

DISCUSSION PAPER SERIES

IZA DP No. 12055

**Under Pressure? Assessing the Roles of
Skills and Other Personal Resources for
Work-Life Strains**

Niels-Hugo Blunch
David Ribar
Mark Western

DECEMBER 2018

DISCUSSION PAPER SERIES

IZA DP No. 12055

Under Pressure? Assessing the Roles of Skills and Other Personal Resources for Work-Life Strains

Niels-Hugo Blunch

Washington and Lee University and IZA

David Ribar

University of Melbourne and IZA

Mark Western

University of Queensland

DECEMBER 2018

Any opinions expressed in this paper are those of the author(s) and not those of IZA. Research published in this series may include views on policy, but IZA takes no institutional policy positions. The IZA research network is committed to the IZA Guiding Principles of Research Integrity.

The IZA Institute of Labor Economics is an independent economic research institute that conducts research in labor economics and offers evidence-based policy advice on labor market issues. Supported by the Deutsche Post Foundation, IZA runs the world's largest network of economists, whose research aims to provide answers to the global labor market challenges of our time. Our key objective is to build bridges between academic research, policymakers and society.

IZA Discussion Papers often represent preliminary work and are circulated to encourage discussion. Citation of such a paper should account for its provisional character. A revised version may be available directly from the author.

ABSTRACT

Under Pressure? Assessing the Roles of Skills and Other Personal Resources for Work-Life Strains*

Many working parents struggle to balance the demands of their jobs and family roles. Although we might expect that additional resources would ease work-family constraints, theory and evidence regarding resources have been equivocal. This study uses data on working mothers and fathers – as well as their cohabiting partners/spouses – from the Household, Income, and Labour Dynamics in Australia survey to investigate how personal resources in the form of skills, cognitive abilities, and personality traits affect work-life strains. It considers these along with standard measures of economic, social, and personal resources, and estimates seemingly unrelated regression (SUR) models of work-life strains for employed mothers and fathers that account for correlations of the couple's unobserved characteristics. The SUR estimates indicate that computer skills reduce work-life strains for mothers, that math skills reduce strains for fathers, and that the personality traits of extraversion, conscientiousness, and emotional stability reduce strains for both parents. However, the estimates also indicate that better performance on a symbol look-up task, which tests attention, visual scanning acuity, and motor speed, increases fathers' work-life strains.

JEL Classification: I1, I31, J24, J81

Keywords: work-family strains and gains, cognitive abilities, skills, household resources, Australia, HILDA survey

Corresponding author:

Niels-Hugo Blunch
Washington and Lee University
Department of Economics
Lexington, VA 24450
USA

E-mail: blunchn@wlu.edu

* This paper uses the confidentialized unit record file from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA Project was initiated and is funded by the Commonwealth Department of Family, Housing, Community Services and Indigenous Affairs and is managed by the Melbourne Institute: Applied Economic & Social Research. The findings and views reported in this paper are those of the authors only. The paper's analysis data were extracted using PanelWhiz, a Stata add-on package written by John Haisken-DeNew. The authors thank Art Goldsmith, Chris Handy, John Haisken-DeNew, and participants at several conferences and workshops for helpful comments and suggestions. The initial work on this paper was undertaken while Blunch was a visiting researcher at the Melbourne Institute; funding from the Institute and the University of Melbourne Faculty of Business and Economics is gratefully acknowledged.

1. Introduction

Many working parents struggle to balance the demands of their jobs and family roles. Intuitively, we might see these strains as symptoms of limited time, competing demands, and resource constraints, and we might expect that more resources would ease work-family pressures. However, theory and evidence regarding the role of resources are equivocal. Hamermesh and Lee (2007) offer a rational-choice conceptual model of time stress that predicts that increased resources in the form of higher market wages or even higher unearned incomes can make time constraints bind more rather than less. Empirical studies have found that higher-quality jobs (Marshall & Barnett 1993) and more education (Lozoncz 2001) are also associated with greater strains. These counter-intuitive results raise many questions. Worse, they suggest that outcomes, such as fairer pay and more white-collar job opportunities for women, that are good in most contexts might be a source of stress in families.

Empirical research on work-family balance has considered three principal domains of resources: economic resources, such as incomes, wage rates, and accommodating jobs; social resources, such as partner support, kin and friend networks, and community support; and personal resources, such as educational attainments, health, personality, and abilities. An analytical challenge to testing the resource hypothesis is that many types of resources may be influenced by work-life trade-offs. A person's wage might incorporate a compensating differential for benefits or schedules that accommodate family responsibilities (Rosen 1986). Social networks might be smaller if long work hours prevent someone from socializing. Health may be compromised by work-family strains (Allen et al. 2000, Grzywacz & Bass 2003). Some other types of resources, especially personal capacities that are determined prior to beginning a family or career and are also relatively stable across adulthood, may provide a better way to test

resource hypotheses. Empirical studies have investigated some personal resources, such as parents' education and personality traits, but have generally not considered other resources, such as skills and cognitive abilities.

Our study uses the rich data from the Household, Income, and Labour Dynamics in Australia (HILDA) survey to investigate how standard social, economic, and personal resource measures from previous research correlate with work-family gains and strains. However, in a departure from other studies, we also examine self-assessed skills and cognitive capabilities. Skills and cognitive ability have been shown to contribute to higher wages and better social outcomes (Cawley et al. 2001; Heckman et al. 2006). However, they have not been considered in the context of work-life balance.

The HILDA survey collects these measures separately for every adult in each surveyed household. This allows us to examine characteristics of both the parent and her or his partner, providing a more complete picture of the resources available in the household. Previous research has typically either ignored the partner's characteristics or considered them in a cursory way.

We conduct empirical analyses in which our outcome measure is a comprehensive work-life strain scale that includes work-family and work-parenting elements and also positive and negative outcomes. We estimate multivariate regression models jointly for working mothers and fathers, using Seemingly Unrelated Regression (SUR) methods. These allow us to consider gender differences while accounting for shared unobservable characteristics within households.

The multivariate analyses reveal that several abilities and traits are important. Fathers with higher self-reported math skills and mothers with higher self-reported computer skills experience fewer work-life strains than other parents. However, fathers who perform better on a symbol look-up test—a test of attention, visual scanning acuity, and motor speed—experience

more work-life strains. The traits of extraversion, conscientiousness, and emotional stability are negatively associated with men's and women's strains. Agreeableness is also negatively associated and openness to experience, positively associated with women's strains.

2. Background

Most empirical studies of parents' work-family strains have framed their explanations for strains in terms of demands, which increase time pressures on parents, and resources, which increase parents' opportunity sets and their scope to address work-family issues.

Demands can come from parents' work or family responsibilities. Demands from the work side include longer work hours (Hosking & Western 2008; Laurijssen & Glorieux 2013; Losoncz, 2011; Marshall & Barnett 1993; Wooden 2003) and irregular and non-standard hours (Hosking & Western 2008). Key elements from the family side are the numbers and ages of children, with more children and the greater care requirements of young children causing strains (Craig & Sawrikar 2008; Hosking & Western 2008; Marshall & Barnett 1993).

The standard view is that more demands increase work-family strains, but some researchers see more complexity in this relationship.¹ Greenhaus and Beutell (1985) considered how demands from home and work compete with each other to produce conflicts. There is also evidence of interactions between the types of demands with lower hours of work possibly improving work-family balance for parents of young children but reducing it for parents of older children (Kifle et al. 2014). These complex interactions and evidence that family and work demands contribute differently to strains has led researchers to distinguish between the directions

¹ More provocatively, some researchers reject that there is a relationship. Goodin et al. (2005) contend that a household's "necessary" time demands consist of (a) the market time required to earn enough income to reach the poverty standard and (b) the non-market time required to produce a minimally socially acceptable level of household outputs. They maintain that all other time spent in paid or unpaid work is discretionary and leads to "time pressure illusion."

of conflicts—that is, work-to-family and family-to-work conflicts (Reynolds & Aletraris 2007). In addition, Marshall and Barnett (1993) have argued that fulfilling the demands from multiple roles may be rewarding and thus be a source of work-family gains as well as strains.

