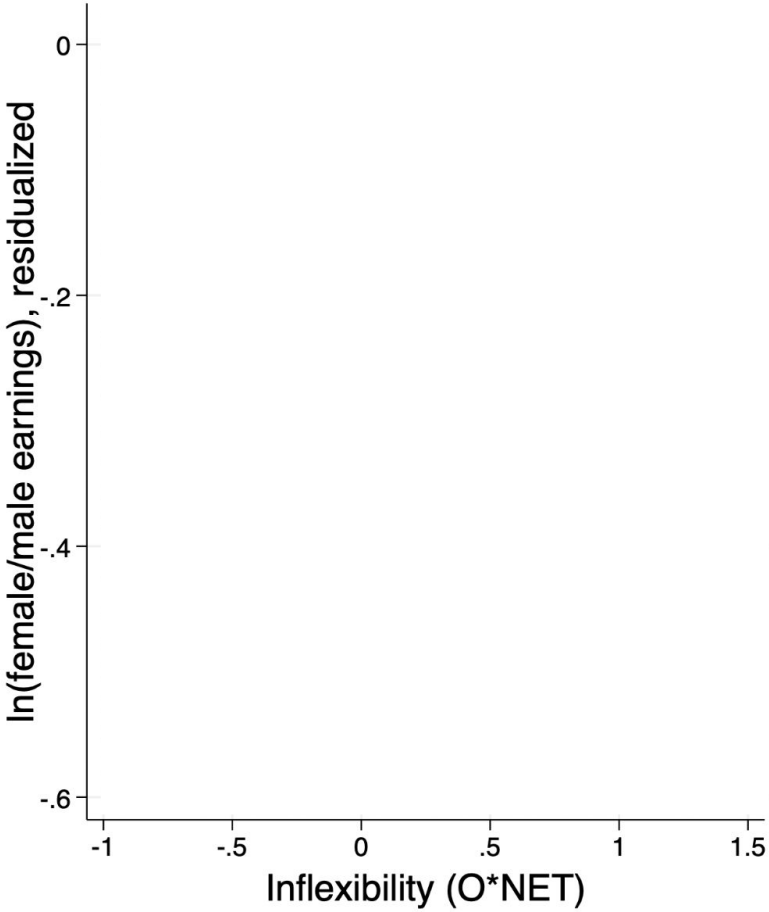
Inflexibility, Social Skills, and the Allocation of Talent

