Unhappiness is Unpredictability/Instability
Online Appendix (Supplementrary Online Material)

Tuesday 17$^{\text{th}}$ February, 2026   15:04

Contents

1 Relationships among variables, choice of controls, and overcontrol bias

We stick with the regressions in the paper for several reasons. And reviewers did not argue to adjust the models for unpredictability/instability antecedents and overcontrol bias–changing the approach completely seems too dramatic at this stage. But we do see merit in antecedant and overcontrol bias exploration, so we take middle way, explore here, and summarize in paper. Most importantly–we think our original models mostly abide–there are antecedants and overcontrol bias is avoided. There is not much difference in results and

wherever there is, we say so in the paper. The most problematic overcontrol bias variable 'paid by the hour' is left in the original models till the last specification (and there is substantial siginificance and effect size in earlier models on unpredictability/instability). Including income is a standard practice and it is unclear if the variable is problematic (especially family income used here), but we explore further here.

$UI =$ Unpredictability and Instability

$-\!>=$ is antecedent of (predicts)

We are considering here whether a potential control is also an antecedent of unpredictability/instability. From SIR editorial, "what we really need,to identify/estimate $X-\!>Y$, is to control for other determinants of Y that are also antecedents of X (so, $W-\!>X$)."

We argue using logic/reasoning these are the antecedents:

- more income and education (and some occupations) $-\!>$ higher-end jobs with either less (or chosen/preferred UI)

- male and paid by the hour $-\!>$ UI

- decide working hours: if one can decide schedule $-\!>$ less UI

But, as the SIR editorial warns, "if we include controls where the relationship goes the other way $(X-\!>W)$,we will exacerbate bias in our estimate of $X-\!>Y$ [overcontrol bias]"–then:

- maybe: $UI-\!>$ income (eg extra pay for UI jobs; also UI may predict greater variability in income; still family income used in paper is less affected than personal income)

- probably!: $UI-\!>$ paid by the hour (if little idea how many hrs then need to pay by hr)

So we will be careful with the above 2. But the other ones are unlikely:

- not $UI-\!>$ education; as education typically precedes job

- not $UI-\!>$ occupation; as occupation would rather define UI

- not $UI-\!>$ decide or set schedule; decision making on schedules defines UI, not the other way round

- not $UI-\!>$ male; definitely not

Further, based on the literature, the antecedents of the following unpredictability/instability categories are:

Unstable hours / work-hour volatility; (Week-to-week or month-to-month fluctuations in total hours worked)

- Hourly-paid status (vs. salaried)

- Low wages / low earnings

- Part-time and involuntary part-time employment

- Service-sector occupations (retail, food service, hospitality)

- Weak worker bargaining power (nonunion status, slack labor markets)

- Early-career / short tenure

- Employer use of "just-in-time" staffing

2

Core empirical studies:

- Volatility is concentrated among low-wage, hourly, nonunion workers when worker power is weak. LaBriola, J., & Schneider, D. (2019). Worker power and class polarization in intra-year work hour volatility. Social Forces, 98(3), 973-999. https://doi.org/10.1093/sf/soz

- Occupational and gender stratification in hour volatility, net of macro conditions. Cai, J. Y. (2024). Labor market volatility and worker financial wellbeing: An occupational and gender perspective. Institute for New Economic Thinking Working Paper No. 217.

- Persistence of volatility post-pandemic, especially among low-wage hourly workers. Cai, J. Y. (2023). Work-hour volatility by the numbers. Federal Reserve Bank of Boston, Community Development Issue Brief.

Schedule unpredictability / advance notice; (Short notice of schedules, last-minute changes, on-call shifts, cancellations)

- Retail and food-service employment

- Large-chain employers using algorithmic scheduling

- Hourly pay + low job control

- Nonunion status

- Race/ethnicity (workers of color disproportionately exposed)

- Younger and early-career workers

Core empirical studies

- One of the first national mappings of predictors of short notice and last-minute changes. Lambert, S. J., Fugiel, P. J., & Henly, J. R. (2014). Schedule unpredictability among early career workers in the U.S. labor market. University of Chicago Working Paper.

- Uses Shift Project data; shows unpredictability is driven by employer practices, not worker preferences. Schneider, D., & Harknett, K. (2019). Consequences of routine work-schedule instability for worker health and well-being. American Sociological Review, 84(1), 82-114.

- Identifies advance notice, on-call shifts, and cancellations as key mechanisms linking jobs to hardship. Schneider, D., & Harknett, K. (2021). Routine schedule unpredictability and material hardship among service-sector workers. Social Forces, 99(4), 1682-1709.

Schedule inflexibility / non-responsiveness to worker preferences (Employer refusal or inability to adjust hours or timing in response to worker needs or stated preferences)

- Low worker input or voice over schedules

- Managerial discretion without formal constraints

- Algorithmic scheduling systems

- Low-wage hourly jobs

- Absence of unions or formal scheduling rights

- Gendered caregiving constraints (especially for women)

Core empirical studies

- Mismatch between preferred and actual hours as a defining feature of low-quality jobs. Golden, L. (2015). Irregular work scheduling and its consequences. Economic Policy Institute Briefing Paper No. 394.

- Inflexibility is organizationally chosen, not technologically inevitable. Williams, J. C., Lambert, S. J., & Kesavan, S. (2018). Stable scheduling increases productivity and sales. Center for WorkLife Law & University of Chicago report.

- Workers' stated preferences are often overridden by managerial practices. Henly, J. R., & Lambert, S. J. (2014). Unpredictable work timing in retail jobs. Industrial & Labor Relations Review, 67(3), 986-1008.

- Links inflexibility directly to perceived disrespect and loss of autonomy. Woods, T. (2025). Schedule instability as a threat to perceived dignity in the service sector. Social Problems. Advance online publication.

Next we move to reestimating paper regressions taking into account the above information. Model a1 is repeated for reference from the body. Model a2 includes antecedents as theorized above. Results are similar, slightly stronger. Then we proceed to include problematic variables. In a3 we add income. Now the results are stronger, especially on "fewest hrs per week past month/usual hours"–this may be result of overcontrol. In a4 we removed income and add most problematic variable "paid by the hour." It kills significance on both main variables. Finally in a5 we add back income. Now results are again similar to a3. We conclude that indeed both income and "paid by the hour" do change the results, and results with these variables controlled for should be interpreted with caution. The main "final" result would be in a2, which is similar to what we report in the body of the paper. There is negative effect from "most hrs per week past month/usual hours" at about -.16, but not so much from "fewest hrs per week past month/usual hours."

	a1	a2	a3	a4	a5
fewest hrs per week past month/usual hours	0.13	0.16	0.24*	0.15	0.23*
most hrs per week past month/usual hours	-0.14+	-0.16*	-0.19*	-0.13	-0.17*
male		0.11+	0.04	0.11+	0.04
decide working hours		-0.00	-0.01	-0.00	-0.01
highest year of school completed		-0.00	-0.01	-0.01	-0.02
professional		0.00	0.00	0.00	0.00
administrative/managerial		0.02	0.03	0.02	0.03
clerical		-0.20*	-0.16	-0.13	-0.11
sales		-0.19+	-0.14	-0.13	-0.10
service		-0.13	0.02	-0.08	0.05
agriculure		-0.33	-0.20	-0.24	-0.13
production,transport		-0.12	-0.03	-0.01	0.05
craft, technical		-0.24*	-0.22+	-0.21+	-0.20
family income in $1986, millions			4.25***		3.60***
paid by the hour				-0.20**	-0.17*
constant	2.26***	2.34***	2.30***	2.51***	2.44***
N	488	482	456	466	441

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err

Table 1: OLS regressions of life satisfaction.

We do a similar exercise for remaining main independent variables. The rest of the results are substantively similar as those reported in the body of the paper except on the last main independent variable "what is your working schedule" in table 4. The dummy "daily working times are decided at short notice" is not significant when only controlling for its antecedents in d2, and only becomes significant when controlling for income in d3. Thus, these results are not robust.

	b1	b2	b3	b4	b5
(mosthrs-leasthrs)/usualhrs	-0.14+	-0.16*	-0.21**	-0.14+	-0.19*
male		0.11+	0.05	0.11+	0.05
decide working hours		-0.00	-0.01	-0.00	-0.01
highest year of school completed		-0.00	-0.01	-0.01	-0.02
professional		0.00	0.00	0.00	0.00
administrative/managerial		0.02	0.03	0.02	0.03
clerical		-0.20*	-0.16	-0.13	-0.11
sales		-0.19+	-0.14	-0.12	-0.09
service		-0.13	0.01	-0.08	0.04
agriculure		-0.33	-0.20	-0.24	-0.14
production,transport		-0.12	-0.03	-0.01	0.06
craft, technical		-0.24*	-0.22+	-0.21+	-0.20
family income in $1986, millions			4.22***		3.56***
paid by the hour				-0.20**	-0.17*
constant	2.24***	2.34***	2.35***	2.53***	2.50***
N	488	482	456	466	441
+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err					

Table 2: OLS regressions of life satisfaction.

	c1	c2	c3	c4	c5
never	0.00	0.00	0.00	0.00	0.00
-1 day	-0.06	-0.03	-0.01	-0.02	0.00
2 days-1 wk	-0.20*	-0.20*	-0.19*	-0.18*	-0.18*
1 wks-	-0.15*	-0.14+	-0.14+	-0.11	-0.11
male		0.11+	0.05	0.11+	0.05
decide working hours		-0.00	-0.01	-0.00	-0.01
highest year of school completed		-0.01	-0.02	-0.01	-0.02+
professional		0.00	0.00	0.00	0.00
administrative/managerial		0.04	0.05	0.03	0.04
clerical		-0.20*	-0.16	-0.14	-0.11
sales		-0.19+	-0.14	-0.13	-0.09
service		-0.11	0.01	-0.07	0.06
agriculure		-0.46	-0.35	-0.36	-0.27
production,transport		-0.17	-0.08	-0.04	0.01
craft, technical		-0.26*	-0.23*	-0.22+	-0.20
family income in $1986, millions			4.11***		3.44***
paid by the hour				-0.20**	-0.18*
constant	2.28***	2.47***	2.45***	2.63***	2.59***
N	497	491	462	473	446
+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err					

Table 3: OLS regressions of life satisfaction.

	d1	d2	d3	d4	d5
schedule or shift regularly changes	-0.04	-0.10	-0.11	-0.12	-0.14
daily working times are decided at short notice	-0.20+	-0.18	-0.29*	-0.13	-0.26+
male		0.14*	0.08	0.13*	0.08
decide working hours		0.00	-0.01	-0.00	-0.01
highest year of school completed		-0.01	-0.02	-0.02	-0.02+
professional		0.00	0.00	0.00	0.00
administrative/managerial		0.03	0.04	0.03	0.03
clerical		-0.22*	-0.17+	-0.14	-0.12
sales		-0.18+	-0.13	-0.12	-0.09
service		-0.18	-0.04	-0.11	0.02
agriculure		-0.38	-0.24	-0.29	-0.17
production,transport		-0.16	-0.07	-0.05	0.02
craft, technical		-0.24*	-0.21+	-0.21+	-0.19
family income in $1986, millions			4.08***		3.28**
paid by the hour				-0.22**	-0.19**
constant	2.20***	2.39***	2.39***	2.61***	2.58***
N	751	484	456	468	441
+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err					

Table 4: OLS regressions of life satisfaction.