The findings regarding the effects of resources on work-family strains have been more equivocal. Results for several economic, personal, familial, social, and community resources are consistent with expectations. Work-family conflicts have been found to increase with financial stress (Hosking & Western 2008) and fall with better physical and mental health (Hamermesh & Lee 2007; Losconz 2011), family-friendly work conditions (Berg et al. 2003, Craig & Sawrikar 2008, Skinner & Ichii 2015), social support (Losconz 2011), community resources (Skinner & Ichii 2015), and agreeableness and conscientiousness (Allen et al. 2014). However, there are also counter-intuitive findings, with work-family conflicts and time pressure increasing with education (Hosking & Western 2008; Losconz 2011), occupational status (Hosking & Western 2008), and earnings (Hamermesh & Lee 2007). The educational patterns have been corroborated with data from the U.S. which show that total time spent in market and non-market work decreased substantially from 1965 to 2003 among men and women with a high school diploma or less education but changed little among those with a college degree (Aguilar & Hurst 2007).

Hamermesh and Lee (2007) developed a rational-choice household production model to explain some of these patterns. They showed that under the plausible circumstance that extra income increases the marginal utility of household time more than the marginal utility of market work time, higher non-labor incomes and wages will make people's time constraints bind more, rather than less, raising their time stress. They also conjectured that greater household productivity would act like an increase in the time endowment and reduce time stress. Their analyses of Australian, German, Korean, and U.S. data indicated that time stress rose with

earnings but fell with health.

Barnett (1998) has offered a different conceptual approach that emphasizes a process of “fit” for mediating demands and resources to produce work-family outcomes. Barnett models work-family outcomes as bi-directional and multi-dimensional. The outcomes may involve components of conflict and fulfillment, and people may value these components differently. People’s capacities for navigating the different circumstances under which demands and resources intersect may also vary.

Although researchers have investigated many economic and social resources, they have tended to look at only a few *personal* resources—most often education, health, and personality traits. Other personal resources, including skills and cognitive ability have been less frequently examined. Adopting the theoretical framework of Hamermesh and Lee (2007), the predicted effects of these resources on work-family strains are ambiguous. On the one hand, the resources would raise people’s market productivities and, like education, contribute to greater strains. On the other hand, the resources would also raise people’s household productivities and, like health, contribute to fewer strains. From Barnett’s (1998) fit perspective, skills and cognitive ability may improve parents’ capacities to mediate demands and other resources.

Our empirical analyses consider standard measures for demands and resources but also investigate skills and cognitive ability. Thus, we expand the set of resources that have been examined in previous research. The analysis of skills and cognitive ability conveys a methodological advantage because they may be less susceptible to mutual causality than other resources. Additionally, skills and cognitive ability might be the mechanisms through which education and possibly other characteristics have their effects, so including measures for these resources in an analysis may change other findings.

3. Data and Descriptive Statistics

The HILDA survey is a large national longitudinal survey that began with 13,969 people in 7,682 Australian households in 2001 and has subsequently followed those people and their families in annual interviews. Each wave asks about demographic, economic, and other characteristics through interviews about the household, interviews with each adult member (people 15 and over), and written self-completion questionnaires (SCQs) for the adults. Of special relevance for our study, each wave also asks about work-family and work-parenting gains and strains as well as about work conditions and family circumstances. The 12th wave of the survey, administered in 2012, gathered measures of people's skills and cognitive abilities, and the 13th wave (and two earlier waves) asked a 36-item inventory of the "Big Five" personality traits. Attrition has been modest; by the 13th wave, which we use for our outcome measures, just over two-thirds of the original survey respondents completed interviews (Summerfield et al., 2017).

The outcome measure for our empirical analysis is a scale of work-family and work-parenting strains and gains, which we construct by averaging the responses to 16 items in the HILDA SCQ that asked working parents about their agreement or disagreement on a 1-7 scale with statements regarding their work and family responsibilities. The statements, which are listed in Appendix A, were adapted from an inventory developed by Marshall and Barnett (1993). Marshall and Barnett used the original inventory to construct four subscales corresponding to work-family gains, work-family strains, work-parenting gains, and work-parenting strains.

Because the HILDA survey asks a subset of the full inventory and slightly alters the wording of some statements, we independently examined how to combine the responses into scales. We conducted factor analyses on the 16 items separately for women and men. These

revealed that a single factor explained 63 percent of the overall variation for each gender. Eigenvalue and parallel analyses further indicated that a single-factor solution was appropriate. Based on this, we construct a single scale that averages the responses from all the items, reverse coding some items so that higher values indicate more work-family and work-parenting strains (fewer gains). The scale has an α reliability coefficient of 0.85 for men and 0.86 for women.

The focal explanatory variables for our analyses are measures of people's skills and cognitive abilities. Interviewers in Wave 12 asked respondents to rate their reading and math skills on 0-10 scales relative to the "average or typical Australian adult." Separately, the SCQ asked people their agreement or disagreement on a 1-7 scale with seven statements about their computer skills (e.g., "My level of computer skills meets my present needs;" "I feel comfortable installing or upgrading computer software"). We average the responses for the items to form a scale of computer skills, which has a reliability coefficient of 0.88 for men and 0.85 for women. Interviewers also administered three cognitive assessments: a backwards-digit recall test of sequences up to eight digits to measure working memory, a 25-item word pronunciation test to measure vocabulary, and a symbol look-up test to measure attention, visual scanning acuity, and motor speed (see Wooden, 2013). All our multivariate empirical analyses include the three self-assessments of skills and three interviewer-administered assessments of cognitive abilities.

Wave 13 of the HILDA asked a 36-item inventory of personality characteristics, which can be used to measure the "Big Five" traits of extroversion, agreeableness, conscientiousness, emotional stability, and openness to experience. We use scale measures that were developed by the HILDA survey staff and supplied with the survey (Summerfield et al. 2017). These traits might be viewed as a psychological resource.

The HILDA also asks about other resources and characteristics that are often included in

studies of work-life and work-family balance. As controls for people's human capital, we include indicators for completing year 12 or less (reference), Certificates III or IV, a Diploma or Advanced Diploma, a Bachelor's degree or equivalent, or a graduate-level degree. As measures of time demands, we include the person's weekly hours in paid work, caring for dependent children and elderly relatives, and conducting errands and housework. Job characteristics include monthly earnings, occupation (eight indicators), and whether the person worked in a fixed-term, casual, permanent, or self-employed arrangement.

Our multivariate analyses also include many demographic variables, including age, age squared, formal marital status (as opposed to de facto), migration from a non-English speaking country, Aboriginal or Torres Strait Islander background, self-reported health (a dummy for reporting very good or excellent health), and the numbers of dependent children aged 0-4, 5-9, 10-14, and 15-25 years old. We also account for residence in a major city, inner regional area, or outer regional or remote area.

Our analysis sample consists of partnered (married or de facto) parents who were respondents in both the 12th wave when skills and cognitive abilities were assessed and the 13th wave when work-life outcomes and personality traits were measured. We further restrict the sample to parents who were working, were 18-60 years old in the 13th wave, and had at least one dependent child aged 17 years or less. We drop observations for people who are missing data on the outcome or explanatory measures.

Table 1 reports means and standard errors of our analysis variables separately for men and women (columns 1, 2, 5 and 6) and conditional on each group having work-life strain scores above the median (columns 3, 4, 7 and 8). The first row in Table 1 lists statistics for the work-life strains scale. Men in our sample report slightly more strains than women. The difference, which

roughly amounts to responding one category higher on one scale item, is statistically significant at the 10 percent level.

The women and men in our sample differ in many other characteristics. Women's self-assessed reading skills and interviewer-assessed symbol look-up abilities are higher than men's, but women's self-assessed math skills are lower. Fewer women than men hold Certificate III or IV credentials, but more hold a Bachelor's degree. Women score higher on the traits of extraversion, agreeableness, and conscientiousness and lower on openness to experience. Women spend less time in paid work but more time in dependent care, errands, and housework. Women's and men's earnings, occupations, employment arrangements, and health also differ.

We see further differences in the characteristics of people with high levels of work-life strains. Women and men with above-median levels of work-life strains have lower reading and math skills than those with below-median strains. However, men with high levels of strains perform better on the symbol look-up test. Women and men with high levels of strains score lower on the traits of extraversion, agreeableness, conscientiousness, and emotional stability. Men with high strains also score lower on openness to experience. Women with high levels of strains work longer hours in the market but spend less time in errands and housework. Women with high levels of strains also are more likely to have permanent jobs and less likely to be casual workers or self-employed. They have more children aged five to nine years (young school-age children) and are more likely to come from indigenous backgrounds. Both women and men with high levels of strains report worse health than those with low levels of strains. The many differences in characteristics between people with high and low levels of strains, especially among women, motivate our use of multivariate empirical methods in our subsequent analyses.