Savannah Noray
Harvard University
July 25, 2023

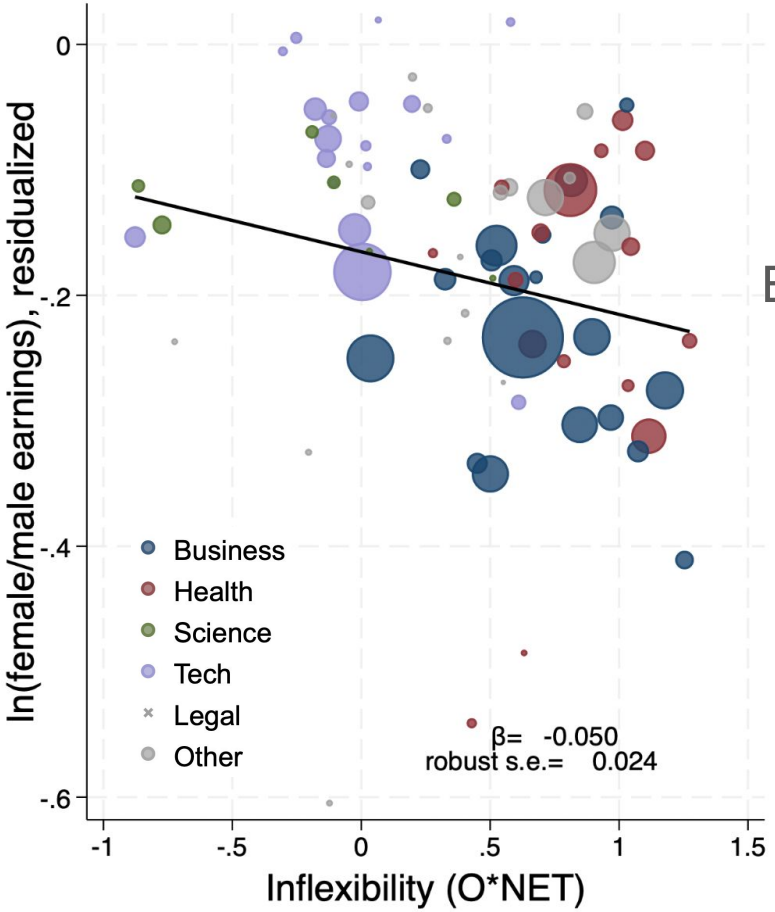
Motivation

Fact: college gender wage gap *increasing* in inflexibility…



Source: ACS 2015-2019. Each observation is a Dorn-Deming-Hanson (3-digit) occupation. Left panel is replication of Goldin (2014). Sample is college-educated, FTFY workers aged 25-64. Occs ≥75th percentile in male earnings & with at least 25 men and 25 women among sample displayed (80 occs). Teachers not included. Observations are weighted by number employed (within the sample).

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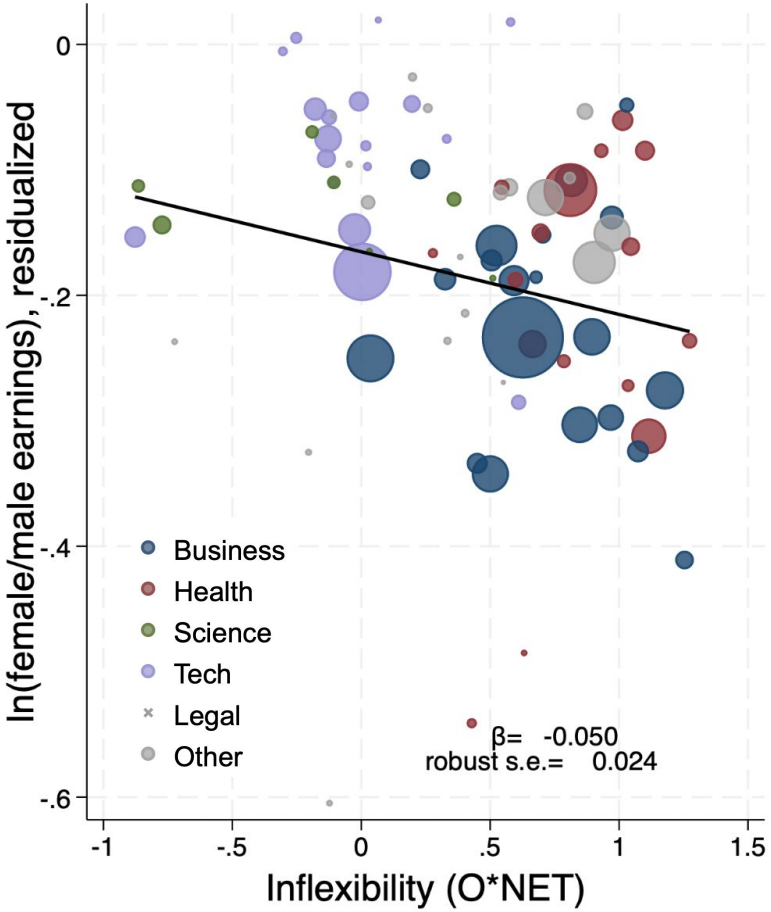


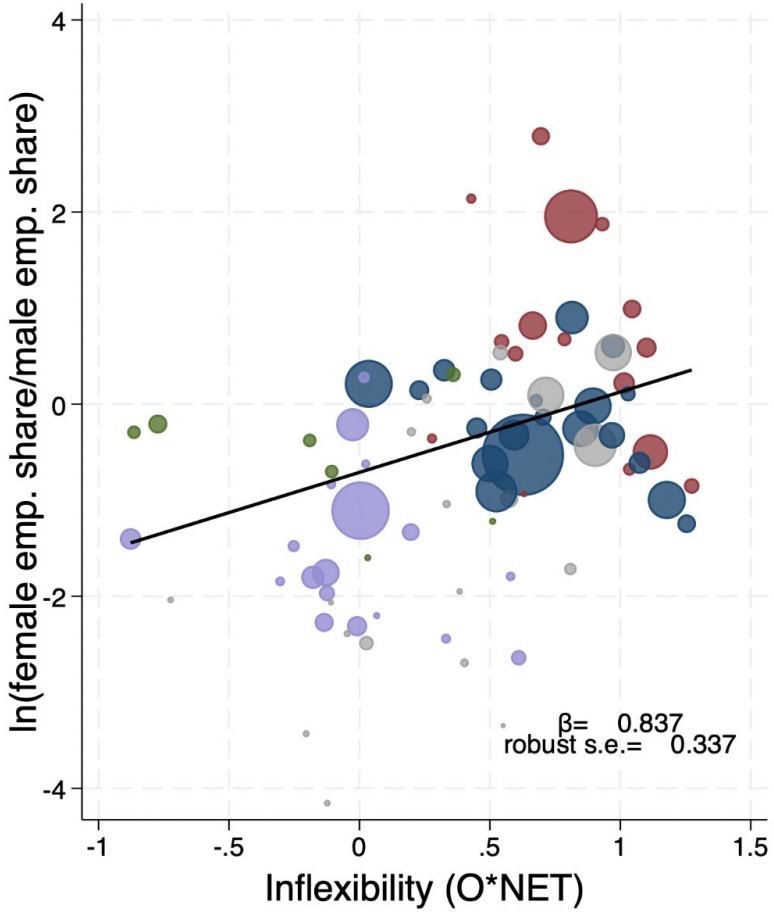
Explanation (Goldin, 2014):

