberration and a theoretical curiosity. Two dynamic studies of mismatch, however, suggest that labor markets do not consistently help conscripts to escape from long hours. Merz (2002) estimates a model of the factors associated with working hours tension (preferred hours minus actual hours) using German panel data covering a 10 year period, while Reynolds and Aletraris (2006) use panel data from Australia to analyze how mismatches are created and resolved over a one year window. Both of these studies conclude that it is easier for employees to increase than to reduce their hours, implying the existence and persistence of long hours conscripts.

We study both the static and dynamic characteristics of long hours conscripts and volunteers using the Australian data source employed by Reynolds and Aletraris (2006). There are two reasons for using these specific data. First, in a comparison of nine developed nations, Jacobs and Gerson (2000:94) find only the U.S. and Australia yielding reports of over 20 percent of employed men and over 5 percent of employed women working at least 50 hours per week. Anyone studying long hours would therefore be well served by focussing on one of these nations. Second, the survey includes what are arguably the most carefully crafted questions developed to date for identifying long hours volunteers and conscripts. However, given most of the literature on long hours and mismatch was developed in the U.S., we pay attention to unique features of Australia and how these might affect our findings.

THEORIES OF LONG HOURS

Three theoretical approaches can explain long work hours, and each carries implications for volunteer or conscript status. These approaches concern choice theoretic models, bargaining power, and norms. We treat these in a static setting before turning to dynamics.

STATIC ISSUES

Traditional economic theories are built on notions of rational individual choice and so predict that all long hours workers will be volunteers. The most elemental choice theoretic question concerns labor supply, wherein individuals select from a menu of work hours given the wage associated with different jobs. Wages *per se* can motivate long hours for either high or low wage individuals due to income and substitution effects. Substitution effects cause high wages to raise the price of non-working time, leading to a positive association between wages and hours, while income effects lead high wage individuals to work short hours. Although labor supply theory cannot predict the net effect of wages, it suggests that wages may play a crucial role in determining work hours (Petersen 1989).

Education as an investment in human capital raises the wage, so also sets off income and substitution effects. However, long hours are more likely to result here since they increase the monetary returns to educational investments.

The theoretical effect of increases in other sources of income is clearer, since these should induce income effects leading to fewer work hours. For example, someone in a family with substantial non-labor income or with a high income partner should not supply long hours.

Gender may also play a role. Becker (1985) claims that households with one member specializing in paid employment and the other in home production enjoy an efficiency advantage over more egalitarian households. That advantage should be strongest where children are present, since they require elevated levels of both income and housework for

their maintenance. Very differently, Hakim (2000) argues that women tend to specialize in household production because they place a higher value on caregiving and family than men. These theories can explain breadwinner/homemaker families and “neotraditional families” (Moen and Roehling 2005) wherein the gender divide between paid work and unpaid housework and childcare is slightly less pronounced. They can also explain why men, and particularly fathers, may work long hours.

Choice theoretic models also address incentives for individuals to voluntarily work long hours. Landers, Rebitzer and Taylor (1996) consider internal labor markets with competitive promotion systems and conclude that these systems should motivate long hours and attract employees with a taste for long hours. Therefore, promotions should be linked to long hours.

An additional choice theoretic issue concerns the cost of job loss. Bowles (1985) and Schor (1991) suggest that a high cost of job loss can motivate long hours. Employers pay relatively high wages to make it difficult for the employee to find employment elsewhere with similar remuneration. Employees facing a high cost of job loss will, in this view, tend to voluntarily work long hours to help ensure job retention.

Both the promotion and cost of job loss models require internal labor markets. However, as Bernhardt et al. (2001) and Cappelli (1999) argue, internal labor markets became less prevalent in recent decades. Professional careers of today may involve a trade off of long hours in exchange for enhanced mobility across employers. This logic turns the cost of job loss argument on its head, since upwardly mobile employees may voluntarily work long hours to generate a low cost of job loss; long hours serve to improve career options. Long hours may therefore result in wage increases in the future.

To explain the phenomenon of long hours conscripts, we first turn to bargaining power considerations. As a general proposition, employee bargaining power should be inversely related to the existence of work hours mismatch; if employees control their conditions of employment, they should tend to achieve their preferred hours. By extension, we expect low levels of employee bargaining power to be associated with long hours conscript status.

The classic expression of employee bargaining power is the labor union (Freeman and Medoff 1984). Given the logic provided above, we expect relatively few unionized employees to be long hours conscripts. Relatedly, public sector employees may also hold a bargaining power advantage relative to their private sector counterparts if, as is widely assumed, “public sector employees have greater security than their counterparts in the private sector” (Kalleberg and Mastekaasa 1998:1249). Recent U.S. evidence finds employees in government jobs exhibiting much stronger preferences for job security (Lewis and Frank 2002), and layoff rates that are far lower in the public than the private sector (Wilson and McBrier 2005). We therefore expect to find relatively few conscripts in the public sector.

Individuals may escape employer bargaining power entirely through self employment. That is, some individuals may seek self employment to escape long hours, while other highly motivated individuals may voluntarily work long hours. The self employed, however, are reliant upon customers, and so may be subject to income uncertainty or customer bargaining power. Either condition may drive some of the self employed to be long hours conscripts.

We can alternatively understand long hours conscripts by appealing to norms around consumption and the ideal worker. The consumerism hypothesis was developed by Schor (1991, 1999). She argues that corporations generate increased revenues by expanding the range of goods and services considered part of a usual, or at least desirable, middle class standard of living. Larger houses, cable television, home entertainment systems, cellular phones, designer clothes, and expensive cars have, for example, all become more common.

Further, middle class families gauge the success of themselves and their peers in part on their ability to purchase such goods. As a result, many people are caught in a work and spend cycle, marked by high levels of consumption funded by income from long work hours and by debt, with the latter reinforcing pressures to work long hours. We therefore expect to find a correlation between long hours and household debt. These arguments further imply that many of those caught in the work and spend cycle will be long hours conscripts. If we instead found most individuals with high debt levels serving as long hours volunteers, we could conclude that the work and spend cycle is simply an expression of individual choice. Schor's vision of work and spend as a "trap" would therefore be rejected.

Researchers also argue that an ideal worker norm has spread among the middle class, with highly educated managers and professionals expecting themselves and others in similar positions to work long hours, with few breaks for holidays or vacations, for years or even decades at a stretch (Bailyn 1993; Hochschild 1997; Williams 2000; Blair-Loy 2003; Jacobs and Gerson 2004; Moen and Roehling 2005). The ideal worker norm is associated with new understandings of masculinity, wherein middle class men are judged, and judge themselves, according to the size of their paychecks and their unwavering commitment to a career, as signaled by high levels of face time and 24/7 availability for work related tasks (Williams 2000). Highly educated women in managerial and professional positions are also subject to the norm, but their commitment is viewed with suspicion because they may or may become encumbered by family commitments (Williams 2000; Blair-Loy 2003).