4. Multivariate Analyses

The conceptual discussion indicates that work-family and work-parenting strains may depend on a host of factors, including household demands and economic, social, and personal resources. These suppositions are buttressed by our descriptive analyses, which also uncovered many associations. The conceptual discussion also suggests that spousal characteristics may be important. To address the potential confounding influences of these various characteristics, we estimate multivariate models of the work-family, work-parenting strains scale. Because of the differences in women's and men's characteristics and the likely differences in how these contribute to strains, we estimate our models separately by gender. However, to account for the presence of shared unobserved characteristics among the couples, we specify the models as maximum-likelihood Seemingly Unrelated Regressions (Zellner, 1962). We allow for unobserved characteristics to be correlated within communities by calculating robust standard errors (Huber, 1967; White, 1980) with adjustments for area clustering and stratification (Wooldridge, 2010).

One critical issue in our analysis is the potential endogeneity of several explanatory variables, owing to mutual causality and omitted variables. Due to the large number of such variables and the lack of suitable instruments, an instrumental-variable estimation strategy is not feasible. Instead, we estimate alternative specifications that do and do not include problematic variables, and we examine the robustness of our principal results across these specifications. We acknowledge though that this methodology limits our ability to draw causal inferences.

We report results from four specifications with increasing sets of explanatory variables in Table 2. The columns 1 and 2 list estimates from a SUR model of men's and women's work-parenting and work-family strains that includes the person's own self-reported skills and

interviewer-assessed abilities. This model accounts for inter-relationships among the skill and ability measures, such as a positive association between reading skills and word recognition. As with the bivariate analyses, the multivariate estimates indicate that women's computer skills and men's math skills are negatively associated with work-life strains and that men's symbol look-up results are positively associated with strains. However, the multivariate results also indicate that women's backwards-digit recall results and men's word recognition have marginally significant positive associations with strains and that men's and women's reading skills are not significantly associated with strains. The covariance estimate for the errors of the two equations is modestly positive (the implied correlation is 0.17), indicating that men's and women's reports of work-family strains are positively related, conditional on their abilities and skills.

The next two columns (3 and 4) of Table 2 report results from SUR specifications that add controls for personality traits, education, demographic characteristics, and geography. These controls can plausibly be viewed as exogenous or predetermined for the person's current work situation. The inclusion of these controls leads to weaker estimates of the skills and ability coefficients. As with the initial specification, men's math skills are negatively associated with work-family strains, and men's symbol look-up scores are positively associated. However, none of the other skills and ability coefficients for men and no skills and ability coefficients at all for women are statistically significant.

Among the personality traits, extraversion and emotional stability are negatively related to work-family strains for men and women. Conscientiousness has a negative association for men, while agreeableness has a negative association and openness to experience has a positive relationship for women. Good health is estimated to reduce strains from men and women. Several other characteristics raise strains for women, including holding a level III or IV

certificate or a post-graduate degree, an indigenous background, and the number of children aged 5-9 years and 10-14 years. However, none of the other added characteristics, except for personality traits and health, is significantly associated with men's strains. The added controls do, however, account for the correlation between the partners' strains; the covariance for the errors in the two equations is not significantly different from zero.

Columns 5 and 6 of Table 2 lists estimates from models that also add controls for each person's time use and job characteristics. Longer market work hours are estimated to increase men's and women's work-family strains, but longer hours in dependent care, errands, and housework do not. Men in management, professional, technical, trade, communications, and personal service occupations have fewer strains than those who are Laborers. Men's self-employment is also associated with fewer strains. For women, none of the job characteristic coefficients are statistically significant. Adding the time use and job characteristic measures has little effect on the other estimates. Men's math skills are positively related with strains, and men's symbol look-up results are negatively related. Women's computer skills are positively related to strains.

The final columns (7 and 8) for Table 2 report results from models that add controls for the spouse's or partner's characteristics. Table 2 lists the estimates for the person's own characteristics, and Appendix Table A2 lists estimates for the spouse's and partner's characteristics. The addition of these controls has little effect on the other results. The wife's computer skills are negatively associated with the husband's strains. The wife's extraversion, agreeableness, and employment in most non-Laborer occupations also have negative associations. The husband's emotional stability, certificate III or IV credential, and employment in a managerial occupation have negative associations with the wife's reports of work-life

strains.

Sensitivity analyses. We first examine the sensitivity of the results to the definition of the dependent variable. We replace our simple summative measure of work-life balance with the score from our factor analysis. The score allows different components of the scale to enter with different data-driven weights, which may produce a more accurate measure. We show the results of a SUR model with the same explanatory variables as column 3 but with factor scores as the dependent variables in the first column of Appendix Table A3. The results are very similar to those using the summative measure. The main difference is that the coefficient for the backwards digit recall test for women becomes marginally statistically significant and indicates that this ability reduces their work-life balance. The men's coefficient for agreeableness becomes significantly positive, and the women's coefficients for emotional stability and openness to experience lose their significance.

The second sensitivity analysis considers whether potential multicollinearity among the skill and ability measures affects the results for these variables. We examine this by incorporating these variables one at a time instead of including them all at once. The results are reported in the right panel of Appendix Table A3. The separate consideration of the skill and ability measures in a multivariate specification does not alter our results much.

5. Discussion and conclusion

Our multivariate analyses of the HILDA survey data indicate that men's self-assessed math skills and women's self-assessed computer skills are associated with fewer work-life strains. With the exception of one multivariate specification, these results are robust to the inclusion of different sets of observed controls and alternative specifications of the work-life strains measure.

Although these skills likely contribute to higher market productivity and wages, which would

tend to increase work-life strains, they may also boost household productivity which would reduce strains. Better math skills may help with financial management, time management, or problem solving. Similarly, computer skills may help with different management, communications, scheduling, and information tasks. The associations for math and computer skills measures are similar to associations that we and others (e.g., Hamermesh & Lee 2007; Losconz 2011) find for physical health. The negative association between health and work-life strains is also typically interpreted as a household production effect. Math and computer skills might also be resources that help people achieve better fit between their work and family roles, along the lines suggested by Barnett (1998).

The associations of men's math skills and women's computer skills with work-life strains appear to be independent of other human capital effects. There is little change in the estimated associations of education, occupation, or age in our models in Appendix Table A2 that do and do not include the math and computer skills variables. Thus, there is no indication that skills are mechanisms for these other variables. Indeed, for education and age we find few direct effects at all in any of our specifications.

While skills appear to reduce work-life strains, cognitive abilities seem—if anything—to increase them. Men's scores on a symbol look-up test are positively associated with work-life strains across many alternative specifications. In addition, men's word recognition scores and women's backwards-digit recall scores have significant positive relationships with strains in several specifications. None of the interviewer-assessed ability measures has a significant negative relationship with work-life strains in any of the specifications. Although we expect that the results for skills and cognitive abilities would be similar, it is possible that cognitive abilities contribute more to market productivity. Another possibility is that people with greater cognitive

ability have a greater awareness or more complete recall of the demands that they face and thus sense more strains than others.

We find that several personality traits are associated with lower levels of work-life strains. Extraversion and emotional stability are negatively related to work-life strains for men and women in almost all our analyses. Conscientiousness is consistently negatively related to women's reports of strains, while agreeableness is consistently negatively related to men's reports. Extraverts may be better at setting boundaries for their different roles—more willing to speak up and say “no.” They may also be able to engage and communicate with others to manage their work and family lives. Conscientious, agreeable, and emotionally stable behavior may reduce interpersonal conflicts, leading to fewer strains. Agreeable and emotionally stable people may also see gains and satisfaction in more situations than other people.

In contrast to the other personality traits, women's openness to experience is positively associated with work-life strains. Women with this personality trait may place high values on several types of outcomes, leading them to feel the trade-offs between outcomes more keenly.

Our results confirm that work-life strains are highly gendered. The levels of strains reported by men and women are similar, with men reporting slightly more strains than women. However, the associations with other characteristics differ substantially. There is no overlap whatsoever between men and women in the associations with skills and abilities. We also see that occupation has strong associations with strains for men but not women, while school-age children, rural residence, and holding a level III or IV certificate have strong associations for women but not men. Gendered associations also appear for some personality traits, especially the strong positive association of openness to experience among women. The many differences confirm the need to model men's and women's work-life strains in distinct equations.