- Women have higher WTP for flexibility
- Cost of providing flexibility amenity varies by occ
- Within "inflexible" occs, women pay more to accommodate their desire for autonomy over hrs

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But, college women *more* likely to sort into inflexible occs





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What is a plausible explanation for these patterns?

Hypothesis:

- **1)** On avg, women relatively more skilled in *social perceptiveness*
  - Social perceptiveness = being aware of others' reactions & understanding why they react
    - decoding nonverbal cues & "reading the room" (Hall, 1978)
  - Example occs: therapists, managers, social workers
- **2)** Flexibility more costly in relationship-intensive jobs
  - E.g. building relationships with clients → more likely to be "on call" & work irregular/long hrs
  - Example occs: CEOs, lawyers, managers
- ⇒ sorting/wage gap consequences of flexibility trade-off is amplified
  - OVB biases relationships in previous graphs towards ∞

So what? If true, then **women are between a rock and a hard place**

- Capitalizing on their talent → paying more for desired workplace amenities
- E.g., one implication: if could costlessly remove inflex. from social occs, then
  - Even more women would sort into these occs
  - Conditional on sorting into these occs, the within-occ wage gap would be smaller

This project

- **Model**: highlights tradeoff b/w flexibility amenity and skill requirements
  - To generate testable predictions for sorting/wage gaps, nest w/in Roy model (Hsieh et al., 2019)
  - **Key element**: social perceptiveness demands correlate with cost of flexibility
  - **Key insight**: women may still sort into inflexible occs if relative skill advantage large enough, which, in turn, may mute gender wage gaps
- **Descriptive analysis**: test predictions (ACS, O*NET)
  - **Key result**: slope of wage gap WRT inflexibility *increases* when controlling for social percep.
- **Additional analysis *(working on)***:
  - Microdata on skills, mechanisms (NLSY97, AddHealth)
  - Natural experiment building on Wasserman (2023)

Contribution to the literature

- Women prefer & are WTP for flexibility, broadly defined
  - e.g. Goldin & Katz (2011, 2016), Goldin (2014), Flabbi & Moro (2012), Mas & Pallais (2017), Wiswall & Zafar (2018), Cortes & Pan (2019), Wasserman (2023)

  → **Gender equality aside, are there *productivity gains* to lowering price of flexibility?**

- Constraints on occ choice can hinder sorting on comp. adv. and, ultimately, productivity
  - Sorting frictions (human capital barriers & discrimination) constrained GDP growth (Hsieh et al., 2019)
  - Evidence connecting frictions (discrimination) to task content (contact tasks) (Hurst et al., 2023)

  → **But, what if group facing constraint is esp. skilled in the tasks that are demanded *in those occs*?**

- Newer literature explores how selection/skills interact with flexibility story
  - Women's aversion to occs w/ long hrs is a quantitatively important driver of gaps (Erosa et al., 2022)
    - Roy selection *mutes* the gender wage gap within such occs

  → ***Avg skill diffs* can mute (or amplify) these wage gaps & seem empirically important**
  - Women's comp. adv. in Abstract tasks is offset by comp. disadv. in long/unusual hours, which leads to "mis-match" & widens across-occ wage gap ([Prelim.] Juhn & Rubinstein, 2022)

  → **Women's comp. adv. in social tasks offsets distaste for inflexibility & narrows the within-occ wage gap**