There is an economic component to the ideal worker norm. Adherents are rewarded with promotions or upward mobility in the labor market. Nonetheless, as Blair-Loy notes (2003:21), the norm has become "semi-autonomous from purely economic considerations." We therefore expect to encounter a group of "true believers" or long hours volunteers among those with ideal worker characteristics, but we also expect to find conscripts as well.

Both the consumerism and ideal worker norm arguments can be interpreted as applying to and perhaps even defining current understandings of middle class status. It is therefore important to ascertain empirically whether the phenomena are linked.

DYNAMIC ISSUES

The three theoretical approaches suggest very different dynamics for long hours volunteers and conscripts. In general, in choice theoretic models individuals get what they want, at least over time. These models thus imply that most long hours employees will be volunteers, that conscripts will tend to achieve short hours over time, and that few of the remaining conscripts will switch to volunteer status. The first claim flows from the notion that employees choose their hours of employment. Although this proposition might be dubious in the context of choosing between, say, a 39 and a 40 hour work week, the proposition seems reasonable when considering long hours. The claim that conscripts will eventually achieve short hours flows from the notion of a responsive labor market and stable preferences, and is consistent with the finding of Reynolds and Aletraris (2006: 631) that work hours mismatches are often resolved by changing employers. The claim that conscripts will not switch to volunteer status follows as well if preferences are stable.

As argued earlier, bargaining power models can explain the long term coexistence of volunteers and conscripts. By extension, they fit the dynamic claim that employees with high levels of bargaining power who begin as conscripts will eventually achieve short hours, while those with little bargaining power may move into conscript status over time. As suggested earlier, union membership and public sector employment may proxy high levels of employee

bargaining power, so may facilitate movement away from conscript status. Similarly, the self employed should be in a stronger position to achieve preferred hours over time.

Norms can also explain various dynamics. Regarding consumerism, Schor (1999) portrays the norm as a trap. That logic generated the static prediction that debt is related to conscript status. We further expect short hours employees with high levels of debt to move into conscript status over time. Finally, to the extent individuals follow Schor's advice and escape the trap, we expect movement from long hours conscript status to short hours over time. Consumerism as a norm does not predict movement from conscript to volunteer status for individuals with high levels of debt nor does it predict movement from short hours to volunteer status among debtors.

The ideal worker literature yields more complex predictions. In general, proponents of the ideal worker norm claim it is stable, with ideal workers working long hours for period of years or decades at a stretch. If this is so, then movement out of long hours should be relatively rare among highly educated managers and professionals, even if many volunteers and conscripts exist within the group and even if a substantial subset fluctuates between volunteer and conscript status. However, the same literature views long hours as undesirable, and argues that managers and professionals should be judged using performance metrics rather than long hours and face time. Such a recasting would permit managers and professionals to work reduced hours without career penalties (e.g., Williams 2000; Jacobs and Gerson 2004). We therefore expect to see numerous highly educated managers and professionals rejecting the norm, moving from volunteer to conscript status, with relatively few individuals moving from conscript to volunteer status. Rejection of the norm would also appear in movement from conscript status to short hours over time.

THE AUSTRALIAN CONTEXT

Most of the literature reviewed above uses evidence from the U.S., yet the data employed here are from Australia. While Australia has a far smaller population, the nations exhibit important similarities. Both have significant immigrant populations, albeit from different sources, they share a broadly similar set of institutions and values, and both economies are developed and have experienced substantial economic growth since the early 1990s.

In terms of the labor market, Australia has historically been very different from the U.S. Prior to the 1990s, wages and employment conditions in Australia were mainly dependent on arbitrated, multi-employer "awards" which covered all workers in a specific industry or occupation and were administered by industrial tribunals and commissions (Wooden 2000). In recent years, however, Australia has moved much closer to a U.S. system of labor relations. Most importantly, awards are of far less significance. Instead, wages and employment conditions are mainly established through direct negotiation, either collectively at the enterprise or workplace level or through individual contracts.

Bargaining has therefore become more decentralized in Australia. Nevertheless, compared with the U.S., both unions and collective agreements are still relatively common. Union membership rates have fallen dramatically in Australia (from around 45 percent of employees in the mid-1980s to just 20 percent in August 2006), but the rate is still well above the comparable U.S. figure.¹ Nor are awards entirely irrelevant. While only around one in

¹ Data from the US Bureau of Labor Statistics indicate that trade union members represented just 12.0 per cent of all employed wage and salary earners in the US in 2006. The Australian data are from the Australian Bureau of Statistics (ABS), *Employee Earnings, Benefits and Trade Union Members* (ABS cat. no. 6310.0).

five Australian employees depend on awards for wage increases², awards still cover most employees and provide guarantees of minimum wages and contain provisions about a range of working conditions, including working hours.

There are also important differences in rates of part-time employment, which are far higher in Australia, and particularly among mothers (Drago 2007: 107). We might therefore expect to find more men working long hours in Australia relative to the U.S., something that appears to be confirmed in cross country data for 2002 reported by the OECD (2004: 42).

The social safety net is also stronger in Australia, with national health insurance, a generous welfare system, and portable pensions. Drago (2007:85-86) suggests that low wage employers in the U.S. often motivate long hours through the provision of various benefits and particularly health insurance. This source of motivation is largely irrelevant in Australia.

Finally, during the time period under study, from 2003 to 2005, macroeconomic conditions in Australia were very favorable. Unemployment rates were at a 30 year low, real earnings rose steadily and skill shortages were evident in many sectors of the labor market. Opportunities to work long hours were therefore abundant, but employees were also in a strong position to resist employer demands and avoid conscript status. Labour Force Survey data suggest the latter effect dominated across the period, with 18.4 percent of employed persons reporting usual weekly hours of 50 or more in late 2002, but only 17.5 percent reporting these long hours at the end of 2005.³

DATA

THE HILDA SURVEY

We use data from several waves of the Household, Income and Labour Dynamics in Australia (HILDA) Survey, a nationwide household panel survey. Discussed in more detail in Wooden and Watson (2007), it began in 2001 with a national probability sample of Australian households. Members of responding households in Wave 1 formed the basis of the panel for later annual interviews. Interviews were completed at 7,682 of the 11,693 households identified as in scope for Wave 1. Within these households, there were 15,127 persons who were at least 15 years of age (and hence eligible for interview), and 13,969 were successfully interviewed. Of this group, 11,993 also responded in Wave 2, 11,190 responded in Wave 3 and 10,565 responded in Wave 4. We only use data from Waves 2 through 4 given some of the key independent variables are not available in the Wave 1 data.

