

# Ryan Finnigan\* & Jo Mhairi Hale. “Working 9 to 5? Union Membership and Work Hours and Schedules.” *Social Forces*

## Online Appendix

### *I. Inconsistencies within Persons between Waves*

Some key variables within the SIPP have differences within persons between waves that indicate probable misreporting or person misidentification. The proportion of likely miscoded observations for each variable is relatively small, most below one percent except education. We excluded individuals from the sample with inconsistent sex (320 out of 131,892 persons ever in the 2008 SIPP). Though gender identity and reporting is certainly malleable, close inspection of several cases reveal misidentification of individuals between waves. One example is a husband and wife in a married-couple household whose identifiers swapped between two survey waves. We also excluded an additional 1,627 individuals with age differences larger than likely misreporting (age larger by two years in preceding wave, or smaller by five years). Again, close inspection of several of these cases indicated misidentification of individuals between waves.

Next, we resolved within-person inconsistencies with education, nativity, citizenship, and race by using the modal category reported across all waves. Individuals' education was replaced with their modal categories (2.23% of all person-months) if their reported education declined between waves, or increased two or more categories between four-month waves. Nativity was replaced with the modal category when reporting changed with persons, affecting 0.03% of all person-months. Similarly, citizenship status was replaced with the modal category for individuals switching from citizens to non-citizens between waves (only 15 individuals).

Race/ethnicity was replaced with the modal category for individuals reporting different categories between waves, affecting 0.2% of all person-months. Individuals with multiple modal categories were recoded as “Other Race.” This recoding is not meant to negate the socially constructed and context-dependent nature of racial identification. However, fixed categories within persons facilitate comparison of longitudinal and cumulative employment outcomes between groups. Additionally, we emphasize that most inconsistencies within persons resemble misidentification, and a very small fraction of person-months are recoded.

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*II. Coefficients from Control Variables in Selected Models*

Table A1. Coefficients for control variables from Tables 2, 3, 4, and 5.

	Hours Vary (Table 2, Model 6)	Non-Standard Schedule (Table 3, Model 6)	Logged Monthly Earnings (Table 4, Model 4)	Logged Monthly Earnings (Table 5, Model 4)
<i>State-Level Controls</i>				
ln(GSP PC)	0.031 (1.21)	-0.266 (-1.25)		
Economic Growth	-0.001 (-1.50)	0.011+ (1.65)		
Unemployment Rate	0.007* (2.49)	0.004 (0.17)		
Minimum Wage	-0.007+ (-1.92)	0.012 (0.38)		
Right-to-Work	0.002 (0.73)	-0.003 (-0.10)		
ln(Population)	-0.002 (-0.24)	0.140+ (1.78)		
<i>Individual-Level Controls</i>				
Age	0.000** (3.18)	-0.003 (-1.37)	-0.002*** (-7.16)	-0.002*** (-3.46)
Female	-0.008** (-2.89)	-0.319*** (-9.48)	-0.107*** (-20.39)	-0.103*** (-12.23)
Black	0.001 (0.30)	0.051 (0.99)	0.018** (2.61)	0.010 (0.90)
Latino/a	-0.001 (-0.21)	-0.157*** (-3.34)	0.014* (2.33)	0.023* (2.34)
Asian	0.015+ (1.78)	0.250*** (3.37)	0.046*** (3.86)	0.030 (1.59)
Other Race	0.007 (0.67)	0.118 (1.52)	0.001 (0.12)	0.013 (0.65)
Separated	0.006 (1.11)	0.324** (2.97)	0.012 (1.11)	-0.002 (-0.09)
Divorced	0.006+ (1.94)	0.080+ (1.67)	0.029*** (4.89)	0.035*** (3.52)