The estimation results provide much less evidence of the need to model those equations together for partners in a SUR system. Although we measured a statistically significant positive correlation between the unobserved components of the partners' equations in our most parsimonious specification, the correlation disappeared once we added observed controls to the specifications. Similarly, we only find modest evidence that one partner's observed characteristics affect the other's work-life strains.

We acknowledge several limitations in these analyses. Our sample of partnered, employed, working-age parents with complete information on the outcome and explanatory measures is relatively small, which could reduce the power of our analyses. Although the measures are obtained across two waves of the HILDA survey, the design effectively amounts to a single cross-section. And several measures that we include as explanatory variables are potentially endogenous, which limits our ability to draw causal inferences. Features of our analysis mitigate some of these concerns. Our sample restrictions lead to a more homogenous analysis group. Where possible, we take advantage of the longitudinal structure of the HILDA survey and use lagged values of potentially endogenous variables. We include many observed controls in our specifications, and most reassuringly, our key results for skills and cognitive abilities are robust across many different types of specifications.

References

- Aguiar, Mark, and Erik Hurst. 2007. "Measuring Trends in Leisure: The Allocation of Time over Five Decades." *Quarterly Journal of Economics* 122:969-1006.
- Allen, Tammy, David Herst, Carly Bruck, and Martha Sutton. 2000. "Consequences Associated with Work-to-Family Conflict: A Review and Agenda for Future Research." *Journal of Occupational Health Psychology* 5:278-308.
- Allen, Tammy, Ryan Johnson, Kristin Saboe, Eunae Cho, Soner Dumani, and Sarah Evans. 2012. "Dispositional Variables and Work-Family Conflict: A Meta-analysis." *Journal of Vocational Behavior* 80:17-26.
- Barnett, Rosalind. 1998. "Toward a Review and Reconceptualization of the Work/Family Literature." *Genetic, Social, and General Psychology Monographs* 124:125-82.
- Berg, Peter, Arne Kalleberg, and Eileen Appelbaum. 2003. "Balancing Work and Family: The Role of High-Commitment Environments." *Industrial Relations* 42:168-88.
- Cawley, John, James Heckman, and Edward Vytlačil. 2001. "Three Observations on Wages and Measured Cognitive Ability." *Labour Economics* 8:419-42.
- Cobb-Clark, Deborah, and Stefanie Schurer. 2013. "Two Economists' Musings on the Stability of Locus of Control." *Economic Journal* 123:F358-400.
- Cobb-Clark, Deborah A. and Stefanie Schurer. 2012. "The Stability of Big-Five Personality Traits." *Economics Letters* 115: 11-15.
- Craig, Lyn, and Sawrikar, Pooja. 2008. "Satisfaction with Work-Family Balance for Parents of Early Adolescents Compared to Parents of Younger Children." *Journal of Family Studies* 14:91-106.
- Goodin, Robert, James Mahmud Rice, Michael Bittman, and Peter Saunders. 2005. "The Time Pressure Illusion: Discretionary Time vs. Free Time?" *Social Indicators Research* 73:43-70.
- Greenhaus, Jeffrey, and Nicholas Beutell. 1985. "Sources of Conflict Between Work and Family Roles." *Academy of Management Review* 10:76-88.
- Grzywacz, Joseph, and Brenda Bass. 2003. "Work, Family, and Mental Health: Testing Different Models of Work-Family Fit." *Journal of Marriage and Family* 65:248-62.
- Hamermesh, Daniel, and Jungmin Lee. 2007. "Stressed out on Four Continents: Time Crunch or Yuppie Kvetch?" *Review of Economics and Statistics* 89:374-83.
- Heckman, James, Jora Stixrud, and Sergio Urzua. 2006. "The Effects of Cognitive and Noncognitive Abilities on Labor Market Outcomes and Social Behavior." *Journal of Labor Economics* 24:411-82.

- Hosking, Amanda, and Mark Western. 2008. "The Effects of Non-Standard Employment on Work-Family Conflict." *Journal of Sociology* 44:5-27.
- Kifle, T., P. Kler, and S. Shankar. 2014. "The Power of the Pram: Do Young Children Determine Female Job Satisfaction." *Applied Economics Letters* 21:289-92.
- Laurijssen, Ilse, and Ignace Glorieux. 2013. "Balancing Work and Family: A Panel Analysis of the Impact of Part-Time Work on the Experience of Time Pressure." *Social Indicators Research* 112:1-17.
- Losoncz, Ibolya. 2011. "Persistent Work-Family Strain among Australian Mothers." *Family Matters* 86:79-88.
- Marshall, Nancy, and Rosalind Barnett. 1993. "Work-Family Strains and Gains Among Two-Earner Couples." *Journal of Community Psychology* 21:64-78.
- Reynolds, Jeremy, and Lydia Aletraris. 2007. "Work-Family Conflict, Children, and Hour Mismatches in Australia." *Journal of Family Issues* 28:749-72.
- Rosen, Sherwin. 1986. "The Theory of Equalizing Differences." In O. Ashenfelter and R. Layard (eds.), *Handbook of Labor Economics Volume I*. Amsterdam: North-Holland, pp. 641-92.
- Skinner, Natalie, and Reina Ichii. 2015. "Exploring a Family, Work, and Community Model of Work-Family Gains and Strains." *Community, Work and Family* 18:79-99.
- Summerfield, Michelle, Andrew Bevitt, Simon Freidin, Markus Hahn, Nathan La, Ninette Macalalad, Mark O'Shea, Nicole Watson, Roger Wilkins, and Mark Wooden. 2017. *HILDA User Manual – Release 16*. Melbourne, Melbourne Institute.
- Wooden, Mark. 2003. "Balancing Work and Family at the Start of the 21st Century: Evidence from Wave 1 of the HILDA Survey." Unpublished paper, Melbourne Institute.
- Wooden, Mark, 2013. "The Measurement of Cognitive Ability in Wave 12 of the HILDA Survey." Working Paper No. 44/13, Melbourne Institute.
- Zellner, A. 1962. "An Efficient Method of Estimating Seemingly Unrelated Regressions and Tests for Aggregation Bias." *Journal of the American Statistical Association* 57: 348-368.

Table 1. Means and Standard Errors for the Analysis Variables for Men and Women and Conditional on Above-Median Work-Life Strains

Variable	Men				Women			
	All Mean (1)	S.E. (2)	Above-median strains Mean (3)	S.E. (4)	All Mean (5)	S.E. (6)	Above-median strains Mean (7)	S.E. (8)
Work-life strains scale	3.140*	0.035	3.802***	0.027	3.055	0.041	3.798***	0.035
Skills, abilities, and personality traits								
Skills and abilities								
English reading score	7.815***	0.079	7.647*	0.123	8.571	0.058	8.425**	0.096
Math score	7.620***	0.078	7.470*	0.123	6.988	0.078	6.854*	0.115
Computer skills scale	5.291	0.056	5.247	0.081	5.339	0.054	5.280	0.070
Backwards digit span test score	5.250	0.063	5.209	0.092	5.309	0.063	5.371	0.095
Symbol-digits modalities test score	53.154***	0.409	53.876*	0.572	56.699	0.386	56.883	0.618
Word pronunciation test score	14.673	0.217	14.518	0.352	14.892	0.203	14.538	0.295
'Big Five' personality traits								
Extraversion	4.291***	0.044	4.072***	0.065	4.589	0.047	4.432***	0.071
Agreeableness	5.142***	0.036	5.005***	0.051	5.707	0.035	5.520***	0.050
Conscientiousness	5.107***	0.042	4.919***	0.062	5.338	0.046	5.230**	0.065
Emotional stability	5.122	0.043	4.912***	0.054	5.174	0.045	4.928***	0.066
Openness to experience	4.299*	0.044	4.216*	0.063	4.190	0.045	4.222	0.062
Education								
Year 12 or less (ref.)	0.232	0.017	0.245	0.026	0.246	0.018	0.254	0.028
Certificate III or IV	0.285***	0.021	0.269	0.029	0.161	0.016	0.192*	0.024
Diploma or advanced diploma	0.106	0.014	0.120	0.021	0.100	0.013	0.088	0.018
Bachelor's degree or equivalent	0.283***	0.020	0.281	0.029	0.413	0.021	0.388	0.031
Post-graduate degree	0.093	0.012	0.084	0.016	0.079	0.012	0.079	0.017
Weekly time use								
Hours in paid work	44.608***	0.459	45.157	0.688	28.094	0.585	29.733***	0.812
Hours in dependent care	11.788***	0.515	11.878	0.910	24.174	1.006	22.853	1.362
Hours in errands and housework	10.455***	0.383	10.094	0.495	22.710	0.578	21.711*	0.857
Job characteristics								
Monthly earnings (1,000s)	6.649***	0.181	6.942	0.265	3.592	0.123	3.754	0.185