IDENTIFYING LONG HOURS CONSCRIPTS AND VOLUNTEERS

We define three categories of workers: (i) long hours volunteers, who usually work and prefer working at least 50 hours per week; (ii) long hours conscripts, who report working at least 50 hours per week but prefer less than 50; and (iii) short hours workers, who report less than 50 usual hours per week (although we recognize that 49 hour work weeks stretches the meaning of “short hours”). Earlier research has used long hours cut offs of 45 hours (e.g., OECD 2004; Drago 2007), 50 hours (e.g., Jacobs and Gerson 2000, 2004) and even 60 hours (see van der Hulst 2003), so we replicate our analyses with cut offs of 45 and 60 hours per week as a sensitivity check.

² From ABS, *Employee Earnings and Hours, May 2006* (ABS cat. no. 6306.0).

³ Figures on the distribution of usual hours of work per week are reported every quarter in ABS, *Australian Labour Market Statistics* (ABS cat. no. 6105.0).

As Reynolds and Aletraris note (2006: 624), the HILDA Survey data are ideal for analyses of mismatch because of their longitudinal nature and because the work hours questions are carefully constructed. The usual hours variable is drawn from the following HILDA Survey item: “Including any paid or unpaid overtime, how many hours per week do you *usually* work in *all* your jobs? [This includes any work done at the workplace and at home.]” If the respondent indicated that work hours varied from week they were then asked to provide the number of per week they worked on average over a usual 4-week period. Respondents were next asked: “If you could choose the number of hours you work each week, *and taking into account how that would affect your income*, would you prefer to work ... fewer hours than you do now? about the same hours as you do now? or more hours than you do now?” For respondents claiming to prefer “about the same hours”, preferred hours are assumed to equal usual hours. A final question yielded preferred hours for respondents preferring fewer or more hours: “In total, how many hours a week, on average, would you choose to work? Again, take into account how that would affect your income. This includes any work done at the workplace and at home.” Given that conscripts hear the income caveat twice before reporting preferred hours below 50, our estimates of conscript status should be reasonably accurate.⁴

Table 1 provides summary statistics on the incidence of employment in each of the three employment categories. As is the case for all analyses here, each estimate uses the largest sample available. Both sample attrition and movements out of employment, however, mean that samples are necessarily smaller when multiple rather than single waves of data are used. In response, weights to approximate population characteristics are applied to each specific sample.

Table 1 shows that close to 23 percent of employees worked long hours in Wave 2, with long hours volunteers (12 percent of all employed persons) outnumbering conscripts (10.6 percent). Over 40 percent of those who were initially long hours volunteers or conscripts persisted in the same state in Wave 4, which compares with almost 90 percent of short hours employees who persisted in that state. We therefore find substantial movement among long hours volunteers and conscripts. For both categories, the main transition, affecting around one third of each group, was to short hours by Wave 4. Only around one fifth of the long hours volunteers become trapped in the conscript state, while a similar proportion of conscripts adapt and become long hours volunteers by Wave 4. On the face of it, processes of adaptation and of rejection are about equally prevalent. More troubling for traditional labour market theories, movement from conscript status to short hours is only slightly more frequent than changes from volunteer status to short hours, suggesting the labour market is not functioning effectively for many long hours employees.

As discussed earlier, wages and changes of employment are likely related to but also determined simultaneously with work hours. We therefore do not use these as independent variables in the main regression analyses below, instead placing them in subsidiary analyses. To begin relevant checks, average hourly wages for Wave 2 and changes of employment (between Waves 2 and 4) for each group are also reported in Table 1. Initial long hours volunteers exhibit the lowest wages as well as the lowest frequency of changing employers. Within the more detailed dynamic sub-categories, however, persistent long hours volunteers receive the highest mean wage, while the lowest wages are associated with long hours volunteers who switch to short hours by Wave 4, suggesting that wages are positively correlated with voluntary long hours, consistent with traditional labour supply theories. The

⁴ Surveys that do not ask respondents to consider any potential loss of income from hours reductions tend to generate low and arguably inaccurate estimates of preferred hours (Jacobs and Gerson 2004: 73-76).

greatest rates of mobility lie within the initial short hours group, with the highest rates for any sub-group (over 35 percent) found for short hours employees who ultimately become long hours conscripts. This result suggests that changes of employment do not consistently provide a route for achieving desired hours. Nonetheless, within the initial long hours volunteer and conscript categories, the highest frequency of job changing is among employees who reduce their hours, a relationship that is strongest for conscripts who achieve short hours by Wave 4.

Table 1. Long and Short Hours Paths, Wave 2 to Wave 4

	Frequency (N)	Proportion (%)	Average Hourly Wage (\$)	Changed Employer (%)
<i>Long Hours Volunteers, Wave 2</i>	716	12.0	19.58	19.5
Persistent Volunteer	305	41.0	21.13	14.4
Volunteer to Conscript	167	22.7	19.66	13.1
Volunteer to Short Hours	244	36.3	17.87	29.3
<i>Long Hours Conscripts, Wave 2</i>	671	10.6	20.13	20.2
Persistent Conscript	305	44.7	20.82	11.6
Conscript to Volunteer	139	21.2	20.62	17.6
Conscript to Short Hours	227	34.1	18.96	33.1
<i>Short Hours, Wave 2</i>	4470	77.5	20.11	25.7
Persistent Short Hours	4,027	89.8	20.10	24.8
Short Hours to Volunteer	206	4.4	19.96	31.6
Short Hours to Conscript	237	5.8	20.34	35.5
<i>Total</i>	5857	100.0	20.05	24.4

Note: Figures based upon analysis of a balanced panel of respondents from waves 2 to 4 of the HILDA data using longitudinal population weights. Analysis restricted to persons who were employed and reported hours worked and preferred hours in waves 2 and 4. Average hourly wage figures further restricted to persons who reported income from wages and salaries in wave 2.

INDEPENDENT VARIABLES

The potential correlates of long hours volunteers and conscripts are described in Table 2. All variables were constructed from Wave 2 data because information on two of the variables (promotions and debt) was not collected in Wave 1. Following the theoretical discussion, we begin with choice theoretic variables. To address human capital issues, a series of four mutually exclusive dummy variables are used for educational attainment (a bachelor's degree or higher is the omitted category).⁵ An additional variable for household income excluding respondents' labour earnings is included to capture income effects on hours. Consistent with the theory of income effects, all family income except that directly related to the respondent's employment is included in the variable. To capture effects related to gender, parenting, and partner employment, we created a series of dummy variables identifying male parents, female parents, and female non-parents (male non-parents are the omitted category). We then constructed additional variables for traditional men or male parents with non-employed

⁵ Given the ideal worker variable includes many individuals with a bachelor's degree, the omitted category can be viewed as the 6.4 percent of employees holding a bachelor's degree but employed in non-managerial and non-professional occupations.

partners to check the effects of traditional family structures on men’s hours, with a similar variable for neotraditional men or male parents in families where the woman is employed part-time. Finally, to capture family circumstances that may motivate women to work long hours, a variable is included for partnered women who are not parents of dependent children and whose partners are either not employed or employed part-time.