1.1 Initial Analysis and Reasoning [Background Only; Skip]

We left the original tables in the body of the manuscript, as sequential elaboration of the models with predictors of the dependent variable in addition to main (unpredictabilty/instability) independent variables is the usual practice. But here we elaborate and use various "robustness" and "sensitivity" checks and provide more discussion.

While overall, some negative effect of the unpredictability/instability measures on SWB often holds, there are many nuances as elaborated here.

Specifically, here we adress the editorial by Bartram et al. (2024) as per choice of control variables. We explore what may predict unpredictability/instability.

We proceed as follows. We start with pairwise correlations to get an overall sense of relationships. Then we use Specifcation Curves Analysis (SCA) to find out how model specification affects statistical significance and effect size of the main (unpredictability/instability) independent variables. Then having identified key control variables with pairwise correlations and SCA we focus on these in additional sensitivity/robustness models.

1.1.1 Pairwise correlations

We take main hours varables from first 2 tables and also 2 main scheduling variables from last 2 tables and control variables from regressions.

In table 5 high correlations are mostly among the main independent variables measuring unpredictability/instability that are in regressions separately[1] Most others are small $|0 - .3|$, with few exceptions:

- income is most correlated with other controls, no wonder it then changes significance a lot when introduced in our–it correlates with following, all as expected:

  - married .4

  - education .4

  - paid by the hour -.4

- paid by the hour correlates with education at -.4, also as expected

- a control we introduce in specification #4 in each table, ``number of hours worked last week'' correlates highly at .6 to .8 with key unpredictability/instability indepnendent variables based on working hours, as expected: ``most hrs/week worked in past month'', ``fewest hrs/week worked in past month'', and ``how many hrs/week do you usually work''.

1.1.2 Specifcation Curves Analysis (SCA)

Here we use Stata's speccurve to analyze effect size and statistical significance by specification.

Just to orient discussion, in SCAs below we designate as main in red color middle specification #3, somewhat balancing underfitting and overfitting, from each regression table in the body of the paper.

Figures 1 2 show that family income ``realinc'' is most important variable–substraction of income in later specifications across the x axis decreases both significance and effect size most substantially of all variables.

In figure 3–here health decreases significance and effect size as opposed to income earlier, and does so very clearly–once health is added, the drop (towards 0) is clear.

In figure 4 the pattern is more complex–first, dropping health and then income decrease effect size and significance.

To summarize, clearly both health and income matter for unpredictability/instability's effect and significance and both can make unpredicatbility/instability more or less bearable (in terms of SWB).

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[1]With exception of the first regression table, where we have both ``fewest hrs per week past month/usual hours'' and ``most hrs per week past month/usual hours'' that correlate at .4.

Table 5: Cross-correlation table

Variables	SWB	most hrs/week worked in past month	fewest hrs/week worked in past month	how many hrs/week do you usually work	fewest hrs per week past month/hours	most hrs per week past month/hours	(mosthrs leasthrs)	family income in $1986, millions	age	age squared	married	highest year of school completed	male	number of persons in household	white	number of hours worked last week	health	decide working hours
SWB	1.0																	
most hrs/week worked in past month	0.0	1.0																
fewest hrs/week worked in past month	0.1	0.6	1.0															
how many hrs/week do you usually work	0.1	0.7	0.6	1.0														
fewest hrs per week past month/usual hours	0.0	0.1	0.7	-0.1	1.0													
most hrs per week past month/usual hours	-0.0	0.4	0.1	-0.2	0.4	1.0												
(mosthrs-leasthrs)/usualhrs	-0.1	0.3	-0.5	-0.1	-0.5	0.6	1.0											
family income in $1986, millions	0.2	0.1	0.1	0.2	-0.1	-0.0	0.0	1.0										
age	0.1	-0.2	-0.1	-0.1	0.0	-0.1	-0.1	0.2	1.0									
age squared	0.1	-0.2	-0.1	-0.2	0.0	-0.1	-0.1	0.2	1.0	1.0								
married	0.2	0.0	0.1	0.0	0.1	0.0	-0.0	0.4	0.2	0.2	1.0							
highest year of school completed	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.4	0.1	0.1	0.1	1.0						
male	0.0	0.3	0.2	0.3	0.1	0.1	0.0	0.1	-0.1	-0.1	0.1	-0.1	1.0					
number of persons in household	0.0	0.0	0.0	0.0	0.0	-0.0	-0.0	0.2	-0.2	-0.2	0.3	-0.1	0.0	1.0				
white	0.1	-0.0	-0.0	0.0	-0.1	-0.1	-0.0	0.1	0.1	0.1	0.1	0.1	0.0	-0.0	1.0			
number of hours worked last week	0.1	0.8	0.6	0.8	0.0	0.1	0.0	0.1	-0.0	-0.1	0.0	0.1	0.2	-0.0	0.0	1.0		
health	0.2	-0.0	0.1	-0.0	0.1	0.0	-0.1	0.2	0.0	0.0	0.1	0.2	-0.0	-0.0	0.1	-0.0	1.0	
decide working hours	0.0	0.1	-0.1	0.1	-0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.2	0.1	-0.0	0.0	0.1	0.0	1.0
paid by the hour	-0.2	-0.1	-0.1	-0.2	0.0	0.1	0.0	-0.4	-0.1	-0.0	-0.1	-0.4	-0.1	0.0	-0.1	-0.1	-0.2	-0.2
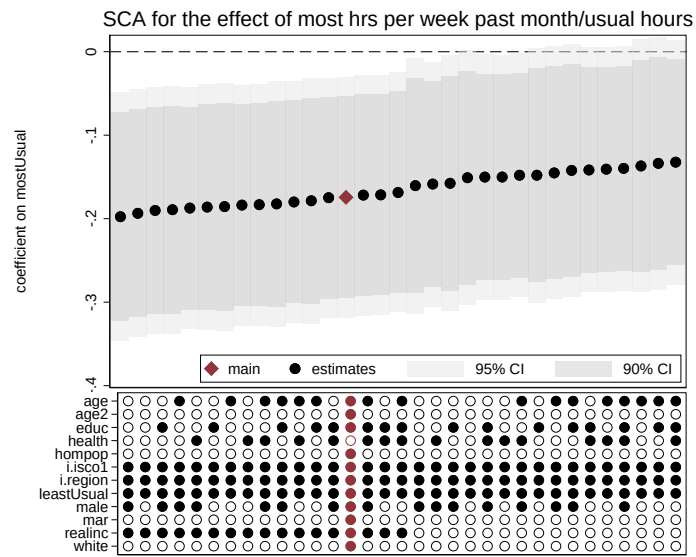
Figure 1
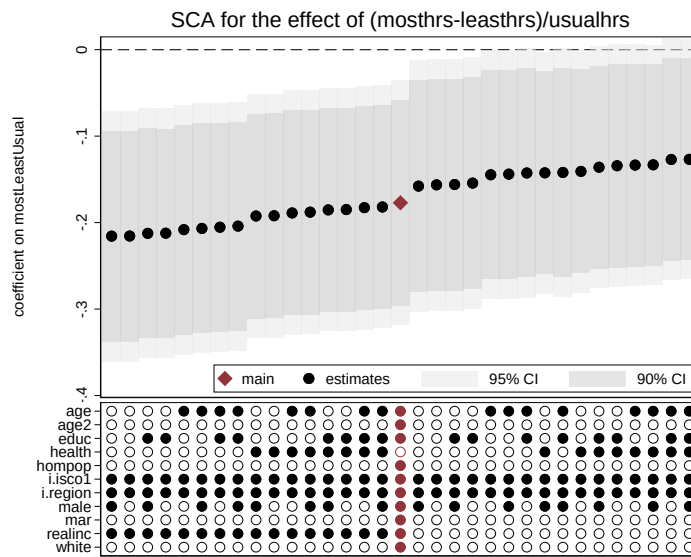
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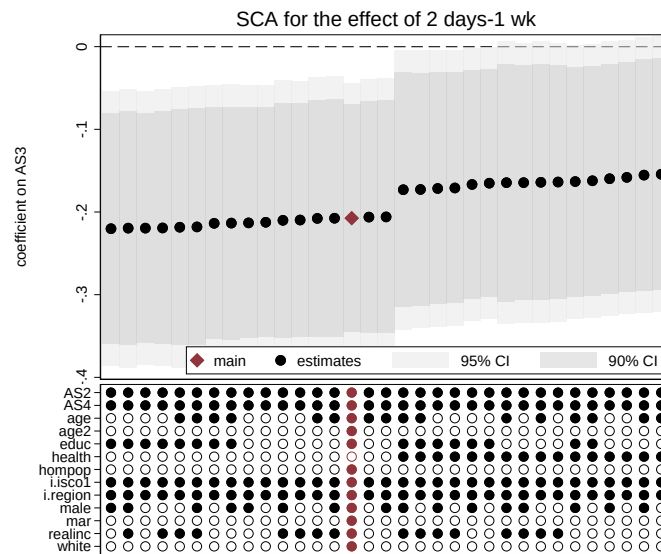
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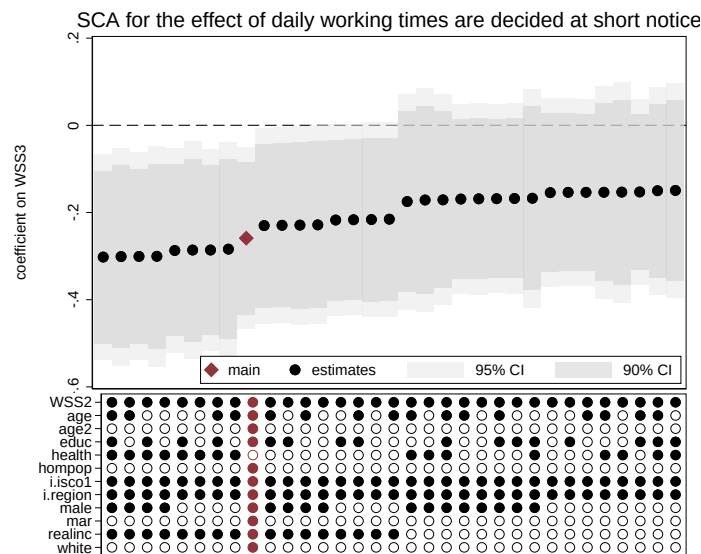
Figure 4

1.1.3 Additional sensitivity/robustness models

Finally, as per SCA we focus on healh and income and rerun regressions from the body below. We also focus on industry dummies here (which are also explored in greater detail in susequent section).