Occupation								
Laborer (ref.)	0.075***	0.011	0.084	0.017	0.026	0.007	0.025	0.010
Manager	0.207***	0.017	0.197	0.025	0.100	0.013	0.108	0.019
Professional	0.301**	0.019	0.289	0.030	0.352	0.019	0.338	0.030
Tech and trade	0.203***	0.017	0.197	0.026	0.059	0.010	0.054	0.013
Communication or personal service	0.063***	0.010	0.056	0.014	0.126	0.014	0.129	0.022
Clerical or administrative	0.065***	0.010	0.076	0.017	0.248	0.018	0.250	0.027
Sales worker	0.024***	0.007	0.032	0.011	0.075	0.011	0.083	0.017
Machine operator	0.063***	0.010	0.068	0.015	0.014	0.005	0.013	0.006
Employment contract								
Permanent (ref.)	0.677*	0.022	0.711	0.031	0.626	0.022	0.679**	0.031
Fixed term	0.075	0.012	0.088	0.018	0.069	0.012	0.075	0.018
Casual	0.035***	0.008	0.028	0.011	0.173	0.017	0.142*	0.021
Self-employed	0.213***	0.018	0.173**	0.024	0.132	0.015	0.104*	0.021
Demographic and geographic variables								
Age	42.435***	0.326	42.129	0.494	40.337	0.314	40.292	0.451
Married	0.854	0.015	0.880	0.019	0.854	0.015	0.858	0.022
Migrant (non-English speaking country)	0.104	0.013	0.120	0.021	0.108	0.014	0.117	0.020
Aboriginal or Torres Strait Islander	0.010	0.004	0.004	0.004	0.012	0.004	0.021*	0.008
Health excellent or very good	0.555**	0.021	0.486**	0.029	0.622	0.021	0.571**	0.031
# dependent children 0-4 years	0.484	0.032	0.502	0.046	0.484	0.032	0.500	0.046
# dependent children 5-9 years	0.547	0.034	0.566	0.048	0.547	0.034	0.608*	0.051
# dependent children 10-14 years	0.539	0.033	0.522	0.048	0.539	0.033	0.529	0.044
# dependent children 15-24 years	0.333	0.028	0.297	0.038	0.333	0.028	0.333	0.042
Major city (ref.)	0.705	0.020	0.723	0.031	0.705	0.020	0.713	0.031
Inner regional area	0.205	0.018	0.197	0.027	0.205	0.018	0.192	0.026
Outer regional or remote area	0.091	0.015	0.080	0.021	0.091	0.015	0.096	0.022
Observations	508		249		508		240	

Notes: Authors' calculations from the HILDA survey, Waves 12 & 13. Within each column, means are listed on the left, and robust (Huber, 1967; White, 1980) standard errors adjusted for clustering (Wooldridge, 2010) at the enumeration area level and for stratification from the survey design, on the left. Statistical differences in means are tested between groups as follows: column 1, men vs. women; column 2, above vs. below median strains among men; column 4, above vs. below median strains among women.

*** Significantly different at 1 percent

** Significantly different at 5 percent

* Significantly different at 10 percent

Table 2. Estimates from Alternative Work-Life Strains SUR Model Specifications, By Gender

	Only skills and cognitive abilities		Adding controls for personality, education, demographic and geographic characteristics		Adding controls for job characteristics and time use		(4) Adding spousal characteristics	
	Men (1)	Women (2)	Men (3)	Women (4)	Men (5)	Women (6)	Men (7)	Women (8)
Skills and abilities								
English reading score	-0.040 [0.027]	-0.047 [0.031]	-0.001 [0.026]	0.001 [0.030]	-0.001 [0.027]	-0.003 [0.030]	-0.002 [0.025]	0.017 [0.030]
Math score	-0.084*** [0.026]	0.005 [0.023]	-0.070*** [0.025]	0.013 [0.024]	-0.071*** [0.025]	0.011 [0.023]	-0.076*** [0.025]	0.012 [0.022]
Computer skills scale	-0.013 [0.030]	-0.073** [0.037]	-0.027 [0.031]	-0.058 [0.037]	-0.019 [0.031]	-0.085** [0.036]	-0.014 [0.030]	-0.086** [0.037]
Backwards digit span test score	0.029 [0.027]	0.053* [0.028]	0.022 [0.026]	0.031 [0.027]	0.023 [0.026]	0.040 [0.027]	0.027 [0.025]	0.018 [0.028]
Symbol-digits modalities test score	0.011*** [0.004]	0.001 [0.005]	0.006* [0.004]	0.001 [0.004]	0.008** [0.004]	0.001 [0.004]	0.008** [0.004]	0.001 [0.004]
Word pronunciation test score	0.015* [0.008]	-0.004 [0.010]	0.009 [0.008]	-0.016 [0.010]	0.012 [0.008]	-0.013 [0.011]	0.014* [0.009]	-0.005 [0.011]
Personality traits								
Extraversion			-0.112*** [0.038]	-0.069* [0.036]	-0.112*** [0.037]	-0.070** [0.034]	-0.108*** [0.037]	-0.080** [0.034]
Agreeableness			-0.055 [0.043]	-0.291*** [0.055]	-0.047 [0.044]	-0.282*** [0.056]	-0.059 [0.043]	-0.270*** [0.051]
Conscientiousness			-0.107*** [0.039]	-0.058 [0.041]	-0.110*** [0.040]	-0.068* [0.041]	-0.122*** [0.040]	-0.057 [0.040]
Emotional stability			-0.115*** [0.039]	-0.117*** [0.044]	-0.135*** [0.040]	-0.113** [0.044]	-0.127*** [0.041]	-0.111*** [0.043]
Openness to experience			-0.028 [0.042]	0.097** [0.041]	-0.035 [0.043]	0.107** [0.042]	-0.025 [0.044]	0.113** [0.044]
Education								
Certificate III or IV			-0.001 [0.102]	0.245** [0.116]	0.044 [0.104]	0.282** [0.119]	0.063 [0.099]	0.265** [0.117]

Diploma or advanced diploma	0.161 [0.140]	0.057 [0.142]	0.191 [0.143]	-0.009 [0.152]	0.134 [0.142]	0.009 [0.146]
Bachelor's degree or equivalent	0.093 [0.101]	0.161 [0.099]	0.126 [0.110]	0.120 [0.106]	0.118 [0.116]	0.100 [0.114]
Post-graduate degree	0.146 [0.123]	0.270* [0.160]	0.147 [0.133]	0.158 [0.167]	0.144 [0.141]	0.141 [0.178]
Weekly time use						
Hours in paid work			0.010*** [0.004]	0.012*** [0.004]	0.010*** [0.004]	0.011*** [0.004]
Hours in dependent care			0.002 [0.003]	-0.002 [0.002]	0.002 [0.004]	-0.002 [0.002]
Hours in errands and housework			-0.005 [0.004]	0.002 [0.003]	-0.008** [0.004]	0.002 [0.003]
Job characteristics						
Monthly earnings (1,000s)			0.009 [0.008]	-0.012 [0.016]	0.014* [0.008]	-0.015 [0.017]
Manager			-0.308** [0.140]	0.080 [0.230]	-0.351** [0.142]	0.138 [0.248]
Professional			-0.331** [0.138]	0.018 [0.203]	-0.342** [0.143]	0.059 [0.228]
Techs and trade			-0.329** [0.130]	-0.191 [0.244]	-0.324** [0.134]	-0.16 [0.270]
Communication/personal service			-0.422** [0.185]	-0.002 [0.211]	-0.430** [0.184]	0.023 [0.238]
Clerical and administrative			-0.258 [0.182]	0.005 [0.198]	-0.249 [0.196]	0.051 [0.227]
Sales worker			0.092 [0.289]	-0.136 [0.215]	0.216 [0.310]	-0.117 [0.239]
Machine operator			-0.140 [0.160]	-0.139 [0.327]	-0.120 [0.153]	-0.107 [0.355]
Fixed-term contract			0.031 [0.111]	0.105 [0.137]	-0.006 [0.113]	0.113 [0.140]
Casual contract			-0.025 [0.192]	-0.060 [0.093]	-0.089 [0.187]	-0.066 [0.091]
Self-employed			-0.186** [0.094]	-0.103 [0.121]	-0.120 [0.094]	-0.122 [0.126]