Regarding other choice theoretic issues, a variable for internal promotions during the previous year should capture the effects of promotion systems, although the measure, affecting around 10 percent of employees, undoubtedly understates the breadth of such systems. A cost of job loss variable is derived as the inverse of responses to a question to employees regarding the expected probability (ranging from 0 to 100) of finding another job with similar wages and benefits if needed.⁶

To proxy bargaining power, dummy variables for union membership, public sector employment, and self employment follow.

Table 2. Independent Variables, Wave 2

Variable name	Description	Mean	Standard Deviation
Post-school diploma	Highest educational qualification is advanced diploma or diploma	0.090	0.286
Trade certificate	Highest educational qualification is trade or other certificate	0.213	0.409
Completed Year 12	Highest educational attainment is completion of Year 12 (final year of secondary school)	0.158	0.364
Year 11 or below	Highest educational attainment is completion of Year 11 or less	0.289	0.453
Rest of household income	Annual household income (\$) excluding respondent’s earned income from wage and salary or business income	45752.41	52550.98
Male parent	Male parent of a resident child aged 0-14 years	0.180	0.385
Female parent	Female parent of a resident child aged 0-14 years	0.159	0.366
Female non-parent	Female without resident child aged 0-14 years	0.313	0.464
Traditional man	Male parent with a partner who is not employed	0.060	0.238
Neotraditional man	Male parent with a partner who is part time employed	0.076	0.266
Female non-parent, partner not FT	Female non-parent with a partner who is not employed full time (i.e., is either part time employed or not employed)	0.032	0.175
Promotion	Promoted at work in previous 12 months	0.094	0.292
Cost of job loss	Inverse of proportional chance that, following job loss, the next job found would be at least as good as the current job	29.53	33.71
Union member	Member of trade union or employee association	0.261	0.439
Public sector	Employed by a government organization	0.227	0.419
Self employed	Employer or self-employed (including owner managers employed in their own incorporated business)	0.188	0.391
Debt / income ratio	Ratio of household debt to annual household disposable income	1.961	5.815
Ideal worker	Has university qualification (at least a bachelor degree) and working in a managerial or professional occupation	0.187	0.390
Age	Years of age	38.31	12.70
Age-squared	Years of age squared	1628.96	1011.06

Note: Figures constructed from the unweighted sample of persons who were employed and who reported usual hours worked and preferred hours of work in wave 2 of the HILDA Survey data (N = 6,851).

⁶ The question is identical to one included in the U.S. Survey of Economic Expectations and used by Manski and Straub (2000) to construct measures of job insecurity.

Two variables were constructed to ascertain the effects of norms. For the consumerism hypothesis, debt is proxied by the ratio of total household debt to annual disposable household income. Household income for individuals reporting zero or negative income was set to \$1, while the debt to income ratio was top coded at 100 (an extreme value itself) to reduce the effects of a small number of cases, mostly among low income households, where the debt to income ratio was extremely high. The variable has a mean value of around 2. The next variable is a proxy for ideal worker status, which is held to exist when the employee holds at least a bachelor's degree and is in a professional or managerial occupation, characteristics that hold for a little less than one fifth of the sample.⁷

A control variable for age is also included. Age is specified in quadratic form to allow for the possibility that long hours are concentrated in the mid-career years.

METHODS

The main analyses involve the estimation of both static and dynamic models of the correlates of long hours working, where we distinguish not only between long and short hours but, among the former, between volunteers and conscripts.

For the static estimates, Wave 2 data are used for both the dependent and independent variables, with independent variables as listed in Table 2. There are three possible outcomes, so an appropriate estimator is the multinomial logit, where we predict long hours volunteer or conscript status, leaving short hours as the base category.

For the dynamic analysis, we have three outcome states in both Waves 2 and 4, hence nine categories are required to capture all potential types of persistence and change. Again, the multinomial logit is applied, with the base category being employees who work short hours in both Waves 2 and 4. The same set of independent variables listed in Table 2 is used in the dynamic model.

In both models, the coefficients are the log of the odds ratios for category membership. To generate size effects, we take the anti-log to yield odds ratios; these take a value of unity for a random probability of category inclusion, and are less than unity for a negative association and above unity for a positive correlation.

A series of specification tests are applied. First, as mentioned earlier, the regressions are rerun using 45 and, separately, 60 hour cut offs for long hours. Second, because the age of a child may influence work hours, the parenting variables were interacted with a dummy variable for families with a child less than five years of age. Third, as a test for attrition bias, the static Wave 2 regression is replicated after excluding 1221 individuals who did not respond to the HILDA survey in Wave 4. Fourth, we exclude from the dynamic analyses individuals who exited employment prior to Wave 4. Since exit can serve as a relevant mechanism for resolving mismatch (Böheim and Taylor 2004; Reynold and Aletraris 2006), we test whether conscripts are more likely to exit employment than volunteers. Fifth, the results may be affected by heterogeneity within the base categories of short hours employees, given that a subset of those employees may prefer long hours while others may not. As a check for relevant effects, the regressions are replicated after excluding respondents who work short hours but prefer long hours, both in Wave 2. Sixth, to ascertain the role of

⁷ Drago (2007: 91) categorizes ideal workers as holding at least a bachelor's degree and working at least 45 hours per week. With U.S. data, he finds that 79.4 percent of ideal workers but only 23.6 percent of other employees are in managerial and professional occupations. We use occupation and education for the classification since long hours serves as our dependent variable.

changing employers between Waves 2 and 4, we rerun the regressions after excluding respondents who changed jobs. By comparing these results to the main regressions, we may better understand the role of labor market mobility.

As the literature on the decline of internal labor markets suggests, long hours may generate future wage increases. To test this possibility, we regress the change in the hourly wage between Waves 2 and 4 against dummy variables for the long hours categories for Wave 2, and expect positive coefficients for both categories. Because the hours categories predate wage changes, this test does not produce the simultaneity bias which would occur if wages were entered in the main models.⁸

Finally, to address concerns that the ideal worker and debt variables are markers of middle class status, we check the correlation between the two variables. The simple correlation coefficient is close to zero (.009), suggesting the variables are independent. Given the definitions of the variables, we interpret the ideal worker variable as a potential proxy for middle class status, and do not view debt as concentrated in the middle class.