All in all across specifications results from the body mostly hold, but depending on the unpredictability/instability variable, significance and effect sizes vary as discussed below.

In table 6 the range of estimates on ``most hrs per week past month/usual hours'' is -.14 to -.18 sig at least at 10%. Controling for industry dummies in e5 doesnt change results much relative to e1.

	e1	e2	e3	e4	e5
fewest hrs per week past month/usual hours	0.13	0.23*	0.08	0.18	0.17
most hrs per week past month/usual hours	-0.14+	-0.18*	-0.14+	-0.16*	-0.15*
family income in $1986, millions		4.33***		3.52***	
health			0.20***	0.16***	
professional					0.00
administrative/managerial					0.00
clerical					-0.22*
sales					-0.23*
service					-0.14
agriculure					-0.27
production,transport					-0.07
craft, technical					-0.22*
constant	2.26***	2.06***	1.70***	1.63***	2.34***
N	488	461	488	461	484
+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err					

Table 6: OLS regressions of life satisfaction.

In table 7 (mosthrs-leasthrs)/usualhrs range -.12 to -.19 sig at least at 10%, except p-value slightly higher at .102 when only controling for health. Contrling for industry dummies in f5 results slightly stronger than in f1.

	f1	f2	f3	f4	f5
(mosthrs-leasthrs)/usualhrs	-0.14+	-0.19**	-0.12	-0.17*	-0.16*
family income in $1986, millions		4.31***		3.50***	
health			0.19***	0.16***	
professional					0.00
administrative/managerial					0.00
clerical					-0.22*
sales					-0.23*
service					-0.14
agriculure					-0.27
production,transport					-0.07
craft, technical					-0.22*
constant	2.24***	2.11***	1.65***	1.65***	2.36***
N	488	461	488	461	484
+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err					

Table 7: OLS regressions of life satisfaction.

In table 8 more unstable as high as .2 without controls, and insignificant controling for health, or for health and income. Contrling for industry dummies in g5 results similar in g1.

	g1	g2	g3	g4	g5
-1 day	-0.06	-0.03	0.00	0.02	-0.02
2 days-1 wk	-0.20*	-0.16+	-0.13	-0.11	-0.19*
1 wk-	-0.15*	-0.14+	-0.12	-0.11	-0.15*
family income in $1986, millions		4.20***		3.61***	
health			0.17***	0.14***	
professional					0.00
administrative/managerial					0.00
clerical					-0.22*
sales					-0.23*
service					-0.11
agriculure					-0.38
production,transport					-0.10
craft, technical					-0.22*
constant	2.28***	2.12***	1.73***	1.69***	2.39***
N	497	467	497	467	492
+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err					

Table 8: OLS regressions of life satisfaction.

In table 9 here as strong as -.24, controling for health insig, but controling both for health and for income back to significance. Industry dummies kill significance in h5 v bivariate h1.

	h1	h5	h2	h3	h4
schedule or shift regularly changes	-0.04	-0.03	-0.04	-0.04	-0.05
daily working times are decided at short notice	-0.20+	-0.16	-0.24*	-0.14	-0.26*
professional		0.00			
administrative/managerial		-0.04			
clerical		-0.20*			
sales		-0.20*			
service		-0.22*			
agriculture		-0.31			
production,transport		-0.13			
craft, technical		-0.30***			
family income in \$1986, millions			4.29***		3.90***
health				0.18***	0.14***
constant	2.20***	2.35***	2.05***	1.67***	1.65***
N	751	745	705	498	469

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err

Table 9: OLS regressions of life satisfaction.

1.1.4 Unpredictability/Instability means by income, health, and occupations

Here we provide some additional descriptive statistics. First by income and health. Second, by occupations.

Income and health

Here we spling income at median in table 10: realinc2 category # being income above the median. In that category there is slightly less unpredictability/instability on ''most hrs per week past month/usual hours'', ''most hrs per week past month/usual hours'', and ''daily working times are decided at short notice''. And there is a big difference on ''2 days-1 wk''– it is almost 2x lower for those with income wbove median–unpredictability/instability on this measure is much lower for high earners.

In table 11, those in good or excellent health (v poor or fair), have actually more instability on first 2 metrics, but slightly less on the following 2, and much less on the last one (''2 days-1 wk'').

realinc2	fewest hrs per week past month/usual hours	most hrs per week past month/usual hours	most hrs per week past month/usual hours	daily working times are decided at short notice	2 days-1 wk
1	0.85	1.19	0.34	0.05	0.25
2	0.85	1.16	0.31	0.04	0.13

Table 10

gooExcHea	fewest hrs per week past month/usual hours	most hrs per week past month/usual hours	most hrs per week past month/usual hours	daily working times are decided at short notice	2 days-1 wk
	0.8	1.15	0.34	0.06	0.29
1	0.86	1.2	0.33	0.05	0.18

Table 11

Occupations

Here we use International Standard Classification of Occupations (ISCO) that we collapsed to 1-digit groupings.

Clearly unpredictability/instability is an attribute of occupations. Hence, it is a key variable to consider here. While in the boddy of the paper we do include in more leaborate specifications these dummies, here we provide more information: means (and counts) of each unpredictability/instability measure by occupation.

Note, there are very few people in agriculture–can't interpret agriculture.

On leastUI ''fewest hrs per week past month/usual hours'' not much difference except that service is slightly lower. So service varies more than others–the lowest hours for service are lower than elsewhere relative to usual hours.

On mostUsl ``most hrs per week past month/usual hours'' and mostLel ``(mosthrs-leasthrs)/usualhrs'' not much difference, but production/transport is slightly higher. Production/transport hours highest hours are higher than for other occupations relative to usual hours. And in production/transport there is also bigger difference between most and least hours relative to usual hours ((mosthrs-leasthrs)/usualhrs) versus other occupations.

On WSS3 ``daily working times are decided at short notice'': production/transport and especially craft/technical are much higher, 2x or more than the rest.

On AS3 ``2 days-1 wk'' is higher on professional and craft/technical, but especially on service, 2x or more higher.

Thus while there are different patters across unpredictability/instability metrics, production/transport, craft/technical, and service show different levels. Most if not all of these are probably as expected. We do not make too much out of it as occupational sectors are not the focus of the paper, rather a control variable; and cell sizes are quite small in the table below

```
. tabstat leastUsual mostUsual mostLeastUsual WSS3 AS3, by(isco1)format(%9.2f)noto stat(mean n)

Summary statistics: Mean, N
Group variable: isco1 (1 digit occupation)

          isco1 |   leastUl    mostUsl    mostLel     WSS3      AS3
----------------+-----------------------------------------------------
   professional |      0.83       1.16       0.34      0.03      0.24
                |        74         74         74       110        74
----------------+-----------------------------------------------------
administrative/ |      0.83       1.20       0.34      0.04      0.14
     managerial |       107        107        106       159       108
----------------+-----------------------------------------------------
       clerical |      0.88       1.18       0.30      0.04      0.16
                |        86         85         85       128        85
----------------+-----------------------------------------------------
          sales |      0.88       1.16       0.28      0.04      0.19
                |        53         53         53        79        53
----------------+-----------------------------------------------------
        service |      0.78       1.16       0.38      0.04      0.36
                |        61         62         61        94        66
----------------+-----------------------------------------------------
      agriculure |     0.68       1.28       0.60      0.25         0
                |         3          3          3         4         3
----------------+-----------------------------------------------------
production/transpo |   0.88       1.28       0.39      0.07      0.15
                |        39         39         39        69        39
----------------+-----------------------------------------------------
 craft/technical |      0.87       1.17       0.30      0.11      0.22
                |        65         64         64       103        65
----------------------------------------------------------------------
```

2 Using personal income instead of family income

In the body of the paper we have used family income; now as a robustness check we use personal income (they correlate at .73).

Note that using family income in the body of the paper as opposed to person's income is somehwat adjusted by controling for size of the household.

Income is an important variable as per discussion in this appendix in other sections. And likewise using personal income v family income has large effect on many estimates as elaborated below.