Widowed	0.007 (0.94)	-0.190 (-1.38)	0.002 (0.16)	0.010 (0.40)
Never Married	0.012** (2.77)	0.179*** (5.30)	-0.018*** (-3.30)	-0.015+ (-1.66)
HH Size	0.001+ (1.77)	-0.017+ (-1.93)	-0.006*** (-4.57)	-0.007** (-3.27)
Children under 6	-0.008** (-2.71)	0.036 (0.82)	-0.012* (-2.33)	-0.003 (-0.34)
Non-Metro	0.029** (2.85)	-0.065 (-1.11)	-0.026*** (-4.93)	-0.027** (-3.29)
Not Identified	0.004 (0.27)	0.144 (1.27)	0.045*** (4.15)	0.045** (2.86)
ln(Hourly Rate)	-0.022*** (-7.30)	-0.189*** (-4.57)	0.824*** (91.10)	0.815*** (53.50)
Job Tenure	-0.001** (-2.87)	-0.020*** (-5.77)	0.007*** (19.85)	0.007*** (12.77)
Part-Time Some Weeks	0.072*** (15.81)	0.579*** (12.75)	-0.421*** (-86.65)	-0.430*** (-52.65)
HS/GED	-0.000 (-0.06)	0.069 (1.17)	0.050*** (7.39)	0.043*** (3.77)
Some College	-0.003 (-0.59)	0.098 (1.33)	0.070*** (9.71)	0.070*** (5.82)
College	0.000 (0.00)	0.164+ (1.77)	0.078*** (7.94)	0.076*** (4.69)
Post-Graduate	0.011 (1.02)	0.193* (2.16)	0.108*** (5.39)	0.118*** (3.84)
Public Sector	-0.014*** (-4.19)	-0.160** (-2.65)	-0.060*** (-6.41)	-0.052*** (-3.62)
N	318,491	37,328	318,491	37,328

Notes: All models apply cross-sectional weights, and cluster standard errors at the individual and/or state levels. Models include but do not show coefficients for variables in the main tables, 24 occupation categories, 13 industry categories, 4 geographic regions, and year fixed-effects.

+ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

### *III. Are Varying Hours and Non-Standard Schedules Employee- or Employer-Driven?*

This paper's examination of varying hours and non-standard schedules is motivated by research documenting their negative associations with various forms of well-being for workers and their families. This motivation presumes varying hours and non-standard schedules are employer-driven, and workers would prefer steady hours and regular day shifts. As described in the main text, past literature finds limited schedule control among hourly workers, particularly those with varying hours and non-standard schedules. Here we present additional empirical evidence that such workers have limited schedule control. In the same SIPP module as the measure for workers' schedule type, respondents also give the main reason for their schedule type. The eight reasons are coded into voluntary (better child care arrangements, better pay, better arrangements for care of other family members, allows time for school, other voluntary reasons) and involuntary (could not get any other job, requirement of the job, other involuntary reasons). Table A2 presents the percentage of observations reporting involuntary reasons for their schedule type.

Table A2. Percentage of observations reporting involuntary reasons for their schedule type.

<i>Union Membership</i>	<i>Varying Hours &amp; Non-Standard Schedules</i>			
	<i>Hours Steady</i>	<i>Hours Vary</i>	<i>Standard Schedule</i>	<i>Non-Standard Schedule</i>
Non-Union	82.6	82.8	84.2	79.4
Union Members	83.5	87.3	85.4	80.9

The vast majority of workers in all categories report involuntary reasons for their schedule type, and the rates are quite similar for both union members and non-members. Looking at specific reasons, "requirement of the job" is by far the most common response (80%). The modal voluntary category is "other voluntary reason" (7%), followed by "better child care arrangements" (5%). Involuntary reasons are less common for those reporting either non-standard schedules only, though still the vast majority. For both union members and non-members, "other" and "better child care" are the leading voluntary reasons, but together account for less than 15% of responses.

Results based on General Social Survey (GSS) data also find low levels of schedule control. The 2006 International Social Survey Program module on Work Orientations asked respondents who set their working hours: their employers entirely, themselves within certain limits, or themselves entirely. Just over half of workers reports their employer sets their schedule entirely. Nearly three-quarters of union members reported their employers had complete control over their work schedules, compared to fewer than half of non-members. The 2002, 2006, 2010, and 2014 waves of the GSS contain an alternative measure of schedule control, asking workers how often they are allowed to change the start or end times of their work days. More than half of workers say they can 'rarely' or 'never' change their work times. More than half of union members report they can 'never' change their work times, compared to under one-third of non-

members. Though union members have less control over their work schedules, they are at least more predictable. In the 2014 GSS, 63% of union members know their schedule at least four weeks in advance, compared to only 36% of non-members.