RESULTS

The results for the static model are presented in Table 3. Flowing from the theoretical discussion, we consider the effects of variables related to choice theoretic considerations, then bargaining power, and finally norms.

Beginning with the role of education, the findings suggest that individuals without post-school qualifications are significantly less likely to be long hours conscripts. The odds ratios suggest that the odds of a high school graduate being a conscript is less than two-thirds (.64) that of a university graduate. For respondents who do not complete high school the relevant odds ratio is even lower – just .54. This latter group, however, appears to have a high degree of control over the decision to work long or short hours, but that appearance may be illusory if low education employees are often subject to underwork, preferring longer hours than they usually get. For the three main gender and parenting variables we find that women, and particularly mothers, are relatively unlikely to work long hours either as volunteers or conscripts, a result that is consistent with theoretical arguments. In contrast, men in traditional families are, as predicted, the most likely to be long hours volunteers, with an odds ratio of 1.30. Also as predicted, recent promotions are significantly related to volunteer status (odds of 1.77), but are even more closely linked to conscript status (2.27), suggesting there may be aspects of promotion systems that are not reducible to simple incentive effects. The cost of job loss, contrary to the original theory, is inversely related to volunteer status, with a one standard deviation increase in the cost of job loss yielding an odds ratio of .66. This result does, however, fit the more recent arguments that the breakdown of internal labor markets motivates long hours as a mechanism to ensure job mobility.

Turning to variables proxying bargaining power, while union membership effects are negligible, sizeable significant coefficients are found for both the public sector and self employment variables. Public sector employment is, as predicted, negatively related to conscript status (odds .68), but also to volunteer status (.66), suggesting that public sector employees simply tend not to work long hours. The self employed are more likely to report both volunteer (2.74) and conscript (3.10) status, consistent with the possibilities that some

⁸ Consistent with simultaneity bias, including the wage in our main regressions yields negative, significant coefficients for both long hours categories in the static model, and for five of the eight long hours categories in the dynamic model. There is currently no simultaneous equations multinomial logit available to address this problem.

highly ambitious individuals select into self employment and long hours, while others who choose self employment may be forced, perhaps by fears of the loss of future contracts or customers, to work long hours.

Considering the two variables associated with norms, both are significantly, positively, and only related to conscript status. These results suggest that individuals caught in the work and spend cycle typically wish but are unable to break out of the long hours associated with the cycle; they perceive long hours as a trap, with a one standard deviation increase in debt yielding an estimated odds ratio of 1.11 for conscript status. However, given that high levels of debt are not limited to the middle class, the trap is probably related to high standards of consumption only sometimes; in many cases it is likely located in working class families facing high mortgage payments (as would particularly be the case in the larger cities).

Table 3. Static Model of Long Hours Volunteers and Conscripts, Wave 2

Variables	Volunteers		Conscripts	
	Coefficient	Standard Error	Coefficient	Standard Error
Post-school diploma	-0.067	(0.247)	-0.034	(0.223)
Trade certificate	-0.004	(0.217)	-0.243	(0.189)
Completed Year 12	-0.328	(0.241)	-0.449*	(0.217)
Year 11 or below	0.046	(0.217)	-0.620**	(0.198)
Rest of household income	0.000	(0.000)	0.000	(0.000)
Male parent	-0.127	(0.186)	0.096	(0.193)
Female parent	-2.617**	(0.231)	-1.517**	(0.183)
Female non-parent	-1.289**	(0.140)	-0.579**	(0.124)
Traditional man	0.492*	(0.217)	0.087	(0.231)
Neotraditional man	0.265	(0.209)	0.192	(0.213)
Female non-parent, partner not FT	-0.835	(0.535)	-0.432	(0.325)
Promotion	0.571**	(0.151)	0.818**	(0.145)
Cost of job loss	-0.005**	(0.002)	-0.002	(0.002)
Union member	0.138	(0.112)	0.184	(0.110)
Public sector	-0.416**	(0.145)	-0.387**	(0.128)
Self employed	1.008**	(0.126)	1.132**	(0.134)
Debt / income ratio	0.006	(0.007)	0.019**	(0.006)
Ideal worker	0.189	(0.228)	0.369*	(0.188)
Age	0.112**	(0.022)	0.250**	(0.028)
Age squared	-0.001**	(0.000)	-0.003**	(0.000)
Chi squared		838.87**		
Cragg-Uhler pseudo R squared		0.2208		
N		6851		

Notes: The referent (omitted) category for the dependent variable is 'Short Hours'.

** $p < .01$ level; * $p < .05$ level.

The relationship between ideal worker and long hours conscript status suggests that ideal workers typically work but would like to reject the long hours associated with the norm (odds of 1.45). The features driving this behavior likely include the expectations of co-workers and superiors, but might also include incentives around future career advancement; although norms are fundamentally derived from internal and external expectations, they also typically carry penalties for deviance. That said, an alternative specification of the regression using long hours volunteers as the base category finds debt but not the ideal worker variable

significantly related to conscript status. That lack of significance suggests there are many ideal workers who serve as volunteers (see discussion below).

Note finally that the age quadratic is significant. Consistent with both life cycle models of labor supply behavior and a large body of empirical research by economists on working hours, the likelihood of choosing to working long hours rises with age and peaks in mid-career, which in these data occurs at around 44 years of age.

Dynamic regression results are presented in Table 4. To simplify the presentation and discussion, complete results are relegated to an Appendix, with significant coefficients reported in the table. Beginning with the human capital variables, a post-school diploma, which involves the highest levels of education of the four categories, is related to persistent conscript status (odds of 2.23), suggesting that a significant proportion of this group is subject to the ideal worker norm. A trade certificate is negatively associated with movement from conscript to short hours status (.50), while the Year 11 or below variable is negatively related to both that status (.32) and movement from conscript to volunteer status (.39). These results fit the static finding that low levels of education are negatively correlated with long hours conscript status, hence there are relatively few movements away from that state over time. For income effects, we find that high levels of other household income militate against movement from volunteer to short hours status, with a one standard deviation increase in income associated with an odds ratio of .75. This finding implies that individuals who choose long hours from a position of financial security are unlikely to change their minds and opt out over time.

With regard to gender and parenting, women are, relative to men, significantly less likely to be in any of the categories, confirming that relatively few women work long hours, either voluntarily or involuntarily.

Promotion systems, which were related to both volunteer and conscript status in the cross sectional results, continue to exhibit complex patterns. Employees who were promoted prior to Wave 2 were more likely to move from volunteer to conscript status (odds of 3.14), to be persistent conscripts (2.59), to move from conscript to volunteer status (2.81), and to move from conscript status to short hours (2.24). Promotions therefore appear to trap some employees as long hours conscripts, to cause others to find long hours more acceptable, and to lead still others to move to short hours, presumably limiting opportunities for further advancement.