Results on "most hrs per week past month/usual hours" are cut by as much as half. Still the sign is the same, but we mostly lost the statistical significance. In fact, in both tables 12 and 13 we have lost statistical significance on unpredictability/instability measures.

	a1	a2	a3	a4	a5
fewest hrs per week past month/usual hours	0.13	0.08	0.06	0.04	0.02
most hrs per week past month/usual hours	-0.14+	-0.09	-0.11	-0.10	-0.08
r's income in constant usd		0.00+	0.00	0.00	-0.00
age			0.00	0.00	0.01
age squared			-0.00	-0.00	-0.00
married			0.34***	0.31***	0.33***
highest year of school completed			-0.02	-0.03*	-0.04**
male			0.09	0.08	0.07
number of persons in household			-0.02	-0.02	-0.02
white			0.04	0.03	0.03
professional			0.00	0.00	0.00
administrative/managerial			-0.02	-0.01	0.01
clerical			-0.14	-0.17	-0.11
sales			-0.23+	-0.25*	-0.19+
service			-0.14	-0.11	-0.08
agriculure			-0.16	-0.04	0.04
production,transport			-0.12	-0.10	0.02
craft, technical			-0.18	-0.18	-0.16
new england			0.00	0.00	0.00
middle atlantic			-0.11	-0.05	-0.03
east north central			-0.31*	-0.23+	-0.24+
west north central			-0.34*	-0.31*	-0.33*
south atlantic			-0.30*	-0.28*	-0.28*
east south atlantic			-0.21	-0.12	-0.10
west south central			-0.19	-0.13	-0.13
mountain			-0.11	-0.06	-0.03
pacific			-0.29*	-0.18	-0.17
number of hours worked last week				0.00	0.00
health				0.19***	0.19***
decide working hours					-0.01
paid by the hour					-0.18*
constant	2.26***	2.19***	2.58***	2.07***	2.29***
N	488	415	412	412	396

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err

Table 12: OLS regressions of life satisfaction.

	b1	b2	b3	b4	b5
(mosthrs-leasthrs)/usualhrs	-0.14+	-0.09	-0.09	-0.08	-0.05
r's income in constant usd		0.00+	0.00	0.00	-0.00
age			0.00	0.00	0.01
age squared			-0.00	-0.00	-0.00
married			0.34***	0.31***	0.33***
highest year of school completed			-0.02	-0.03*	-0.04**
male			0.09	0.08	0.07
number of persons in household			-0.02	-0.01	-0.02
white			0.05	0.04	0.03
professional			0.00	0.00	0.00
administrative/managerial			-0.02	-0.02	0.00
clerical			-0.15	-0.17	-0.11
sales			-0.23+	-0.25*	-0.20+
service			-0.14	-0.11	-0.08
agriculure			-0.15	-0.03	0.05
production,transport			-0.13	-0.11	0.02
craft, technical			-0.18	-0.18	-0.17
new england			0.00	0.00	0.00
middle atlantic			-0.11	-0.05	-0.04
east north central			-0.31*	-0.23+	-0.24+
west north central			-0.34*	-0.31*	-0.34*
south atlantic			-0.29*	-0.28*	-0.28*
east south atlantic			-0.20	-0.12	-0.10
west south central			-0.20	-0.13	-0.14
mountain			-0.11	-0.06	-0.03
pacific			-0.29*	-0.18	-0.18
number of hours worked last week				0.00	0.00
health				0.19***	0.19***
decide working hours					-0.01
paid by the hour					-0.18*
constant	2.24***	2.18***	2.54***	2.02***	2.24***
N	488	415	412	412	396

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err

Table 13: OLS regressions of life satisfaction.

But then on the last 2 measures there is a great deal of effect. In table 14 ``2 days-1 wk'' is actually more significant than with family income in the body of the manuscript. And then in table 15 we see about the same significance as with family income in the body of the manuscript.

	c1	c2	c3	c4	c5
never	0.00	0.00	0.00	0.00	0.00
-1 day	-0.06	-0.02	-0.02	0.01	0.02
2 days-1 wk	-0.20*	-0.21*	-0.24**	-0.20*	-0.21*
1 wks-	-0.15*	-0.15+	-0.15+	-0.12	-0.08
r's income in constant usd		0.00+	0.00	0.00	-0.00
age			-0.01	-0.01	0.00
age squared			0.00	0.00	-0.00
married			0.33***	0.31***	0.32***
highest year of school completed			-0.02+	-0.03**	-0.04**
male			0.09	0.08	0.07
number of persons in household			-0.01	-0.01	-0.01
white			0.06	0.05	0.05
professional			0.00	0.00	0.00
administrative/managerial			0.00	0.01	0.02
clerical			-0.13	-0.16	-0.11
sales			-0.26*	-0.27*	-0.22+
service			-0.14	-0.12	-0.07
agriculure			-0.22	-0.11	-0.02
production,transport			-0.17	-0.16	-0.02
craft, technical			-0.20	-0.21+	-0.18
new england			0.00	0.00	0.00
middle atlantic			-0.08	-0.03	-0.01
east north central			-0.30*	-0.23+	-0.24+
west north central			-0.38*	-0.36*	-0.33*
south atlantic			-0.30*	-0.28*	-0.27*
east south atlantic			-0.19	-0.11	-0.07
west south central			-0.17	-0.12	-0.12
mountain			-0.09	-0.05	-0.01
pacific			-0.29*	-0.19	-0.18
number of hours worked last week				0.00	0.00
health				0.18***	0.19***
decide working hours					-0.01
paid by the hour					-0.18*
constant	2.28***	2.23***	2.85***	2.35***	2.42***
N	497	418	415	415	399

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err

Table 14: OLS regressions of life satisfaction.

	d1	d2	d3	d4	d5
schedule or shift regularly changes	-0.04	0.01	-0.00	-0.02	-0.06
daily working times are decided at short notice	-0.20+	-0.26*	-0.30**	-0.28*	-0.30**
r's income in constant usd		0.00**	0.00	0.00	-0.00
age			-0.01	-0.01	-0.00
age squared			0.00	0.00	0.00
married			0.33***	0.31***	0.32***
highest year of school completed			-0.02	-0.03*	-0.04**
male			0.08	0.11+	0.09
number of persons in household			-0.03	-0.01	-0.01
white			0.00	0.02	0.03
professional			0.00	0.00	0.00
administrative/managerial			-0.08	-0.01	0.01
clerical			-0.16+	-0.18+	-0.13
sales			-0.19+	-0.23*	-0.21+
service			-0.19+	-0.16	-0.12
agriculure			-0.00	0.06	0.16
production,transport			-0.21*	-0.12	0.01
craft, technical			-0.22*	-0.18	-0.17
new england			0.00	0.00	0.00
middle atlantic			-0.01	-0.05	-0.03
east north central			-0.22*	-0.24+	-0.24+
west north central			-0.17	-0.38*	-0.37*
south atlantic			-0.13	-0.29*	-0.28*
east south atlantic			-0.10	-0.13	-0.11
west south central			-0.17	-0.12	-0.14
mountain			0.07	-0.07	-0.04
pacific			-0.19+	-0.21	-0.19
number of hours worked last week				0.00	-0.00
health				0.18***	0.18***
decide working hours					-0.01
paid by the hour					-0.21**
constant	2.20***	2.14***	2.73***	2.24***	2.50***
N	751	632	628	418	396

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err

Table 15: OLS regressions of life satisfaction.

3 Beta (fully standardized) coefficients

	aa1	aa2	aa3	aa4	aa5
fewest hrs per week past month/usual hours	0.06	0.10*	0.08	0.07	0.06
most hrs per week past month/usual hours	-0.08+	-0.09*	-0.09*	-0.09*	-0.08*
family income in $1986, millions		0.21***	0.10+	0.07	0.05
age			0.14	0.11	0.14
age squared			-0.13	-0.10	-0.14
married			0.24***	0.22***	0.23***
highest year of school completed			-0.07	-0.11+	-0.13*
male			0.06	0.04	0.04
number of persons in household			-0.02	-0.00	0.00
white			0.04	0.04	0.03
professional			0.00	0.00	0.00
administrative/managerial			0.02	0.02	0.03
clerical			-0.08	-0.08	-0.06
sales			-0.07	-0.07	-0.05
service			0.02	0.03	0.04
agriculure			-0.05	-0.04	-0.03
production,transport			-0.03	-0.01	0.03
craft, technical			-0.10+	-0.10+	-0.09
new england			0.00	0.00	0.00
middle atlantic			-0.07	-0.04	-0.04
east north central			-0.14+	-0.10	-0.11
west north central			-0.11*	-0.10+	-0.11+
south atlantic			-0.17*	-0.16*	-0.17*
east south atlantic			-0.08	-0.05	-0.05
west south central			-0.09	-0.07	-0.06
mountain			-0.06	-0.04	-0.04
pacific			-0.13*	-0.08	-0.08
number of hours worked last week				0.04	0.03
health				0.20***	0.20***
decide working hours					-0.02
paid by the hour					-0.11*
constant	***	***	***	***	***
N	488	461	455	454	438

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err

Table 16: OLS regressions of life satisfaction.

	bb1	bb2	bb3	bb4	bb5
(mosthrs-leasthrs)/usualhrs	-0.08+	-0.11**	-0.10*	-0.09*	-0.08+
family income in $1986, millions		0.21***	0.10+	0.07	0.06
age			0.14	0.11	0.14
age squared			-0.13	-0.10	-0.13
married			0.24***	0.22***	0.23***
highest year of school completed			-0.07	-0.11+	-0.13*
male			0.06	0.04	0.04
number of persons in household			-0.02	-0.00	0.00
white			0.04	0.04	0.04
professional			0.00	0.00	0.00
administrative/managerial			0.02	0.02	0.03
clerical			-0.08	-0.08	-0.06
sales			-0.07	-0.07	-0.05
service			0.02	0.03	0.04
agriculure			-0.05	-0.04	-0.03
production,transport			-0.03	-0.01	0.03
craft, technical			-0.10+	-0.10+	-0.09
new england			0.00	0.00	0.00
middle atlantic			-0.07	-0.04	-0.04
east north central			-0.14+	-0.10	-0.11
west north central			-0.11*	-0.10+	-0.11+
south atlantic			-0.17*	-0.16*	-0.17*
east south atlantic			-0.08	-0.05	-0.05
west south central			-0.09	-0.07	-0.07
mountain			-0.06	-0.04	-0.04
pacific			-0.13*	-0.08	-0.08
number of hours worked last week				0.04	0.03
health				0.19***	0.20***
decide working hours					-0.01
paid by the hour					-0.11*
constant	***	***	***	***	***
N	488	461	455	454	438

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err

Table 17: OLS regressions of life satisfaction.

	cc1	cc2	cc3	cc4	cc5
never	0.00	0.00	0.00	0.00	0.00
-1 day	-0.03	-0.01	-0.01	0.00	0.02
2 days-1 wk	-0.12*	-0.10+	-0.13*	-0.10*	-0.10+
1 wks-	-0.10*	-0.09+	-0.11*	-0.09+	-0.05
family income in $1986, millions		0.20***	0.09+	0.07	0.05
age			0.02	0.01	0.10
age squared			-0.01	-0.00	-0.09
married			0.23***	0.22***	0.23***
highest year of school completed			-0.10	-0.13*	-0.15*
male			0.06	0.05	0.04
number of persons in household			-0.01	-0.00	0.01
white			0.06	0.05	0.05
professional			0.00	0.00	0.00
administrative/managerial			0.03	0.03	0.03
clerical			-0.07	-0.08	-0.06
sales			-0.08	-0.07	-0.05
service			0.02	0.02	0.05
agriculure			-0.07	-0.06	-0.05
production,transport			-0.05	-0.03	0.01
craft, technical			-0.11+	-0.11+	-0.09
new england			0.00	0.00	0.00
middle atlantic			-0.06	-0.03	-0.03
east north central			-0.14+	-0.11	-0.12
west north central			-0.14*	-0.13*	-0.12*
south atlantic			-0.16*	-0.16*	-0.17*
east south atlantic			-0.08	-0.06	-0.05
west south central			-0.08	-0.07	-0.07
mountain			-0.06	-0.04	-0.03
pacific			-0.14*	-0.11	-0.10
number of hours worked last week				0.05	0.03
health				0.17**	0.18***
decide working hours					-0.02
paid by the hour					-0.12*
constant	***	***	***	***	***
N	497	467	460	459	443