Demographic/geographic vars.								
Age / 10			0.62	-0.301	0.464	-0.234	0.004	-0.06
			[0.434]	[0.496]	[0.421]	[0.511]	[0.510]	[0.722]
Age squared / 100			-0.081	0.034	-0.054	0.028	-0.002	0.008
			[0.050]	[0.063]	[0.048]	[0.064]	[0.059]	[0.086]
Married			0.088	0.048	0.068	0.096	0.137	0.050
			[0.104]	[0.107]	[0.102]	[0.105]	[0.109]	[0.113]
Migrant (non-English speaking)			0.001	-0.043	0.057	-0.043	0.028	-0.163
			[0.111]	[0.135]	[0.106]	[0.132]	[0.147]	[0.149]
Aboriginal or Torres Strait Islander			-0.297	0.584*	-0.287	0.504	-0.427*	0.565*
			[0.222]	[0.323]	[0.229]	[0.312]	[0.229]	[0.309]
Health excellent or very good			-0.201***	-0.187**	-0.168**	-0.194**	-0.080	-0.185**
			[0.074]	[0.077]	[0.072]	[0.079]	[0.071]	[0.078]
# dependent children 0-4 years			-0.007	0.089	0.019	0.166**	0.092	0.159**
			[0.066]	[0.067]	[0.063]	[0.068]	[0.068]	[0.071]
# dependent children 5-9 years			-0.043	0.175***	-0.036	0.176***	-0.020	0.160**
			[0.052]	[0.059]	[0.051]	[0.061]	[0.052]	[0.062]
# dependent children 10-14 years			0.045	0.125**	0.024	0.117**	0.021	0.091
			[0.049]	[0.057]	[0.048]	[0.058]	[0.049]	[0.060]
# dependent children 15-24 years			-0.047	0.073	-0.062	0.032	-0.111*	0.050
			[0.060]	[0.078]	[0.057]	[0.082]	[0.062]	[0.079]
Inner regional area			-0.093	-0.032	-0.104	-0.031	-0.048	0.012
			[0.083]	[0.091]	[0.084]	[0.090]	[0.083]	[0.091]
Outer regional or remote area			-0.166	-0.257**	-0.137	-0.227**	-0.126	-0.158
			[0.130]	[0.108]	[0.120]	[0.111]	[0.119]	[0.113]
Constant	3.227***	3.529***	4.158***	6.143***	4.055***	5.718***	4.846***	5.815***
	[0.243]	[0.346]	[1.005]	[1.028]	[0.998]	[1.045]	[1.050]	[1.269]
σ_{11}	0.619***		0.521***		0.493***		0.459***	
	[0.034]		[0.032]		[0.031]		[0.030]	
σ_{12}	0.115***		0.047		0.032		0.031	
	[0.033]		[0.029]		[0.028]		[0.024]	
σ_{22}	0.761***		0.618***		0.593***		0.549***	
	[0.047]		[0.036]		[0.035]		[0.033]	

Notes: Authors' estimates of SUR model coefficients from the HILDA survey, Waves 12 & 13. Each model has 508 observations. Robust standard errors (Huber, 1967; White, 1980), adjusted for clustering (Wooldridge, 2010) at the enumeration area level and for stratification from the survey design appear in brackets. Reference categories for dummy variables: "Married" (Marital status), "Year 12 or less" (Education), "Laborer" (Occupation), "Permanent" (Contract type), and "Major cities" (Area). Specification 4 also includes controls for spouses' or partners' characteristics; detailed results shown in Appendix Table A2.

*** Significant at 1 percent level.

** Significant at 5 percent level.

* Significant at 10 percent level.

Appendix A1. Items in the Work-Family, Work-Parenting Gains and Strains Scale

The SCQ of the HILDA survey asked parents who were engaged in paid work,

The following statements are about combining work with family responsibilities. Please indicate...how strongly you agree or disagree with each.

1. Having both work and family responsibilities makes me a more well-rounded person
2. Having both work and family responsibilities gives my life more variety
3. Managing work and family responsibilities as well as I do makes me feel competent
4. Because of my family responsibilities, I have to turn down work activities or opportunities that I would prefer to take on
5. Having both work and family responsibilities challenges me to be the best I can be
6. Because of my family responsibilities, the time I spend working is less enjoyable and more pressured
7. Because of the requirements of my job, I miss out on home or family activities that I would prefer to participate in
8. Because of the requirements of my job, my family time is less enjoyable and more pressured
9. Working makes me feel good about myself, which is good for my children
10. My work has a positive effect on my children
11. Working helps me to better appreciate the time I spend with my children
12. The fact that I am working makes me a better parent
13. I worry about what goes on with my children while I'm at work
14. Working leaves me with too little time or energy to be the kind of parent I want to be
15. Working causes me to miss out on some of the rewarding aspects of being a parent
16. Thinking about the children interferes with my performance at work

Possible responses ranged from 1=Strongly Disagree to 7=Strongly Agree.

Appendix Table A2. Work-Life SUR Model Coefficient Estimates for Spouse's or Partner's Characteristics, By Gender

	Men (wife's characteristics)	Women (husband's characteristics)
English reading score	0.036 [0.027]	0.002 [0.028]
Math score	-0.020 [0.021]	0.011 [0.024]
Computer skills scale	-0.066** [0.031]	-0.005 [0.036]
Backwards digit span test score	0.013 [0.023]	0.041 [0.027]
Symbol-digits modalities test score	0.001 [0.005]	-0.003 [0.005]
Word pronunciation test score	-0.009 [0.010]	-0.007 [0.010]
Extraversion	-0.054* [0.028]	-0.034 [0.038]
Agreeableness	0.053 [0.046]	-0.026 [0.048]
Conscientiousness	-0.059* [0.034]	-0.060 [0.043]
Emotional stability	-0.007 [0.039]	-0.074* [0.043]
Openness to experience	0.017 [0.040]	0.040 [0.044]
Certificate III or IV	0.163 [0.111]	-0.236** [0.107]
Diploma or advanced diploma	0.141 [0.131]	-0.015 [0.155]
Bachelor's degree or equivalent	0.173 [0.113]	-0.019 [0.116]
Post-graduate degree	0.080 [0.176]	-0.108 [0.156]
Hours in paid care	0.004 [0.003]	0.008 [0.005]
Hours in dependent care	-0.001 [0.002]	0.000 [0.003]
Hours in errands and housework	-0.004 [0.003]	0.006 [0.006]
Monthly earnings (1,000s)	0.013 [0.015]	0.001 [0.009]
Manager	-0.324* [0.172]	-0.407** [0.179]

Professional	-0.351**	-0.262
	[0.150]	[0.180]
Techs and trade	-0.263	-0.204
	[0.177]	[0.182]
Communication/personal service	-0.367**	-0.336
	[0.162]	[0.216]
Clerical/administrative	-0.413***	-0.179
	[0.136]	[0.211]
Sales worker	-0.253	-0.246
	[0.173]	[0.277]
Machine operator	-0.512*	-0.123
	[0.292]	[0.201]
Fixed-term contract	-0.102	0.107
	[0.138]	[0.142]
Casual contract	0.030	0.093
	[0.096]	[0.199]
Self-employed	0.037	-0.017
	[0.117]	[0.101]
Age / 10	0.278	0.003
	[0.473]	[0.696]
Age squared / 100	-0.025	-0.002
	[0.058]	[0.078]
Migrant (non-English speaking)	0.015	0.226
	[0.151]	[0.137]
Aboriginal or Torres Strait Islander	-0.172	-0.311
	[0.187]	[0.303]
Health excellent or very good	-0.102	0.013
	[0.072]	[0.076]

Notes: Authors' estimates of SUR model coefficients for spouse/partner characteristics from the HILDA survey, Waves 12 & 13, using specification 4 from Table 2. Robust standard errors (Huber, 1967; White, 1980), adjusted for clustering (Wooldridge, 2010) at the enumeration area level and for stratification from the survey design appear in brackets. Reference categories for dummy variables: "Year 12 or less" (Education), "Laborer" (Occupation), and "Permanent" (Contract type).