In terms of bargaining power variables, public sector employees are not only less likely to work long hours as persistent conscripts (odds of .70) but, not surprisingly, as also less likely to move across the long hours states. The self employed are associated with virtually all types of movement into and out of the long hours groups, as well as persistence within the long hours groups. Nonetheless, the largest coefficient is for persistent volunteers (odds of 4.35), fitting the notion that many ambitious types select into self employment.

For the variables associated with norms, the debt variable is positively associated with persistent conscripts, with a one standard deviation increase in debt associated with odds of 1.20 for persistent conscript status, as well as movement from conscript to volunteer status (1.18), and movement from short hours to conscript status (1.22). The prior finding suggests the work and spend trap is indeed a persistent state for many employees, while the latter finding suggests that debt ultimately drives many individuals into long hours as conscripts, with the middle finding suggesting that many caught in the cycle eventually adapt their preferences, apparently accepting their fate.

Table 4. Dynamic Model of Long Hours Volunteers and Conscripts, Wave 2 to Wave 4

Variables (Wave 2)	Persistent Volunteer	Volunteer to Conscript	Volunteer to Short Hours	Persistent Conscript
Post-school diploma				0.801*
Rest of household income			-4.77x10 ⁻⁶ *	
Female parent	-3.981**	-2.012**	-3.008**	-2.072**
Female non-parent	-2.094**	-0.950**	-1.303**	-0.988**
Traditional man	0.829*			
Neotraditional man				0.779*
Promotion		1.144**		0.950**
Public sector	-0.588*	-0.908**		
Self employed	1.471**	1.349**	0.833**	1.292**
Debt / income ratio				0.034**
Ideal worker		1.635*		1.181**
Age	0.088*	0.173**	0.098*	0.310**
Age squared	-0.001*	-0.002*	-0.001*	-0.003**
		Conscript to Volunteer	Conscript to Short Hours	Short Hours to Volunteer
Trade certificate			-0.701*	
Year 11 or below	-0.936*		-1.133**	
Male parent	0.897*			
Female parent	-1.530**	-1.441**	-2.173**	-1.852**
Female non-parent	-0.570*	-0.521*	-1.308**	-0.849**
Promotion	1.033**	0.806**		
Public sector	-0.612*			
Self-employed	1.229**	1.237**		0.586**
Debt / income ratio	0.031**			0.037**
Age	0.331**	0.200**		
Age squared	-0.004**	-0.002**		-0.002*
Chi squared			995.59**	
Cragg-Uhler pseudo R-squared			0.2548	
N			5126	

Notes: The referent (omitted) category for the dependent variable is 'Persistent Short Hours'.

** $p < .01$ level; * $p < .05$ level.

The ideal worker results are more straightforward. Ideal worker types are significantly more likely than others to remain and to become long hours conscripts, with odds of 3.26 for persistent conscript status, and of 5.13 for movement from volunteer to conscript status. Again, the implicit rejection of the long hours associated with the ideal worker norm is striking.

Turning to specification tests for alternative long hours cut offs, we first reran the regressions with a 45 hours cut off. The volunteer category now rises from 12 to 18.6 percent of the Wave 2 sample, with conscripts expanding from 10.6 to 12.7 percent of the sample. In the static model, results were virtually unchanged in terms of sign, size or significance of the coefficients, except the union coefficient was positive and significant for long hours volunteer status, consistent with bargaining power arguments. In the dynamic model, new results that might alter our conclusions include: i) union members are more likely to be persistent volunteers; ii) both the debt/income and ideal worker variables are significantly and positively linked to movement from volunteer to conscript status; iii) public sector employees

are unlikely to fall in the volunteer to short hours group; and iv) for persistent conscripts, the public sector is negatively related to the state. These results better fit the claim that high levels of bargaining facilitate employee choice over hours, while high levels of debt and ideal worker status are more clearly linked to processes of becoming trapped in long hours jobs.

For the 60 hours cut off, the long hours groups are much smaller, with volunteers representing only 4.2 percent and conscripts only 5.1 percent of the sample. Not surprisingly, the static regression results mainly find reductions in the size and significance of coefficients, with the signs remaining the same. One notable exception is that the Year 11 or below coefficient is positive and significant for long hours volunteer status, suggesting that a group of low education (and presumably low income) employees work extremely long hours voluntarily to maintain a standard of living. Another exception is that the ideal worker variable loses significance and takes a negative sign for long hours conscripts, suggesting there are limits to the hours the norm drives employees to work. In the dynamic model we similarly find mainly reductions in the significance of the coefficients. In addition, the debt/income coefficient is positively related to persistent volunteer status, suggesting some individuals plan persistently long hours as a debt servicing device. Further, men in traditional and neotraditional families are negatively related to movement from conscript to short hours status, hardly a surprising result, while promotions are now significantly and positively linked to movement from short hours to conscript status, consistent with the other complex dynamics surrounding promotions.

Interaction terms were added next for parents of young children. In the static model, in addition to a negative, significant conscript coefficient for female parents, a negative coefficient is significant for female parents of young children. This finding suggests age plays a strong role in limiting the hours of mothers of young children. Similar additional and negative effects for mothers of young children were found in the dynamic categories for movement from volunteer to conscript status, and for conscript to short hours status. For men, being the parent of a young child in a traditional family is linked to movement from volunteer to conscript status, parenting any young child is negatively associated with persistent conscript status, while having a young child in a neotraditional family is positively associated with movement from conscript to short hours status. These results call into question whether men in traditional and neotraditional families tend to voluntarily work long hours, as the choice theoretic view predicts.

As a check for the effects of attrition bias, the static Wave 2 model is rerun after excluding 1221 respondents (17.8 percent of the sample) who attrited from survey administration by Wave 4. Although some significance levels decline due to the smaller sample size, the general pattern of results remains unchanged. These results suggest that attrition bias is not a serious problem in the dynamic model.

It is possible that we are misinterpreting the dynamic results if conscripts are often exiting the labor force as a way to achieve a closer match between preferred and usual hours. As a check, we examine the proportions of the Wave 2 sample that left employment by Wave 4. Only 6.9 percent of long hours conscripts and 6.5 percent of long hours volunteers exited employment. This compares with 15.2 percent of short hours employees. The similarity of the conscript and volunteer figures, along with the far larger size of the short hours figures, suggests that exiting employment is not mainly a device for alleviating conscript status.