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust
std err

Table 18: OLS regressions of life satisfaction.

	dd1	dd2	dd3	dd4	dd5
schedule or shift regularly changes	-0.02	-0.02	-0.03	-0.06	-0.07
daily working times are decided at short notice	-0.07+	-0.08*	-0.09*	-0.11**	-0.11**
family income in $1986, millions		0.21***	0.11*	0.08	0.04
age			-0.15	0.03	0.08
age squared			0.16	0.01	-0.06
married			0.24***	0.23***	0.24***
highest year of school completed			-0.07	-0.12*	-0.15*
male			0.07+	0.08+	0.07
number of persons in household			-0.06	-0.00	0.01
white			0.00	0.02	0.03
professional			0.00	0.00	0.00
administrative/managerial			-0.03	0.03	0.03
clerical			-0.08+	-0.08	-0.06
sales			-0.07	-0.05	-0.05
service			-0.05	0.01	0.03
agriculure			-0.04	-0.04	-0.03
production,transport			-0.07	-0.02	0.02
craft, technical			-0.14**	-0.09	-0.08
new england			0.00	0.00	0.00
middle atlantic			-0.03	-0.04	-0.04
east north central			-0.09	-0.11	-0.12
west north central			-0.03	-0.14*	-0.13*
south atlantic			-0.07	-0.17*	-0.18*
east south atlantic			-0.03	-0.06	-0.05
west south central			-0.07	-0.07	-0.07
mountain			0.00	-0.05	-0.04
pacific			-0.09+	-0.12+	-0.11+
number of hours worked last week				0.03	0.01
health				0.17***	0.18***
decide working hours					-0.02
paid by the hour					-0.13*
constant	***	***	***	***	***
N	751	705	697	460	438

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust
std err

Table 19: OLS regressions of life satisfaction.

4   Interactions by groups

We postpone them to appendix and we do not make much of them as sample size is relatively small at about 450 observations and accordingly statistical power is low as well.

Furthermore our focus in the manuscript is onthe main effect, future research, when more data becomes available, can focus on specific effects by groups. Nevertheless here we provide some preliminary results

4.1 Gender

In table 20 for males there is some positive effect from fewest hours, and insignificant from most hours.

	x1	x2	x3	x4	x5
fewest hrs per week past month/usual hours	-0.10	-0.01	-0.05	-0.11	-0.12
0	0.00	0.00	0.00	0.00	0.00
male	-0.43+	-0.48+	-0.52+	-0.59*	-0.61*
male			0.00	0.00	0.00
0 × fewest hrs per week past month/usual hours	0.00	0.00	0.00	0.00	0.00
male × fewest hrs per week past month/usual hours	0.37+	0.37+	0.35	0.40+	0.36
most hrs per week past month/usual hours	-0.35*	-0.37*	-0.40**	-0.41**	-0.42**
0 × most hrs per week past month/usual hours	0.00	0.00	0.00	0.00	0.00
male × most hrs per week past month/usual hours	0.20	0.19	0.26	0.27	0.31
family income in $1986, millions		4.27***	1.90+	1.40	1.04
age			0.00	0.00	0.00
age squared			-0.00	-0.00	-0.00
married			0.29***	0.27***	0.29***
highest year of school completed			-0.01	-0.02+	-0.03*
number of persons in household			-0.01	0.00	0.00
white			0.08	0.07	0.06
professional			0.00	0.00	0.00
administrative/managerial			0.01	0.01	0.03
clerical			-0.14	-0.15	-0.11
sales			-0.15	-0.14	-0.11
service			0.01	0.03	0.05
agriculure			-0.38	-0.30	-0.26
production,transport			-0.07	-0.04	0.05
craft, technical			-0.22+	-0.22*	-0.20+
new england			0.00	0.00	0.00
middle atlantic			-0.15	-0.10	-0.10
east north central			-0.26*	-0.20	-0.21
west north central			-0.32*	-0.30*	-0.33*
south atlantic			-0.29*	-0.28*	-0.29*
east south atlantic			-0.23	-0.17	-0.15
west south central			-0.21	-0.18	-0.16
mountain			-0.17	-0.14	-0.12
pacific			-0.29*	-0.21+	-0.20
number of hours worked last week				0.00	0.00
health				0.17***	0.18***
decide working hours					-0.01
paid by the hour					-0.14+
constant	2.63***	2.46***	2.80***	2.39***	2.54***
N	488	461	455	454	438

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err

Table 20: OLS regressions of life satisfaction.

In table 21 for males there is no significant effect.

	x1	x2	x3	x4	x5
0	0.00	0.00	0.00	0.00	0.00
male	0.15+	0.08	0.08	0.07	0.05
(mosthrs-leasthrs)/usualhrs	-0.11	-0.18	-0.17	-0.14	-0.14
0 × (mosthrs-leasthrs)/usualhrs	0.00	0.00	0.00	0.00	0.00
male × (mosthrs-leasthrs)/usualhrs	-0.07	-0.05	-0.01	-0.04	-0.00
family income in \$1986, millions		4.24***	1.95+	1.51	1.13
age			0.01	0.00	0.01
age squared			-0.00	-0.00	-0.00
married			0.30***	0.28***	0.29***
highest year of school completed			-0.01	-0.02+	-0.03*
number of persons in household			-0.01	-0.00	0.00
white			0.06	0.05	0.05
professional			0.00	0.00	0.00
administrative/managerial			0.03	0.03	0.04
clerical			-0.13	-0.14	-0.10
sales			-0.15	-0.14	-0.10
service			0.03	0.06	0.09
agriculure			-0.37	-0.30	-0.26
production,transport			-0.06	-0.02	0.08
craft, technical			-0.20+	-0.20+	-0.17
new england			0.00	0.00	0.00
middle atlantic			-0.13	-0.07	-0.07
east north central			-0.23+	-0.17	-0.18
west north central			-0.29*	-0.26+	-0.29+
south atlantic			-0.28*	-0.26*	-0.28*
east south atlantic			-0.21	-0.14	-0.12
west south central			-0.18	-0.15	-0.14
mountain			-0.14	-0.10	-0.08
pacific			-0.25*	-0.16	-0.16
number of hours worked last week				0.00	0.00
health				0.17***	0.17***
decide working hours					-0.01
paid by the hour					-0.15*
constant	2.17***	2.08***	2.30***	1.84***	1.99***
N	488	461	455	454	438

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust
std err

Table 21: OLS regressions of life satisfaction.

Likewise in table 22 and 23 for males there is no significant effect.

	x1	x2	x3	x4	x5
0	0.00	0.00	0.00	0.00	0.00
male	0.08	0.06	0.10	0.10	0.10
never	0.00	0.00	0.00	0.00	0.00
-1 day	-0.10	-0.06	-0.00	0.07	0.08
2 days-1 wk	-0.18	-0.10	-0.13	-0.08	-0.09
1 wks-	-0.20+	-0.17+	-0.19+	-0.15	-0.08
0 × never	0.00	0.00	0.00	0.00	0.00
0 × -1 day	0.00	0.00	0.00	0.00	0.00
0 × 2 days-1 wk	0.00	0.00	0.00	0.00	0.00
0 × 1 wks-	0.00	0.00	0.00	0.00	0.00
male × never	0.00	0.00	0.00	0.00	0.00
male × -1 day	0.05	0.03	-0.03	-0.11	-0.08
male × 2 days-1 wk	-0.04	-0.13	-0.17	-0.18	-0.14
male × 1 wks-	0.16	0.12	0.08	0.07	0.00
family income in \$1986, millions		4.10***	1.84+	1.45	0.99
age			0.00	0.00	0.00
age squared			-0.00	0.00	-0.00
married			0.31***	0.29***	0.31***
highest year of school completed			-0.02+	-0.03*	-0.03*
number of persons in household			-0.01	-0.00	0.00
white			0.08	0.07	0.07
professional			0.00	0.00	0.00
administrative/managerial			0.04	0.04	0.05
clerical			-0.11	-0.12	-0.10
sales			-0.16	-0.15	-0.11
service			0.03	0.04	0.10
agriculure			-0.53	-0.45	-0.38
production,transport			-0.11	-0.07	0.04
craft, technical			-0.22+	-0.22+	-0.18
new england			0.00	0.00	0.00
middle atlantic			-0.10	-0.06	-0.06
east north central			-0.23+	-0.18	-0.19
west north central			-0.33*	-0.32*	-0.30*
south atlantic			-0.27*	-0.25*	-0.26*
east south atlantic			-0.21	-0.15	-0.12
west south central			-0.18	-0.16	-0.15
mountain			-0.12	-0.09	-0.07
pacific			-0.27*	-0.20	-0.19
number of hours worked last week				0.00	0.00
health				0.15**	0.16***
decide working hours					-0.01
paid by the hour					-0.16*
constant	2.24***	2.09***	2.51***	2.05***	2.09***
N	497	467	460	459	443

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust
std err

Table 22: OLS regressions of life satisfaction.