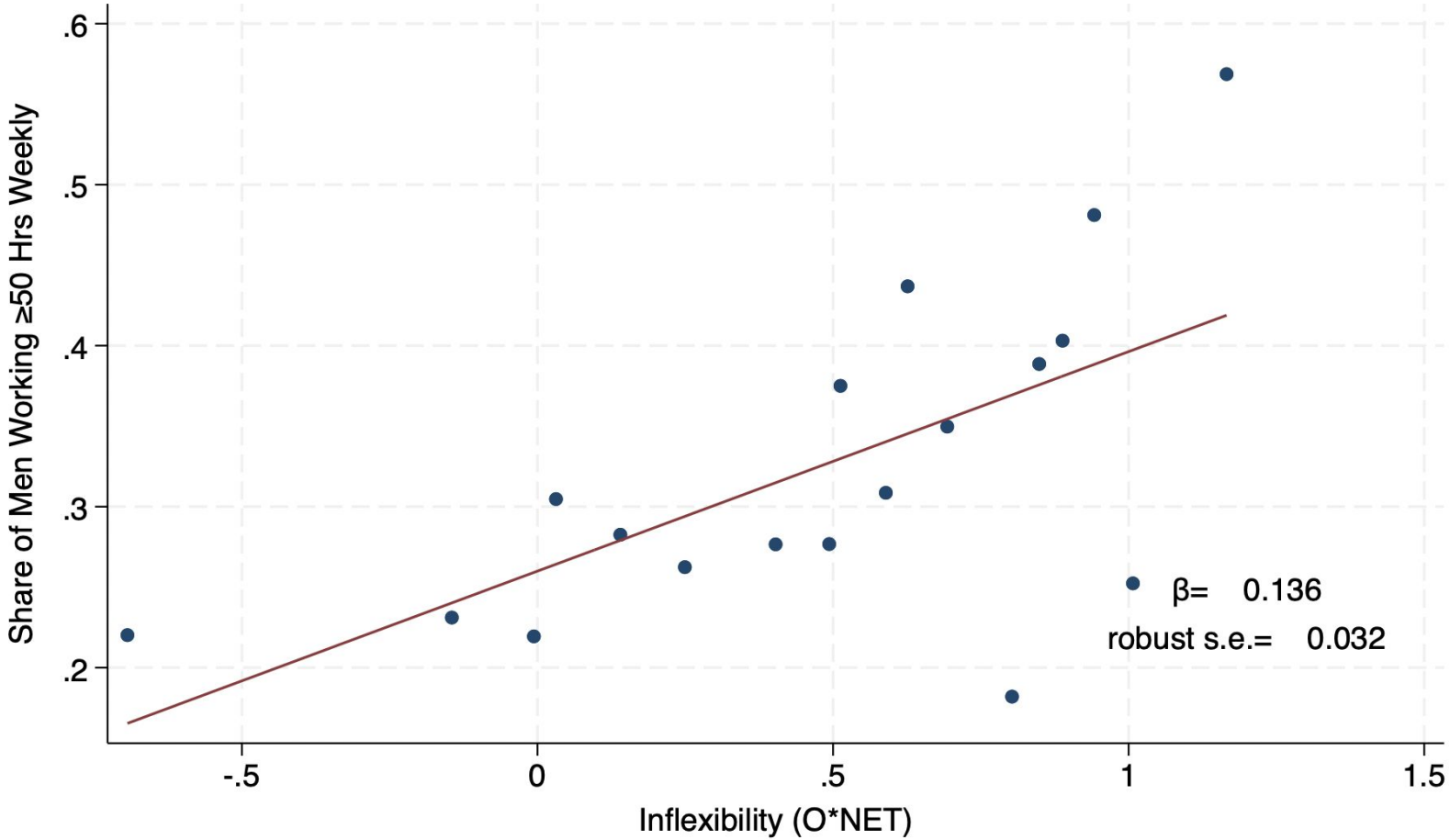
Preliminary Findings

Measuring inflexibility: avg of five dimensions *(Goldin, 2014)*

Dimension	Survey question	Concept
Time pressure	How often does this job require the worker to meet strict deadlines?	Time-sensitivity
Contact with others	How much does this job require the worker to be in contact with others (face-to-face, by telephone, or otherwise) in order to perform it?	Necessity of working working *with* people
Establishing & maintaining interpersonal relationships	Developing constructive and cooperative working relationships with others, and maintaining them over time	
Unstructured work	To what extent is this job structured for the worker, rather than allowing the worker to determine tasks, priorities, and goals?	Level of worker discretion
Freedom to make decisions	How much decision making freedom, without supervision, does the job offer?	