#### *IV. Do Varying Weekly Hours Reflect Hours Gains or Losses?*

In the main text, we focus on varying weekly hours as a deleterious phenomenon, generally reflecting a loss of desired hours like cut shifts. Varying hours could also reflect hours gains, however, like mandatory over-time. We empirically examined the distinction between hours losses and gains for those reporting “hours vary” in two ways. First, we examined individuals’ transitions between full- and part-time hours between waves. Though we do not know the usual number of hours when someone reports “hours vary,” a separate SIPP variable measures whether respondents worked fewer than 35 hours in some weeks in the four-month wave. Table A3 presents the percentage of observations switching between ‘full-time’ (working at least 35 hours in all weeks) and ‘part-time’ (working fewer than 35 hours in some weeks).

Table A3. Percent of observations switching between full-time and part-time between waves.

	All Obs.	Hours steady to Hours Vary	Hours steady to Hours Vary, Non-union	Hours steady to Hours Vary, Union
Full-time to Part-time (Loss)	8.55	17.07	16.98	17.78
Part-time to Full-time (Gain)	9.28	10.52	10.47	10.90

Transitions from ‘full-time’ hours to ‘part-time’ hours are comparable to the reverse among all observations (first column). However, among observations that did not report varying hours in the previous wave but do in the current one, transitions from full-time to part-time are much more common than the reverse (second column). The same is true among both non-union members (third column) and union members (fourth column). The variable does not quite measure full- or part-time status, and transitions above and below 35 hours in some weeks only capture a portion of hours changes above and below a particular threshold. However, the results are suggestive that workers reporting “hours vary” more commonly experience hours losses than hours gains.

Our second strategy examines changes in total monthly earnings between waves with transitions into and out of varying hours. We fit a linear fixed-effects model predicting total monthly earnings with the dummy variable for “hours vary” and controlling for hourly wages. The model includes both person and year fixed effects, so it estimates the association between changes in “hours vary” status and changes in monthly earnings. Holding the hourly wage rate constant, changes in monthly earnings should be due almost entirely to changes in hours. The results are presented in Table A4.

The results indicate monthly earnings statistically significantly decline by \$134 when workers transition into varying hours. The same model predicting logged monthly earnings indicates earnings decline by 14%. Again, reports of ‘varying hours’ appear to primarily reflect hours losses rather than hours gains. The negative association holds even when controlling for changes in part-time hours between waves, indicating varying hours usually reflect losses even within full- or part-time hours.

Table A4. Coefficients and (robust t-statistics) from linear fixed-effects models predicting earnings.

	Monthly Earnings	Monthly Earnings	ln(Monthly Earnings)	ln(Monthly Earnings)
Hours Vary	-134.458*** (-9.75)	-106.535*** (-7.76)	-0.141*** (-26.75)	-0.123*** (-23.60)
Hourly Wages	85.056*** (42.29)	83.505*** (41.76)		
Part-Time Some Weeks		-282.671*** (-34.81)		-0.188*** (-60.33)
ln(Hourly Wages)			0.633*** (55.91)	0.612*** (55.02)
Observations	318,491	318,491	318,491	318,491

Note: Models include both person and year fixed-effects.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

*V. Results from Lagged Dependent Variable Models*

Table A5. Results from lagged dependent variable models.