	x1	x2	x3	x4	x5
0	0.00	0.00	0.00	0.00	0.00
male	0.11*	0.08	0.09+	0.10	0.09
male			0.00	0.00	0.00
schedule or shift regularly changes=0	0.00	0.00	0.00	0.00	0.00
schedule or shift regularly changes=1	-0.11	-0.07	-0.10	-0.17	-0.18
0 × schedule or shift regularly changes=0	0.00	0.00	0.00	0.00	0.00
0 × schedule or shift regularly changes=1	0.00	0.00	0.00	0.00	0.00
male × schedule or shift regularly changes=0	0.00	0.00	0.00	0.00	0.00
male × schedule or shift regularly changes=1	0.13	0.08	0.07	0.13	0.12
daily working times are decided at short notice=0	0.00	0.00	0.00	0.00	0.00
daily working times are decided at short notice=1	0.01	0.05	-0.06	-0.11	-0.08
0 × daily working times are decided at short notice=0	0.00	0.00	0.00	0.00	0.00
0 × daily working times are decided at short notice=1	0.00	0.00	0.00	0.00	0.00
male × daily working times are decided at short notice=0	0.00	0.00	0.00	0.00	0.00
male × daily working times are decided at short notice=1	-0.35	-0.43	-0.28	-0.31	-0.39
family income in $1986, millions		4.17***	2.20*	1.78	0.87
age			-0.01	0.00	0.00
age squared			0.00	0.00	-0.00
married			0.31***	0.29***	0.30***
highest year of school completed			-0.01	-0.02+	-0.03*
number of persons in household			-0.03	-0.00	0.01
white			0.00	0.03	0.04
professional			0.00	0.00	0.00
administrative/managerial			-0.04	0.04	0.05
clerical			-0.13	-0.13	-0.10
sales			-0.13	-0.10	-0.08
service			-0.09	0.03	0.07
agriculure			-0.28	-0.29	-0.21
production,transport			-0.15	-0.04	0.06
craft, technical			-0.25**	-0.17	-0.15
new england			0.00	0.00	0.00
middle atlantic			-0.07	-0.08	-0.08
east north central			-0.15	-0.18	-0.19
west north central			-0.08	-0.34*	-0.33*
south atlantic			-0.12	-0.28*	-0.29*
east south atlantic			-0.07	-0.16	-0.14
west south central			-0.15	-0.14	-0.14
mountain			0.01	-0.10	-0.09
pacific			-0.17+	-0.21+	-0.21
number of hours worked last week				0.00	0.00
health				0.15***	0.16***
decide working hours					-0.01
paid by the hour					-0.18*
constant	2.15***	2.02***	2.57***	1.98***	2.16***
N	751	705	697	460	438

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err

Table 23: OLS regressions of life satisfaction.

4.2 Age

```
gen a20=0
```

```
replace a20=1 if age<30
```

```
replace a20=. if age>=.
```

```
gen a30_54=0
```

```
replace a30_54=1 if age>29 & age <55
```

```
replace a20=. if age>=.
```

```
gen a55=0


replace a55=1 if age>54 & age <200


replace a55=. if age>=.
```

	y1	y2	y3	y4	y5
fewest hrs per week past month/usual hours	0.15	0.27+	0.23	0.17	0.15
a20=0	0.00	0.00	0.00	0.00	0.00
a20=1	-0.44	-0.38	-0.29	-0.25	-0.20
a20=0 × fewest hrs per week past month/usual hours	0.00	0.00	0.00	0.00	0.00
a20=1 × fewest hrs per week past month/usual hours	0.29	0.16	0.06	0.11	0.08
most hrs per week past month/usual hours	-0.14	-0.18+	-0.20*	-0.16+	-0.16
a20=0 × most hrs per week past month/usual hours	0.00	0.00	0.00	0.00	0.00
a20=1 × most hrs per week past month/usual hours	0.14	0.23	0.24	0.18	0.17
fewest hrs per week past month/usual hours	0.00				
a55=0	0.00	0.00	0.00	0.00	0.00
a55=1	0.43	0.49+	0.25	0.46	0.38
a55=0 × fewest hrs per week past month/usual hours	0.00	0.00	0.00	0.00	0.00
a55=1 × fewest hrs per week past month/usual hours	-0.32	-0.23	-0.10	-0.13	-0.12
fewest hrs per week past month/usual hours					0.00
fewest hrs per week past month/usual hours				0.00	
fewest hrs per week past month/usual hours			0.00		
fewest hrs per week past month/usual hours		0.00			
most hrs per week past month/usual hours	0.00				
a55=0 × most hrs per week past month/usual hours	0.00	0.00	0.00	0.00	0.00
a55=1 × most hrs per week past month/usual hours	-0.11	-0.23	-0.14	-0.29	-0.23
most hrs per week past month/usual hours					0.00
most hrs per week past month/usual hours				0.00	
most hrs per week past month/usual hours			0.00		
most hrs per week past month/usual hours		0.00			
family income in $1986, millions		4.53***	2.25+	1.78	1.37
married			0.30***	0.28***	0.30***
highest year of school completed			-0.01	-0.02+	-0.03*
male			0.06	0.04	0.04
number of persons in household			-0.01	-0.00	0.00
white			0.06	0.05	0.05
professional			0.00	0.00	0.00
administrative/managerial			0.02	0.03	0.04
clerical			-0.13	-0.14	-0.10
sales			-0.15	-0.13	-0.10
service			0.01	0.03	0.06
agriculure			-0.32	-0.23	-0.18
production,transport			-0.06	-0.02	0.08
craft, technical			-0.20+	-0.20+	-0.17
new england			0.00	0.00	0.00
middle atlantic			-0.12	-0.06	-0.06
east north central			-0.22+	-0.16	-0.17
west north central			-0.27+	-0.24	-0.27+
south atlantic			-0.27*	-0.25+	-0.27*
east south atlantic			-0.20	-0.11	-0.11
west south central			-0.19	-0.15	-0.14
mountain			-0.13	-0.08	-0.08
pacific			-0.25*	-0.15	-0.16
number of hours worked last week				0.00	0.00
health				0.17***	0.18***
decide working hours					-0.01
paid by the hour					-0.15+
constant	2.23***	2.01***	2.42***	1.92***	2.09***
N	485	458	455	454	438

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err

Table 24: OLS regressions of life satisfaction.

	y1	y2	y3	y4	y5
(mosthrs-leasthrs)/usualhrs	-0.14	-0.21*	-0.21*	-0.17+	-0.16
a20=0	0.00	0.00	0.00	0.00	0.00
a20=1	-0.02	0.00	-0.00	0.03	0.04
a20=0 × (mosthrs-leasthrs)/usualhrs	0.00	0.00	0.00	0.00	0.00
a20=1 × (mosthrs-leasthrs)/usualhrs	-0.05	0.05	0.12	0.06	0.07
(mosthrs-leasthrs)/usualhrs	0.00				
a55=0	0.00	0.00	0.00	0.00	0.00
a55=1	0.01	0.03	0.02	0.04	0.03
a55=0 × (mosthrs-leasthrs)/usualhrs	0.00	0.00	0.00	0.00	0.00
a55=1 × (mosthrs-leasthrs)/usualhrs	0.11	-0.01	-0.02	-0.07	-0.04
(mosthrs-leasthrs)/usualhrs					0.00
(mosthrs-leasthrs)/usualhrs				0.00	
(mosthrs-leasthrs)/usualhrs			0.00		
(mosthrs-leasthrs)/usualhrs		0.00			
family income in $1986, millions		4.43***	2.11+	1.68	1.28
married			0.31***	0.29***	0.30***
highest year of school completed			-0.01	-0.02+	-0.03*
male			0.07	0.04	0.04
number of persons in household			-0.01	0.00	0.00
white			0.06	0.05	0.05
professional			0.00	0.00	0.00
administrative/managerial			0.03	0.03	0.04
clerical			-0.13	-0.14	-0.10
sales			-0.16	-0.15	-0.11
service			0.02	0.05	0.08
agriculure			-0.34	-0.25	-0.20
production,transport			-0.05	-0.01	0.09
craft, technical			-0.20	-0.20+	-0.17
new england			0.00	0.00	0.00
middle atlantic			-0.12	-0.07	-0.07
east north central			-0.23+	-0.17	-0.18
west north central			-0.29*	-0.27+	-0.30*
south atlantic			-0.27*	-0.26*	-0.27*
east south atlantic			-0.21	-0.14	-0.12
west south central			-0.19	-0.16	-0.15
mountain			-0.14	-0.10	-0.09
pacific			-0.25*	-0.16	-0.16
number of hours worked last week				0.00	0.00
health				0.17***	0.17***
decide working hours					-0.01
paid by the hour					-0.15*
constant	2.24***	2.10***	2.44***	1.93***	2.10***
N	485	458	455	454	438

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err

Table 25: OLS regressions of life satisfaction.

In table 26 one could be tempted to read into significant estimates on $a20 = 1 x - 1day$, but there are only 11 such persons, and in actual estimation in specificaton y5 only 11 due to missing data on other vairables:

```
 ta AS2 a20

          |         a20
  -1 day |        0          1 |     Total
-----------+----------------------+----------
        0 |       321         92 |       413
        1 |        69         13 |        82
-----------+----------------------+----------
   Total |       390        105 |       495
```

```
. ta AS2 a20 if e(sample)==1

          |         a20
  -1 day |        0          1 |     Total
-----------+----------------------+----------
        0 |       296         82 |       378
        1 |        54         11 |        65
-----------+----------------------+----------
```

```
     Total |       350         93 |       443
```

Thus we abort these fruitless exercises here.

	y1	y2	y3	y4	y5
a20=0	0.00	0.00	0.00	0.00	0.00
a20=1	0.05	0.15	0.15	0.15	0.13
never	0.00	0.00	0.00	0.00	0.00
-1 day	-0.02	0.09	0.13	0.14	0.19
2 days-1 wk	-0.19	-0.17	-0.18	-0.16	-0.14
1 wks-	-0.25*	-0.21*	-0.23*	-0.19+	-0.14
a20=0 × never	0.00	0.00	0.00	0.00	0.00
a20=0 × -1 day	0.00	0.00	0.00	0.00	0.00
a20=0 × 2 days-1 wk	0.00	0.00	0.00	0.00	0.00
a20=0 × 1 wks-	0.00	0.00	0.00	0.00	0.00
a20=1 × never	0.00	0.00	0.00	0.00	0.00
a20=1 × -1 day	-0.24	-0.42*	-0.40*	-0.38+	-0.36+
a20=1 × 2 days-1 wk	-0.11	-0.10	-0.10	-0.08	-0.07
a20=1 × 1 wks-	-0.08	-0.16	-0.07	-0.04	0.01
a55=0	0.00	0.00	0.00	0.00	0.00
a55=1	-0.06	-0.01	0.02	0.03	0.04
a55=0 × never	0.00	0.00	0.00	0.00	0.00
a55=0 × -1 day	0.00	0.00	0.00	0.00	0.00
a55=0 × 2 days-1 wk	0.00	0.00	0.00	0.00	0.00
a55=0 × 1 wks-	0.00	0.00	0.00	0.00	0.00
a55=1 × never	0.00	0.00	0.00	0.00	0.00
a55=1 × -1 day	0.02	-0.17	-0.27	-0.25	-0.31
a55=1 × 2 days-1 wk	0.10	0.04	-0.08	-0.02	-0.09
a55=1 × 1 wks-	0.37*	0.28	0.25	0.20	0.17
family income in $1986, millions		4.43***	2.11+	1.74	1.29
married			0.31***	0.30***	0.32***
highest year of school completed			-0.02+	-0.03*	-0.03*
male			0.07	0.05	0.04
number of persons in household			-0.00	0.00	0.01
white			0.07	0.07	0.06
professional			0.00	0.00	0.00
administrative/managerial			0.05	0.05	0.06
clerical			-0.13	-0.14	-0.11
sales			-0.17	-0.16	-0.13
service			0.02	0.03	0.08
agriculure			-0.54	-0.46	-0.41
production,transport			-0.13	-0.10	0.01
craft, technical			-0.23*	-0.23*	-0.20+
new england			0.00	0.00	0.00
middle atlantic			-0.08	-0.05	-0.05
east north central			-0.18	-0.14	-0.16
west north central			-0.29*	-0.28*	-0.28+
south atlantic			-0.23+	-0.22+	-0.25+
east south atlantic			-0.15	-0.10	-0.09
west south central			-0.11	-0.10	-0.10
mountain			-0.08	-0.06	-0.05
pacific			-0.25+	-0.19	-0.19
number of hours worked last week				0.00	0.00
health				0.14**	0.15**
decide working hours					-0.02
paid by the hour					-0.16*
constant	2.29***	2.09***	2.48***	2.03***	2.19***
N	494	464	460	459	443