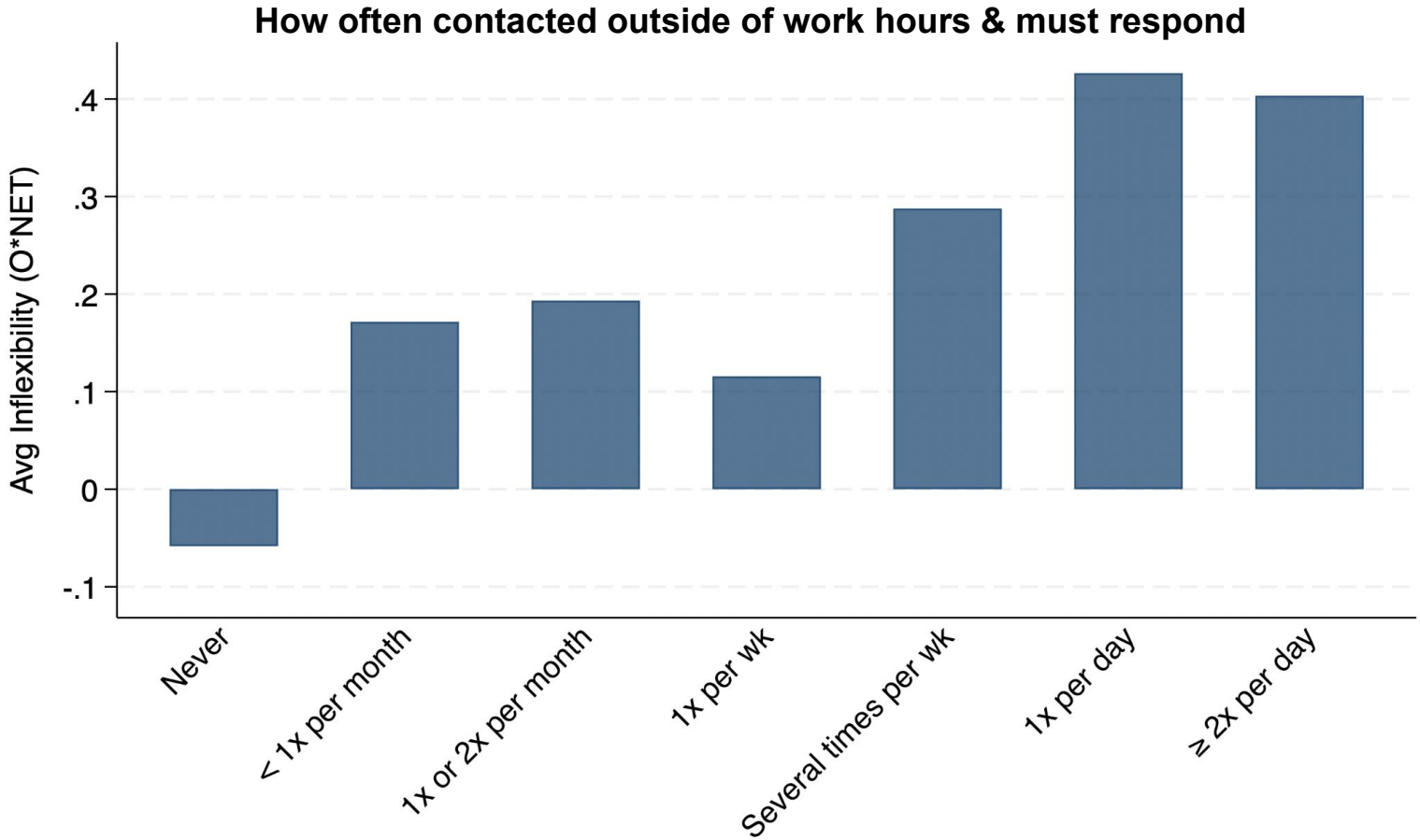
Illustrative occs: Lawyers, CEO's, ad agents, physical therapists = relatively inflexible. Waiters, cashiers, machine operators, computer programmers, scientists = relatively flexible.

Validation: capturing long hours



Source: ACS 2015-2019, O*NET 2013. Figure plots a binscatter of share of men who report usually working at least 50 hours per week against the inflexibility measure for 3-digit occupations. Observations weighted by number of college educated workers employed.