As a check for the effects of heterogeneity within the base group of short hours employees, we reestimate the models after excluding 162 respondents who report short hours but prefer long hours volunteer status in Wave 2. In the static model, the sign and significance of all coefficients remains as before except the Year 12 coefficient loses

significance in the conscript category. In the dynamic model, sign and significance remain as before except the Year 11 coefficient loses significance for the conscript to volunteer category, and the rest of household income coefficient is positive and significant for the short hours to conscript category. Given the vast majority of results remain unchanged, it seems safe to conclude that heterogeneity among short hours employees is not a serious problem.

Next we repeat the main analyses after excluding 1374 respondents who report changing employers between Waves 2 and 4 to see how labor market mobility influences our results. Most results remain, but with some important differences. In the static model, for volunteer status, female non-parents with partners who either work part-time or are not employed are negatively associated with the state, while ideal workers are positively related to the state. Among conscripts, the completed Year 12 coefficient loses significance, as does the ideal worker variable, while the union member coefficient is now positive and significant. The union result suggests that labor market mobility is a mechanism used by many union members to escape long hours conscript status. Similarly, the switch in the pattern of ideal worker coefficients suggests that many ideal workers suffering from initial conscript may not escape long hours over time but are motivated to change employers, perhaps as part of a strategy for career advancement. Regardless of the particular reason for job switching among ideal worker conscripts, the net effect is that ideal workers who remain with a given employer are more typically adherents to the norm. The dynamic results find union members significantly more likely to be persistent volunteers, consistent with bargaining power arguments, and respondents with high household incomes switching from conscript to short hours status, consistent with income effects. However, ideal workers are linked to switches from volunteer to short hours status, a result with no obvious interpretation.

Finally, although the preferred hours question includes a caveat regarding how changes in hours would alter income, it is possible that long hours are associated with long term career advancement, perhaps via job mobility, as well as wage increases over time. To test this possibility, we regressed the change in the hourly wage between Waves 2 and 4 against dummy variables for Wave 2 long hours volunteers and conscripts. The coefficients were positive and significant, with volunteers enjoying an average two year increase of \$2.80 per hour, and conscripts averaging a \$2.94 improvement. Even if present wages are not motivating long hours, the possibility of future rewards seems a very relevant motivator.

DISCUSSION

The evidence presented here strongly suggests that long hours volunteers and conscripts are distinct groups, and that the application of work hours mismatch to an analysis of long hours is useful.

Among the three categories of independent variables, the weakest results are for choice theoretic predictors. Higher levels of education are not clearly linked to long hours volunteer status, nor are high levels of household income. The most supportive result here is the finding that employed fathers with non-employed partners tend to voluntarily work long hours, and do so persistently over time, as expected. Promotions are associated with long hours, but to conscript as well as volunteer status while, contrary to predictions, long hours volunteers typically report a low cost of job loss.

The promotion results are particularly complex. In the dynamic model, individuals who experienced promotion in the year prior to Wave 2 are more likely to report movement from volunteer to conscript status, to be persistent conscripts, and to move from conscript to volunteer status. We suspect that some promotions serve to trap individuals who would

otherwise prefer reduced hours, while for others promotion motivates a gradual acceptance of long hours.

Results surrounding bargaining power are more supportive, with some findings consistent with the proposition that enhanced employee bargaining power reduces the likelihood of being or becoming a long hours conscript. Public sector employees are, in the main results, less likely to appear in long hours categories, with unions exerting no significant effects. However, when we reduce the long hours cut off to 45 hours, the public sector has a stronger inverse relation to conscript status, while union members are positively linked to both initial and persistent long hours volunteer status. The latter result appears to be contradicted by the finding that union membership is associated with conscript status among those who remain with a single employer, but an inability to change employers within this group – itself signalling a shortfall of bargaining power – may explain the result.

The self employed exhibit a more complicated pattern, being more likely to appear as both long hours volunteers and conscripts, and to move between these states over time. These results can be interpreted in terms of bargaining power, with some ambitious types voluntarily selecting long hours while others among the self employed may be forced by customer bargaining power to serve as conscripts. While only further research could confirm this interpretation, the overall pattern of results fits the notion that the self employed hold a substantial degree of bargaining power regarding their hours; the single largest coefficient for the group in the dynamic model was for persistent volunteers, and the group is among those most likely to switch from conscript to short hours status.

The strongest results concern norms. The ratio of household debt to income is positively linked to long hours conscript status, and to movement into and persistence in that status. Admittedly, some respondents with high levels of debt switch from conscript to volunteer status, apparently accepting their fate, but that process is not dominant, otherwise debt would be linked to volunteer status in the static results. As Schor (1991) foresaw, debt often serves to trap individuals into working long hours, and these individuals typically wish to escape the trap, at least as signalled by preferences for shorter hours. Nonetheless, the trap is not limited to the middle class, and the vision of long hours driven by desires for large screen televisions, mansions, SUVs and the like is only relevant for some; for others the problem can undoubtedly be traced to the high cost of urban housing and related mortgage payments that dictate long hours.

The ideal worker norm also plays a significant role, predicting long hours conscript status, movement from volunteer to conscript status, and persistent conscript status. The results are nuanced by the finding that ideal worker characteristics predict long hours conscript status beyond 45 or 50 hours per week, but not beyond the extreme of 60 hours. These findings implicitly raise the question of who is enforcing the norm if so many seem to reject it? A partial answer comes from our finding that, among employees who remain with a given employer, ideal worker types are more likely to be long hours volunteers than conscripts. These individuals may be in more senior positions, hence involved in enforcing norms around long hours. Somewhat differently, our findings concerning the cost of job loss suggest that labor market mobility, which may provide a route for career advancement today, dictates long hours for career success. Many managers and professionals among long hours conscripts may claim to be willing to take a temporary income reduction for reducing their hours, but believe that the long term consequences of doing so would be too severe; hence the norm may be largely self enforcing.

If, as seems reasonable, we interpret ideal worker status as a marker for middle class status, then the results suggest that members of the middle class (and particularly men) are

often serving as long hours conscripts. A comparison of the proportions of ideal worker types in the three static categories highlights this claim. For Wave 2, 16.6 percent of short hours respondents also report ideal worker characteristics, a figure that rises to 17.3 percent for long hours volunteers, and up to 28.7 percent for conscripts.

Is that pattern unique to Australia? Although we cannot replicate most of our results with U.S. data, we can generate comparable figures for this exercise from the 2002 National Study of the Changing Workforce (Bond et al. 2002). We find that 15.1 percent of short hours employees fit the ideal worker characterization, while 24.2 percent of long hours volunteers and 33.1 percent of conscripts do so. These figures suggest that the ideal worker norm is more pervasive in the U.S. and that long hours are more closely aligned with understandings of middle class status in the U.S. However, an important commonality is that in both nations ideal workers typically express desires for shorter hours.