	Hours Vary (Table 2, Model 6)		Nonstandard (Table 3, Model 6)		ln(Earnings) (Table 4, Model 4)		ln(Earnings) (Table 5, Model 4)	
Union Member	-0.008*** (-3.36)	0.002 (0.69)	0.041*** (4.18)	0.081*** (7.01)	0.078*** (26.80)	0.021*** (7.27)	0.074*** (9.33)	0.019* (2.43)
State Unionization	-0.000 (-0.89)	-0.000 (-0.15)	-0.000 (-0.47)	0.001 (0.55)				
Union Member x State Unionization	-0.001 (-1.19)	-0.001+ (-1.67)	-0.001 (-0.58)	-0.001 (-0.49)				
Hours Vary					-0.096*** (-19.35)	-0.081*** (-15.66)		
Union x Hours Vary					0.031* (2.43)	0.013 (1.01)		
Non-Standard Schedule							-0.069*** (-13.27)	-0.045*** (-8.82)
Union x Non-Standard							0.046*** (3.42)	0.028* (2.21)
Dep. Var., t-1	0.423*** (19.73)	0.408*** (18.65)	0.250*** (9.77)	0.207*** (7.56)	0.827*** (239.70)	0.653*** (111.09)	0.826*** (260.47)	0.650*** (159.22)
Controls		X		X		X		X
Person-Periods	227,659	227,659	25,648	25,648	227,659	227,659	29,519	29,519

Notes: All models include year fixed effects and apply cross-sectional weights. Dep. Var. refers to the dependent variable in the column heading.

+ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

*VI. Average Marginal Effects of Union Membership for Non-Standard Schedules by Industry*

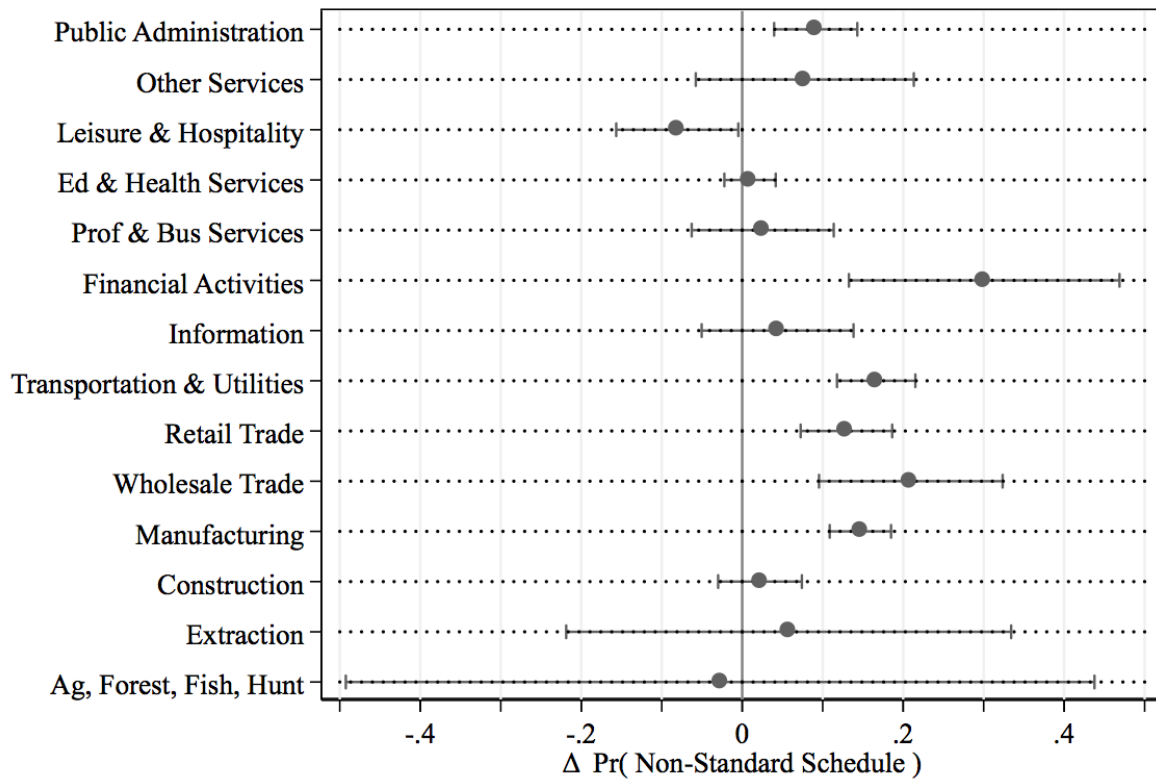


Figure A1. Differences in predicted probabilities of non-standard schedules between union members and non-members by industry, net of individual-level controls. Bars represent 95% confidence intervals.