*** Significant at 0.01 level.

** Significant at 0.05 level.

* Significant at 0.1 level.

Appendix Table A3. Work-Life SUR Results: Sensitivity Analyses, By Gender

	Using factor score as dependent variable		Including skills and ability measures individually											
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Skills and abilities														
English reading score	0.001 [0.031]	0.002 [0.034]							-0.015 [0.021]	-0.013 [0.026]				
Math score	-0.080*** [0.029]	0.017 [0.025]									-0.056*** [0.021]	0.009 [0.021]		
Computer skills scale	-0.045 [0.035]	-0.107*** [0.039]											-0.007 [0.031]	-0.083** [0.036]
Backwards digit span test score	0.019 [0.030]	0.049* [0.028]	0.021 [0.024]	0.026 [0.026]										
Symbol-digits modalities test score	0.010** [0.004]	0.003 [0.004]			0.008** [0.003]	0.001 [0.004]								
Word pronunciation test score	0.014 [0.009]	-0.009 [0.011]					0.012* [0.007]	-0.012 [0.010]						
Personality traits														
Extraversion	-0.146*** [0.044]	-0.091** [0.036]	-0.127*** [0.038]	-0.078** [0.034]	-0.118*** [0.037]	-0.078** [0.035]	-0.128*** [0.038]	-0.077** [0.035]	-0.123*** [0.038]	-0.077** [0.034]	-0.122*** [0.038]	-0.078** [0.035]	-0.128*** [0.038]	-0.073** [0.035]
Agreeableness	-0.100* [0.051]	-0.307*** [0.057]	-0.062 [0.045]	-0.279*** [0.054]	-0.061 [0.045]	-0.285*** [0.054]	-0.06 [0.044]	-0.291*** [0.054]	-0.063 [0.044]	-0.282*** [0.055]	-0.056 [0.044]	-0.287*** [0.054]	-0.063 [0.045]	-0.284*** [0.055]
Conscientiousness	-0.119** [0.047]	-0.089** [0.044]	-0.127*** [0.041]	-0.063 [0.040]	-0.127*** [0.040]	-0.065 [0.040]	-0.120*** [0.040]	-0.068** [0.040]	-0.126*** [0.041]	-0.063 [0.041]	-0.117*** [0.041]	-0.066 [0.041]	-0.126*** [0.041]	-0.065 [0.041]
Emotional stability	-0.087* [0.045]	-0.062 [0.046]	-0.129*** [0.041]	-0.121*** [0.044]	-0.131*** [0.041]	-0.120*** [0.044]	-0.134*** [0.041]	-0.119*** [0.044]	-0.126*** [0.041]	-0.120*** [0.044]	-0.122*** [0.041]	-0.121*** [0.044]	-0.128*** [0.042]	-0.112** [0.044]
Openness to experience	-0.044 [0.049]	0.068 [0.045]	-0.014 [0.043]	0.087** [0.041]	-0.02 [0.043]	0.089** [0.041]	-0.024 [0.043]	0.102** [0.041]	-0.009 [0.043]	0.092** [0.041]	-0.013 [0.043]	0.090** [0.040]	-0.01 [0.043]	0.101** [0.041]
Education														
Certificate III or IV	0.019 [0.119]	0.185 [0.126]	0.052 [0.104]	0.280** [0.120]	0.049 [0.103]	0.278** [0.121]	0.045 [0.104]	0.272** [0.119]	0.045 [0.105]	0.274** [0.120]	0.047 [0.103]	0.274** [0.120]	0.049 [0.104]	0.286** [0.119]
Diploma or advanced diploma	0.218 [0.161]	-0.009 [0.158]	0.232 [0.146]	-0.029 [0.151]	0.209 [0.145]	-0.028 [0.152]	0.213 [0.146]	-0.023 [0.152]	0.235 [0.145]	-0.029 [0.152]	0.222 [0.143]	-0.032 [0.151]	0.239 [0.147]	-0.015 [0.152]
Bachelor's degree or equivalent	0.123 [0.125]	0.052 [0.113]	0.118 [0.108]	0.079 [0.103]	0.098 [0.108]	0.084 [0.103]	0.092 [0.111]	0.104 [0.105]	0.13 [0.109]	0.086 [0.103]	0.162 [0.109]	0.078 [0.103]	0.126 [0.108]	0.111 [0.102]
Post-graduate degree	0.071 [0.153]	-0.013 [0.172]	0.147 [0.130]	0.095 [0.162]	0.133 [0.129]	0.104 [0.162]	0.108 [0.131]	0.134 [0.164]	0.154 [0.130]	0.11 [0.162]	0.182 [0.132]	0.098 [0.163]	0.15 [0.131]	0.151 [0.162]
Weekly time use:														
Hours in paid work	0.009** [0.004]	0.008** [0.004]	0.008** [0.003]	0.012*** [0.004]	0.008** [0.003]	0.011*** [0.004]	0.008** [0.003]	0.010*** [0.004]	0.007** [0.003]	0.011*** [0.004]	0.007** [0.003]	0.011*** [0.004]	0.007** [0.003]	0.012*** [0.004]
Hours in dependent care	0.001 [0.004]	-0.001 [0.002]	0.001 [0.003]	-0.002 [0.002]	0.001 [0.003]	-0.002 [0.002]	0.002 [0.003]	-0.002 [0.002]	0.001 [0.003]	-0.002 [0.003]	0.001 [0.003]	-0.002 [0.002]	0.001 [0.003]	-0.002 [0.002]
Hours in errands and housework	-0.007* [0.004]	0.002 [0.003]	-0.006* [0.004]	0.003 [0.003]	-0.006 [0.004]	0.003 [0.003]	-0.006 [0.004]	0.003 [0.003]	-0.006* [0.004]	0.003 [0.003]	-0.005 [0.004]	0.003 [0.003]	-0.006 [0.004]	0.002 [0.003]
Job characteristics														
Monthly earnings (1,000s)	0.004 [0.009]	-0.016 [0.018]	0.007 [0.008]	-0.017 [0.016]	0.007 [0.008]	-0.018 [0.016]	0.008 [0.008]	-0.015 [0.016]	0.008 [0.008]	-0.017 [0.017]	0.01 [0.008]	-0.018 [0.016]	0.008 [0.008]	-0.014 [0.016]
Manager	-0.393** [0.161]	0.088 [0.238]	-0.278** [0.137]	0.068 [0.215]	-0.296** [0.140]	0.104 [0.211]	-0.302** [0.136]	0.114 [0.217]	-0.266* [0.138]	0.123 [0.215]	-0.277** [0.137]	0.092 [0.214]	-0.274* [0.140]	0.138 [0.217]
Professional	-0.379** [0.156]	-0.018 [0.209]	-0.319** [0.137]	0.019 [0.190]	-0.348** [0.140]	0.05 [0.189]	-0.345** [0.137]	0.065 [0.197]	-0.306** [0.139]	0.067 [0.190]	-0.302** [0.138]	0.043 [0.190]	-0.315** [0.138]	0.057 [0.193]
Technical or trade	-0.382** [0.152]	-0.213 [0.244]	-0.311** [0.132]	-0.198 [0.234]	-0.316** [0.133]	-0.178 [0.234]	-0.318** [0.131]	-0.182 [0.238]	-0.318** [0.132]	-0.162 [0.235]	-0.340** [0.133]	-0.188 [0.237]	-0.318** [0.134]	-0.153 [0.238]
Communication/personal services	-0.559*** [0.213]	-0.007 [0.212]	-0.346* [0.188]	0.012 [0.200]	-0.361* [0.186]	0.032 [0.201]	-0.374** [0.184]	0.016 [0.205]	-0.331* [0.189]	0.037 [0.200]	-0.370** [0.187]	0.025 [0.203]	-0.343* [0.187]	0.036 [0.206]