So what messages do we take from this analysis? In terms of the labor market, the results support the view that the historical breakdown of internal labor markets has created a situation where many employees believe that career success depends on long hours as a tool to ensure job mobility. For public policy, the analysis suggests (almost by construction) that legal limitations on working time could indeed alleviate the problem of long hours conscripts, but may not be warranted given the existence of many long hours volunteers. For individuals considering self employment, the results warn that control over working time does not consistently flow from the strategy. The results also suggest that many families ultimately regret the long work hours required to service high levels of debt. Whether high levels of debt are due to housing or purchases of high end consumption goods, Schor's call to avoid the work and spend cycle has a firm basis in its relationship to persistent conscript status. Finally, given the clear and significant role of the ideal worker norm in the creation and maintenance of long hours conscript status, it seems likely that institutional efforts to change corporate cultures and make them more welcoming of reduced hours options, as suggested by Williams (2000) and Jacobs and Gerson (2004), could significantly reduce the incidence of long hours conscripts, and perhaps even more so in the U.S. than in Australia.

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Table A1. Dynamic Model of Long Hours Volunteers and Conscripts, Wave 2 to Wave 4

Variables (Wave 2)	Persistent Volunteer	Volunteer to Conscript	Volunteer to Short Hours	Persistent Conscript
Post-school diploma	-0.189 (0.450)	0.844 (0.709)	-0.106 (0.427)	0.801* (0.398)
Trade certificate	0.048 (0.371)	1.215 (0.649)	-0.081 (0.393)	0.428 (0.348)
Completed Year 12	-0.684 (0.414)	1.029 (0.679)	-0.453 (0.434)	-0.095 (0.415)
Year 11 or below	-0.154 (0.369)	1.030 (0.646)	0.100 (0.387)	0.346 (0.367)
Rest of household income	4.78×10^{-7} (0.000)	5.59×10^{-7} (0.000)	-4.77×10^{-6} * (0.000)	-2.54×10^{-6} (0.000)
Male parent	-0.120 (0.289)	0.228 (0.398)	-0.198 (0.368)	-0.248 (0.326)
Female parent	-3.981** (0.570)	-2.012** (0.473)	-3.008** (0.428)	-2.072** (0.359)
Female non-parent	-2.094** (0.322)	-0.950** (0.312)	-1.303** (0.251)	-0.988** (0.209)
Traditional man	0.829* (0.329)	0.626 (0.443)	0.138 (0.437)	0.370 (0.375)
Neotraditional man	0.345 (0.321)	0.496 (0.425)	0.072 (0.410)	0.779* (0.336)
Female non-parent, partner not FT	-0.448 (1.073)	-0.860 (1.038)	-0.221 (0.724)	-0.996 (0.745)
Promotion	0.293 (0.264)	1.144** (0.289)	0.014 (0.305)	0.950** (0.227)
Cost of job loss	-0.003 (0.003)	-0.004 (0.004)	-0.004 (0.003)	-0.002 (0.003)
Union member	0.305 (0.186)	-0.360 (0.271)	0.090 (0.198)	0.230 (0.179)
Public sector	-0.588* (0.265)	-0.908** (0.336)	-0.180 (0.224)	-0.359 (0.214)
Self employed	1.471** (0.217)	1.349** (0.268)	0.833** (0.219)	1.292** (0.207)
Debt / income ratio	0.018 (0.011)	0.016 (0.013)	-0.011 (0.022)	0.034** (0.011)
Ideal worker	0.274 (0.391)	1.635* (0.655)	0.226 (0.402)	1.181** (0.341)
Age	0.088* (0.044)	0.173** (0.067)	0.098* (0.044)	0.310** (0.057)
Age squared	-0.001* (0.001)	-0.002* (0.001)	-0.001* (0.001)	-0.003** (0.001)

Table A1 (cont' d)

Variables (Wave 2)	Persistent Volunteer	Volunteer to Conscript	Volunteer to Short Hours	Persistent Conscript
Post-school diploma	-0.495 (0.510)	-0.340 (0.373)	0.082 (0.506)	-0.095 (0.390)
Trade certificate	-0.233 (0.431)	-0.701* (0.335)	0.471 (0.428)	-0.283 (0.369)
Completed Year 12	-0.770 (0.565)	-0.480 (0.339)	0.241 (0.452)	-0.262 (0.407)
Year 11 or below	-0.936* (0.471)	-1.133** (0.339)	0.316 (0.445)	-0.386 (0.424)
Rest of household income	-3.60x10 ⁻⁶ (0.000)	1.70x10 ⁻⁶ (0.000)	-8.80x10 ⁻⁷ (0.000)	1.88x10 ⁻⁶ (0.000)
Male parent	0.897* (0.360)	0.536 (0.320)	-0.035 (0.335)	0.326 (0.363)
Female parent	-1.530** (0.532)	-1.441** (0.302)	-2.173** (0.361)	-1.852** (0.390)
Female non-parent	-0.570* (0.283)	-0.521* (0.217)	-1.308** (0.249)	-0.849** (0.265)
Traditional man	-0.529 (0.450)	-0.117 (0.386)	-0.036 (0.444)	0.295 (0.398)
Neotraditional man	-0.620 (0.414)	-0.696 (0.390)	0.226 (0.387)	-0.269 (0.404)
Female non-parent, partner not FT	-0.519 (0.751)	0.263 (0.468)	-0.704 (0.790)	-0.272 (0.574)
Promotion	1.033** (0.333)	0.806** (0.257)	0.137 (0.268)	0.275 (0.271)
Cost of job loss	0.001 (0.004)	-0.000 (0.003)	-0.003 (0.003)	-0.002 (0.003)
Union member	-0.004 (0.250)	0.028 (0.196)	-0.121 (0.208)	-0.297 (0.201)
Public sector	-0.612* (0.312)	-0.385 (0.221)	0.006 (0.224)	-0.134 (0.223)
Self employed	1.229** (0.305)	1.237** (0.231)	0.397 (0.278)	0.586* (0.261)
Debt / income ratio	0.031** (0.012)	0.015 (0.013)	-0.019 (0.036)	0.037** (0.011)
Ideal worker	0.368 (0.424)	0.143 (0.304)	0.350 (0.437)	0.349 (0.359)
Age	0.331** (0.077)	0.200** (0.047)	0.046 (0.043)	0.123 (0.066)
Age squared	-0.004** (0.001)	-0.002** (0.001)	-0.001 (0.001)	-0.002** (0.001)
Chi squared		995.59**		
Cragg-Uhler pseudo R squared		0.2548		
N		5126		

Notes: Estimated coefficients with standard errors in parentheses.

The referent (omitted) category for the dependent variable is 'Persistent Short Hours'.

** $p < .01$ level; * $p < .05$ level.