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err

Table 26: OLS regressions of life satisfaction.

5 Exploring "decide working hours ('who sets the schedule')"

We thank anonymous reviewer for making the following point:

```
Wouldn't it make more sense to exclude the participants who can control their
schedule and analyze only the effect of employer-friendly flexibility? In case
you are arguing that unpredictability is bad for the SWB independently of who is
controlling the schedule, this should be explicitly stated and the argumentation
should be straightened throughout the paper.
```

In general, in the paper we simply explore effect of unpredictability and instability on happiness. There are many ways to approach it and subset the sample. As the reviewer points out, yes, indeed, effectively we are arguing that "unpredictability is bad for the SWB independently of who is controlling the schedule"–this is due to the fact that we cotrol for "decide working hours ('who sets the schedule')."

But it also makes sense, as the reviewer advises, to "exclude the participants who can control their schedule and analyze only the effect of employer-friendly flexibility." This is what we do in this section (and few other checks). The discussion is postponed here as we already have 6 tables in the body of the paper and also the sample size gets from small to even smaller. (Still we report key points from this section in the body of the paper).

As reported in the paper, the decide working hours ('who sets the schedule') variable measures increasing degrees of decision latitude on the part of an employee. But it deserves some robustness checks as there are 2 interesting categories-the first one is no latitude whatsoever (also on the part of the employer) and the last one is full latitude on the part of an employee. Below is the frequency table

```
         decide working hours |     Freq.    Percent       Cum.
-------------------------------+-----------------------------------
    outside of my/employer control |       28       5.63       5.63
employer decides with little/no input |      224      45.07      50.70
         employer decides with input |      134      26.96      77.67
              i decide witin limits |       91      18.31      95.98
              i decide without limits |       20       4.02     100.00
-------------------------------+-----------------------------------
                        Total |      497     100.00
```

Excluding participants who (fully) control their schedule would mean dropping 20 people in the last category (however, note there are degrees of controlling schedule).

We conduct several robustness checks.

First, we repeat for reference the specification from the body of the paper (a5). Second, instead of treating the variable as continous as in the body, we dummy it out (a5D) with base "employer decides with little/no input." Results are similar. Next in a5no0 we drop the observation in 1st category "outside of my/employer control," again results are similar. Finally in a5no4 we drop "i decide without limits" and here results are different–we lose sig on 'most hrs per week past month/usual hours.' Finally we are droping both ends where employer has no latitude–to see how the results may change if we look at subsample where employer has discretio in column a5no04–results are similar to previous column a5no4.

	a5	a5D	a5no0	a5no4
fewest hrs per week past month/usual hours	0.12	0.10	0.11	0.07
most hrs per week past month/usual hours	-0.16*	-0.14+	-0.17*	-0.13
family income in $1986, millions	1.09	0.95	0.94	0.85
age	0.01	0.01	0.01	0.00
age squared	-0.00	-0.00	-0.00	0.00
married	0.30***	0.29***	0.30***	0.28***
highest year of school completed	-0.03*	-0.03*	-0.03+	-0.03+
male	0.05	0.05	0.09	0.05
number of persons in household	0.00	0.01	0.01	-0.00
white	0.05	0.05	0.05	0.07
number of hours worked last week	0.00	0.00	0.00	0.00
health	0.17***	0.17***	0.17***	0.17***
decide working hours	-0.01			
paid by the hour	-0.14*	-0.14*	-0.15*	-0.13+
professional	0.00	0.00	0.00	0.00
administrative/managerial	0.04	0.04	0.05	0.05
clerical	-0.10	-0.09	-0.10	-0.12
sales	-0.10	-0.12	-0.09	-0.15
service	0.08	0.08	0.04	0.04
agriculure	-0.26	-0.27	-0.29	-0.30
production,transport	0.08	0.07	0.06	0.04
craft, technical	-0.17	-0.19	-0.15	-0.20+
new england	0.00	0.00	0.00	0.00
middle atlantic	-0.07	-0.08	-0.09	-0.05
east north central	-0.18	-0.20	-0.20	-0.14
west north central	-0.29+	-0.31*	-0.28+	-0.25+
south atlantic	-0.28*	-0.29*	-0.26*	-0.24+
east south atlantic	-0.12	-0.14	-0.12	-0.11
west south central	-0.14	-0.15	-0.14	-0.04
mountain	-0.09	-0.10	-0.09	-0.03
pacific	-0.16	-0.17	-0.18	-0.16
sethrs==outside of my/employer control		0.01		
sethrs==employer decides with input		-0.06		
sethrs==i decide witin limits		0.04		
sethrs==i decide without limits		-0.15		
constant	2.02***	2.07***	2.05***	2.04***
N	438	438	414	421

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err

Table 27: OLS regressions of life satisfaction.

Next we repeat the exercise for other main independent variables. With dummies, '(mosthrs-leasthrs)/usualhrs' remains marginally significant at p-value of about .1. Like in the previous table, we lose statistical significance if we exclude "i decide without limits," and

simlarly in last column when we also drop "outside of my/employer control."

	b5	b5D	b5no0	b5no4
(mosthrs-leasthrs)/usualhrs	-0.14+	-0.13	-0.15*	-0.11
family income in $1986, millions	1.13	1.00	1.01	0.92
age	0.01	0.01	0.01	0.00
age squared	-0.00	-0.00	-0.00	0.00
married	0.29***	0.28***	0.30***	0.28***
highest year of school completed	-0.03*	-0.03*	-0.03+	-0.03*
male	0.05	0.04	0.09	0.05
number of persons in household	0.00	0.01	0.01	-0.00
white	0.05	0.05	0.05	0.07
number of hours worked last week	0.00	0.00	0.00	0.00
health	0.17***	0.17***	0.17***	0.17***
decide working hours	-0.01			
paid by the hour	-0.15*	-0.15*	-0.15*	-0.14+
professional	0.00	0.00	0.00	0.00
administrative/managerial	0.04	0.04	0.05	0.05
clerical	-0.10	-0.10	-0.10	-0.12
sales	-0.10	-0.12	-0.09	-0.15
service	0.09	0.08	0.04	0.04
agriculure	-0.26	-0.26	-0.28	-0.29
production,transport	0.08	0.07	0.05	0.04
craft, technical	-0.17	-0.19	-0.15	-0.20+
new england	0.00	0.00	0.00	0.00
middle atlantic	-0.07	-0.08	-0.09	-0.05
east north central	-0.18	-0.20	-0.20	-0.14
west north central	-0.29+	-0.31*	-0.28+	-0.25+
south atlantic	-0.28*	-0.29*	-0.26*	-0.23+
east south atlantic	-0.12	-0.14	-0.12	-0.10
west south central	-0.14	-0.15	-0.14	-0.04
mountain	-0.08	-0.10	-0.09	-0.03
pacific	-0.16	-0.18	-0.18	-0.16
sethrs==outside of my/employer control		0.02		
sethrs==employer decides with input		-0.06		
sethrs==i decide witin limits		0.04		
sethrs==i decide without limits		-0.15		
constant	1.99***	2.03***	2.01***	2.01***
N	438	438	414	421

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust
std err

Table 28: OLS regressions of life satisfaction.

In table 29 dummies do not change much and dropping the first category results are slightly stronger on "2 days-1 wk." And again like earlier, dropping the 4th category kills significance, and remains insignificant when we also drop the first category.

	c5	c5D	c5no0	c5no4
never	0.00	0.00	0.00	0.00
-1 day	0.03	0.04	0.09	0.06
2 days-1 wk	-0.16+	-0.15+	-0.18*	-0.11
1 wks-	-0.08	-0.08	-0.09	-0.08
family income in $1986, millions	0.97	0.86	0.85	0.89
age	0.00	0.00	0.00	0.00
age squared	-0.00	-0.00	-0.00	0.00
married	0.30***	0.29***	0.30***	0.29***
highest year of school completed	-0.03*	-0.03*	-0.03*	-0.03*
male	0.06	0.05	0.10	0.05
number of persons in household	0.00	0.01	0.01	-0.00
white	0.08	0.08	0.08	0.10
number of hours worked last week	0.00	0.00	0.00	0.00
health	0.16***	0.16***	0.15**	0.16***
decide working hours	-0.01			
paid by the hour	-0.16*	-0.16*	-0.16*	-0.15*
professional	0.00	0.00	0.00	0.00
administrative/managerial	0.05	0.05	0.06	0.06
clerical	-0.10	-0.10	-0.10	-0.12
sales	-0.11	-0.13	-0.10	-0.16
service	0.10	0.09	0.06	0.05
agriculure	-0.38	-0.38	-0.43	-0.39
production,transport	0.03	0.02	-0.01	-0.00
craft, technical	-0.18	-0.20+	-0.18	-0.21+
new england	0.00	0.00	0.00	0.00
middle atlantic	-0.07	-0.07	-0.09	-0.04
east north central	-0.19	-0.21	-0.22+	-0.15
west north central	-0.32*	-0.33*	-0.31*	-0.26+
south atlantic	-0.27*	-0.28*	-0.25+	-0.21
east south atlantic	-0.12	-0.14	-0.12	-0.10
west south central	-0.15	-0.16	-0.15	-0.05
mountain	-0.08	-0.09	-0.08	-0.02
pacific	-0.19	-0.21	-0.22	-0.19
sethrs==outside of my/employer control		0.00		
sethrs==employer decides with input		-0.06		
sethrs==i decide witin limits		0.03		
sethrs==i decide without limits		-0.19		
constant	2.10***	2.13***	2.13***	2.04***
N	443	443	419	426

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust
std err

Table 29: OLS regressions of life satisfaction.