Clerical/administrative	-0.275 [0.211]	0.058 [0.202]	-0.241 [0.182]	-0.026 [0.181]	-0.277 [0.187]	0 [0.180]	-0.271 [0.183]	0.005 [0.187]	-0.238 [0.181]	0.017 [0.184]	-0.232 [0.181]	-0.008 [0.183]	-0.248 [0.184]	0.044 [0.188]
Sales worker	0.154 [0.346]	-0.112 [0.219]	0.158 [0.295]	-0.096 [0.207]	0.176 [0.301]	-0.072 [0.207]	0.13 [0.293]	-0.074 [0.212]	0.155 [0.294]	-0.054 [0.206]	0.091 [0.282]	-0.078 [0.207]	0.158 [0.294]	-0.093 [0.210]
Machine operator	-0.291 [0.182]	0.096 [0.379]	-0.072 [0.155]	-0.021 [0.313]	-0.091 [0.157]	0.018 [0.306]	-0.065 [0.154]	0.005 [0.306]	-0.082 [0.155]	0.047 [0.309]	-0.129 [0.161]	0.009 [0.313]	-0.078 [0.155]	-0.038 [0.314]
Fixed-term contract	0.075 [0.131]	0.075 [0.151]	0.019 [0.108]	0.109 [0.138]	0.027 [0.107]	0.105 [0.139]	0.008 [0.109]	0.105 [0.139]	0.025 [0.109]	0.105 [0.139]	0.031 [0.112]	0.101 [0.139]	0.019 [0.109]	0.094 [0.137]
Casual contract	-0.04 [0.220]	-0.053 [0.097]	-0.039 [0.207]	-0.065 [0.092]	-0.058 [0.206]	-0.073 [0.092]	-0.038 [0.205]	-0.066 [0.093]	-0.039 [0.206]	-0.07 [0.092]	-0.034 [0.200]	-0.068 [0.093]	-0.05 [0.204]	-0.074 [0.092]
Self-employed	-0.189* [0.106]	-0.051 [0.130]	-0.182* [0.093]	-0.126 [0.123]	-0.195** [0.093]	-0.13 [0.123]	-0.184** [0.092]	-0.129 [0.123]	-0.185* [0.095]	-0.131 [0.123]	-0.174* [0.123]	-0.13 [0.123]	-0.179* [0.095]	-0.102 [0.121]
Dem./geog. variables														
Age / 10	0.42 [0.486]	-0.342 [0.545]	0.484 [0.426]	-0.297 [0.525]	0.498 [0.427]	-0.344 [0.517]	0.491 [0.426]	-0.33 [0.512]	0.508 [0.426]	-0.331 [0.514]	0.52 [0.421]	-0.342 [0.518]	0.499 [0.425]	-0.33 [0.514]
Age squared / 100	-0.046 [0.055]	0.04 [0.069]	-0.058 [0.049]	0.036 [0.066]	-0.056 [0.049]	0.043 [0.065]	-0.061 [0.049]	0.043 [0.065]	-0.061 [0.049]	0.041 [0.065]	-0.063 [0.048]	0.042 [0.066]	-0.061 [0.049]	0.037 [0.065]
Married	0.073 [0.113]	0.105 [0.110]	0.091 [0.105]	0.105 [0.106]	0.077 [0.104]	0.101 [0.106]	0.103 [0.105]	0.098 [0.105]	0.084 [0.106]	0.106 [0.106]	0.084 [0.103]	0.106 [0.106]	0.095 [0.105]	0.107 [0.106]
Migrant (non-English speaking country)	-0.004 [0.119]	-0.037 [0.152]	0.018 [0.105]	0.013 [0.119]	0.006 [0.106]	0.018 [0.119]	0.072 [0.107]	-0.031 [0.126]	-0.001 [0.106]	0.008 [0.123]	-0.003 [0.103]	0.018 [0.119]	0.012 [0.105]	0.027 [0.118]
Aboriginal or Torres Strait Islander	-0.403 [0.248]	0.531 [0.355]	-0.235 [0.214]	0.464 [0.323]	-0.222 [0.228]	0.443 [0.325]	-0.23 [0.219]	0.461 [0.332]	-0.245 [0.211]	0.449 [0.327]	-0.334 [0.213]	0.459 [0.329]	-0.249 [0.214]	0.43 [0.309]
Health excellent or very good	-0.178** [0.080]	-0.215** [0.085]	-0.190*** [0.073]	-0.205** [0.080]	-0.187** [0.073]	-0.206*** [0.079]	-0.195*** [0.073]	-0.199** [0.079]	-0.185** [0.074]	-0.202** [0.079]	-0.172** [0.073]	-0.206** [0.080]	-0.190** [0.073]	-0.192** [0.079]
# dep. children 0-4 years	0.009 [0.073]	0.128* [0.071]	0.025 [0.062]	0.152** [0.069]	0.036 [0.062]	0.153** [0.070]	0.021 [0.062]	0.158** [0.070]	0.021 [0.062]	0.153** [0.062]	0.01 [0.062]	0.155** [0.070]	0.023 [0.062]	0.163** [0.068]
# dep. children 5-9 years	-0.056 [0.059]	0.173*** [0.062]	-0.032 [0.050]	0.184*** [0.062]	-0.033 [0.051]	0.185*** [0.062]	-0.032 [0.050]	0.182*** [0.062]	-0.032 [0.050]	0.184*** [0.062]	-0.033 [0.051]	0.186*** [0.062]	-0.033 [0.051]	0.181*** [0.061]
# dep. children 10-14 years	-0.002 [0.055]	0.119* [0.062]	0.037 [0.047]	0.129** [0.058]	0.036 [0.047]	0.131** [0.058]	0.039 [0.047]	0.130** [0.058]	0.037 [0.047]	0.132** [0.058]	0.026 [0.048]	0.131** [0.058]	0.037 [0.047]	0.126** [0.058]
# dep. children 15-24 years	-0.085 [0.064]	0.051 [0.085]	-0.046 [0.058]	0.052 [0.081]	-0.046 [0.081]	0.055 [0.081]	-0.046 [0.057]	0.048 [0.081]	-0.044 [0.057]	0.054 [0.081]	-0.054 [0.056]	0.053 [0.082]	-0.045 [0.057]	0.042 [0.081]
Inner regional	-0.105 [0.098]	-0.03 [0.093]	-0.09 [0.084]	-0.044 [0.090]	-0.087 [0.083]	-0.041 [0.090]	-0.084 [0.083]	-0.034 [0.090]	-0.093 [0.084]	-0.041 [0.091]	-0.109 [0.084]	-0.039 [0.090]	-0.096 [0.084]	-0.031 [0.090]
Outer regional or remote area	-0.124 [0.134]	-0.155 [0.118]	-0.165 [0.129]	-0.245** [0.110]	-0.144 [0.128]	-0.244** [0.109]	-0.157 [0.129]	-0.255** [0.110]	-0.164 [0.128]	-0.246** [0.110]	-0.154 [0.124]	-0.240** [0.109]	-0.166 [0.129]	-0.225** [0.111]
Constant	1.521 [1.171]	3.135*** [1.129]	4.230*** [0.994]	5.514*** [1.018]	3.816*** [0.992]	5.675*** [1.003]	4.198*** [0.990]	5.853*** [0.978]	4.379*** [0.996]	5.770*** [0.976]	4.559*** [0.982]	5.718*** [0.976]	4.364*** [0.976]	6.048*** [1.003]
σ_{11}	0.636*** [0.046]		0.509*** [0.033]		0.506*** [0.033]		0.508*** [0.033]		0.510*** [0.033]		0.503*** [0.033]		0.510*** [0.034]	
σ_{12}	0.036 [0.033]		0.032 [0.029]		0.036 [0.028]		0.035 [0.028]		0.035 [0.028]		0.038 [0.028]		0.030 [0.028]	
σ_{22}	0.670*** [0.038]		0.604*** [0.036]		0.605*** [0.036]		0.603*** [0.036]		0.605*** [0.035]		0.605*** [0.035]		0.597*** [0.034]	

Notes: Authors' estimates of SUR model coefficients from the HILDA survey, Waves 12 & 13. Each model has 508 observations. Robust standard errors (Huber, 1967; White, 1980), adjusted for clustering (Wooldridge, 2010) at the enumeration area level and for stratification from the survey design appear in brackets. Reference categories for dummy variables: "Married" (Marital status), "Year 12 or less" (Education), "Laborer" (Occupation), "Permanent" (Contract type), and "Major cities" (Area).

*** Significant at 1 percent level.

** Significant at 5 percent level.

* Significant at 10 percent level.