Finally, in table 30 results remain of similar magnitude and significance throught.

	d5	d5D	d5no0	d5no4
schedule or shift regularly changes	-0.13	-0.12	-0.09	-0.09
daily working times are decided at short notice	-0.34**	-0.35**	-0.29*	-0.33**
family income in $1986, millions	0.85	0.77	0.71	0.88
age	0.00	0.00	0.00	0.00
age squared	-0.00	-0.00	-0.00	-0.00
married	0.30***	0.29***	0.29***	0.28***
highest year of school completed	-0.03*	-0.03*	-0.03*	-0.03*
male	0.09	0.08	0.12+	0.07
number of persons in household	0.01	0.01	0.01	0.01
white	0.04	0.04	0.04	0.07
number of hours worked last week	0.00	0.00	-0.00	0.00
health	0.16***	0.16***	0.15**	0.16***
decide working hours	-0.01			
paid by the hour	-0.18*	-0.17*	-0.18*	-0.15*
professional	0.00	0.00	0.00	0.00
administrative/managerial	0.05	0.05	0.05	0.06
clerical	-0.11	-0.10	-0.11	-0.12
sales	-0.10	-0.12	-0.12	-0.15
service	0.06	0.06	0.01	0.04
agriculure	-0.27	-0.26	-0.32	-0.28
production,transport	0.05	0.04	0.01	0.02
craft, technical	-0.16	-0.18	-0.17	-0.19
new england	0.00	0.00	0.00	0.00
middle atlantic	-0.08	-0.09	-0.11	-0.06
east north central	-0.20	-0.22+	-0.23+	-0.18
west north central	-0.34*	-0.36*	-0.35*	-0.31+
south atlantic	-0.29*	-0.31*	-0.28*	-0.26+
east south atlantic	-0.14	-0.16	-0.15	-0.13
west south central	-0.15	-0.16	-0.17	-0.06
mountain	-0.09	-0.12	-0.12	-0.05
pacific	-0.22+	-0.24+	-0.25+	-0.22+
sethrs==outside of my/employer control		0.03	0.00	0.01
sethrs==employer decides with input		-0.07	-0.07	-0.07
sethrs==i decide witin limits		0.04	0.04	0.03
sethrs==i decide without limits		-0.14	-0.15	0.00
constant	2.16***	2.21***	2.24***	2.09***
N	438	438	414	423

+ 0.10 * 0.05 ** 0.01 *** 0.001; robust std err

Table 30: OLS regressions of life satisfaction.

Hence, we conclude that only the last variable "what is your working schedule" predicts SWB in sample excluding "i decide without limits." For first three variables, while sign remains the same, and the effect size is cut by no more than about 20%, still the loss of statistical significance is notable.

6 Descriptive Statistics

6.1 Distributions of Variables

7 Other/minor points

7.1 Directionality of effect from health and income to SWB

The direction of causality of some SWB determinants such as health may be disputed, i.e., whether health predicts happiness or happiness predicts health (Diener 2015). But recent evidence supports our assumption that health causing happiness is predominant (Liu et al. 2016). The same logic applies to the role of income in SWB estimation and whether it is income that predicts SWB or vice versa (Easterlin 1974, Helliwell et al. 2004). While in general it is assumed that income predicts SWB (e.g., Okulicz-Kozaryn 2011, 2016), longitudinal and (quasi) experimental designs are recommended to tackle reverse causality (Diener 1994, Helliwell et al. 2004).

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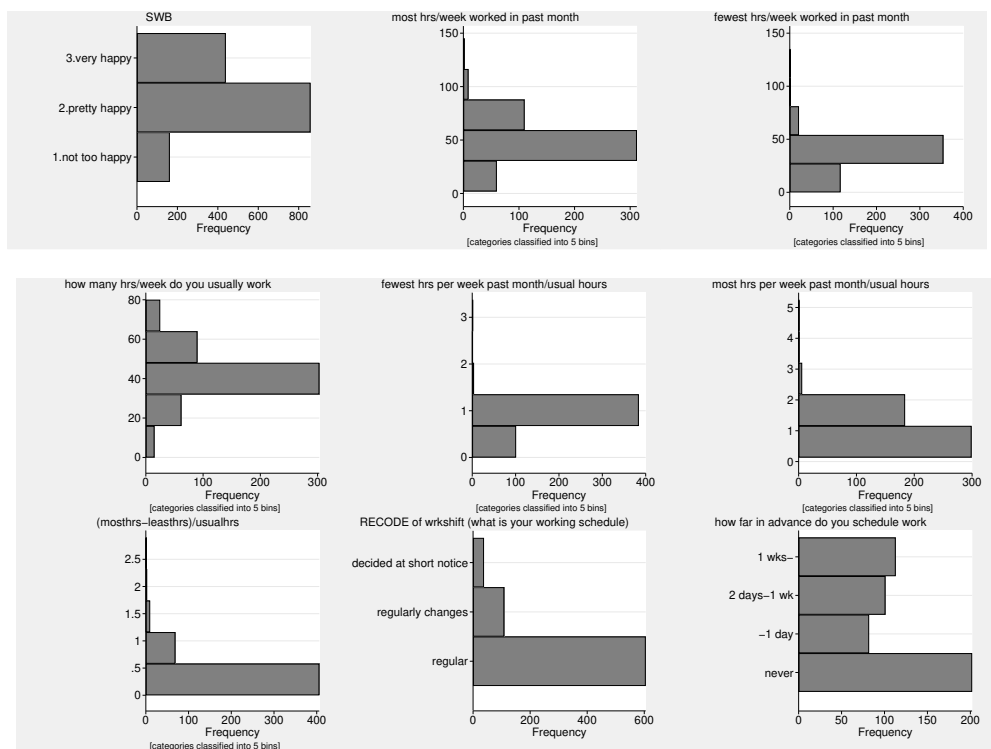
Figure 5: Variables' distribution.

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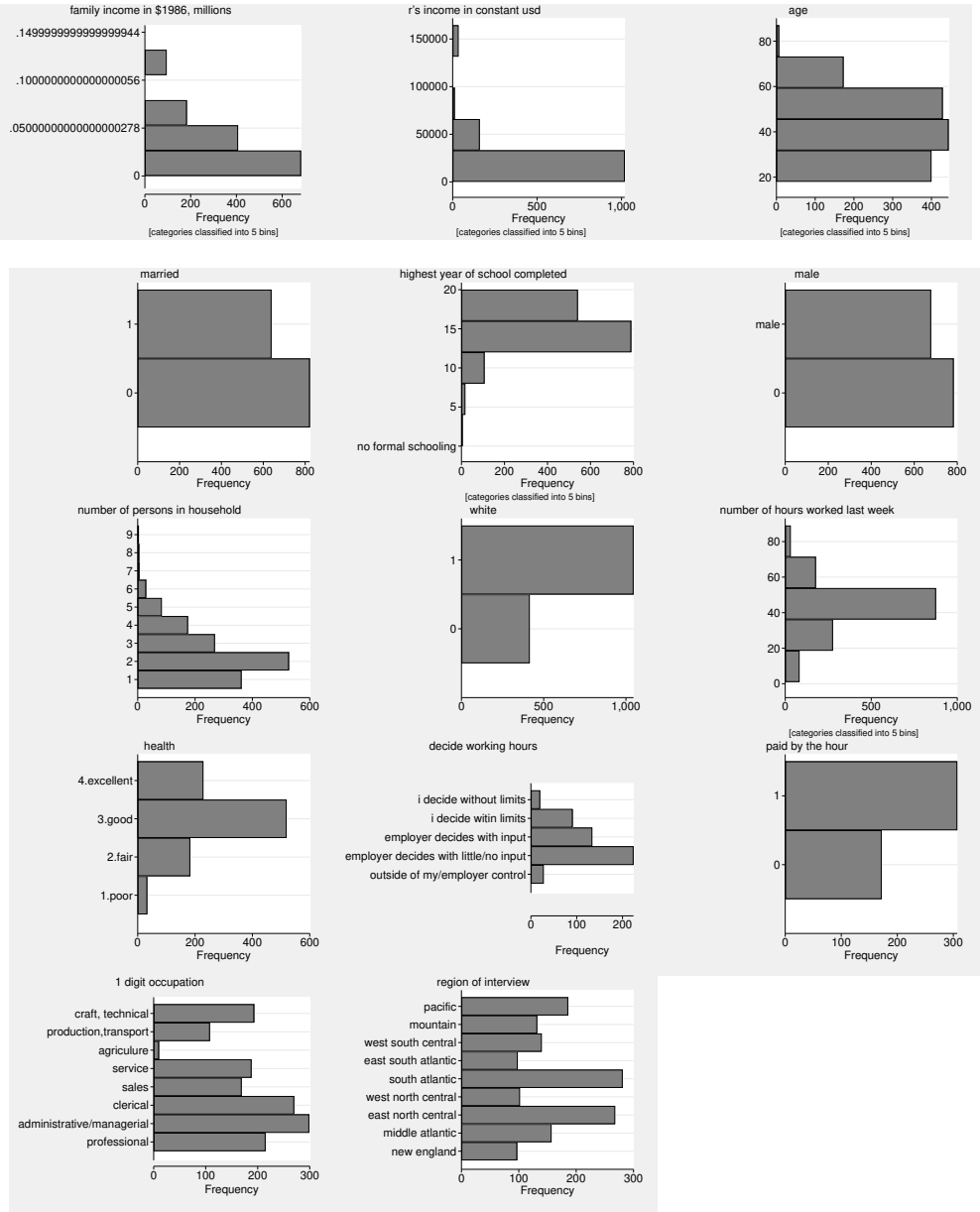——— (2016): "Unhappy metropolis (when American city is too big)," *Cities*.

Figure 6: Variables' distribution.