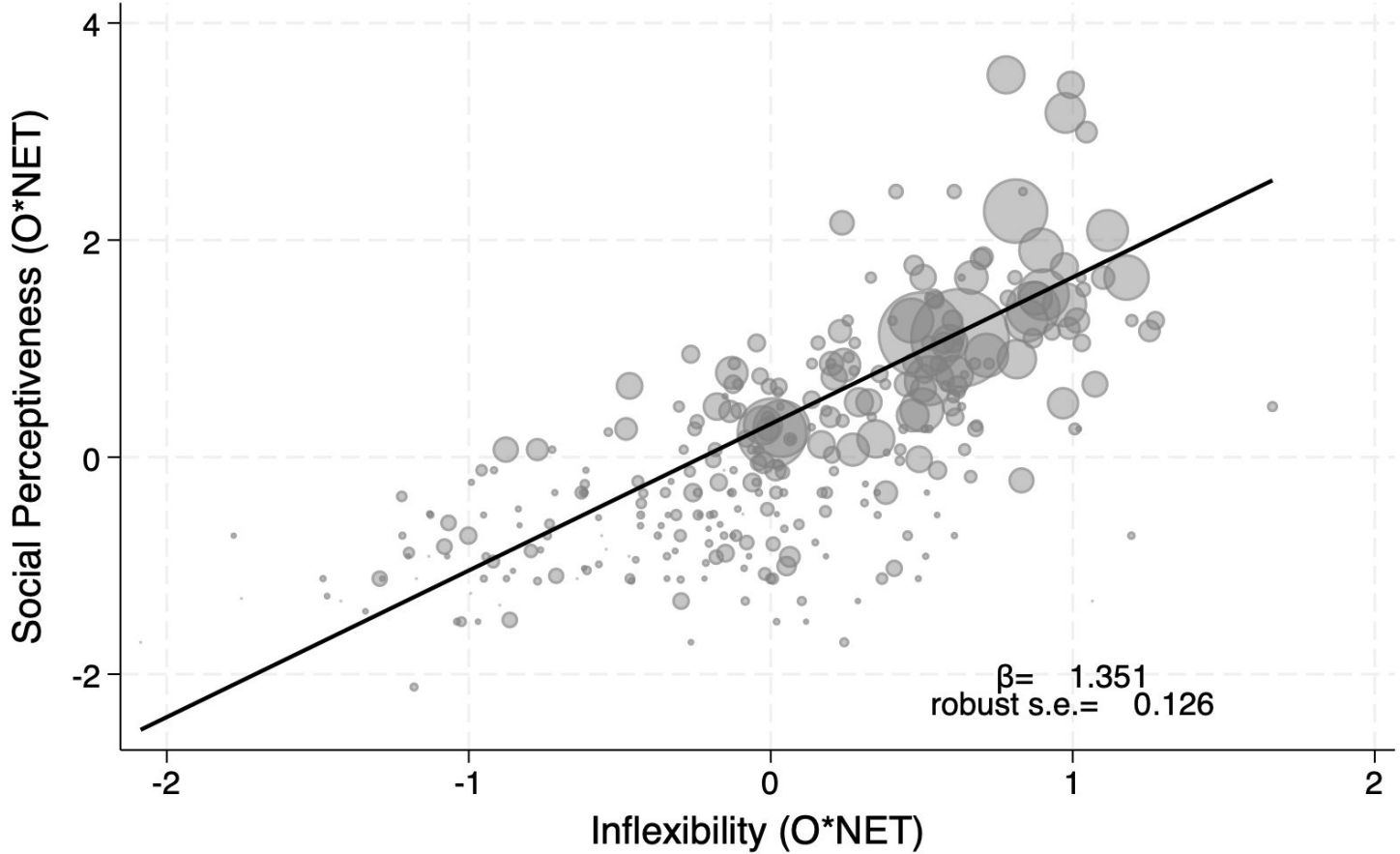
Validation: capturing time demands for *your* labor



Source: GSS 2014. Graph depicts average inflexibility (O*NET measure) across workers' answers to the question "Some workers must respond to coworkers, supervisors, managers, customers, or clients about work-related matters when they are not working. These contacts may be by phone, text, instant message, email, etc. How often are you contacted about work-related matters when you are not working?"

Inflexibility highly correlated with ***social perceptiveness***

Social Perceptiveness: *"Being aware of others' reactions and understanding why they react as they do."*

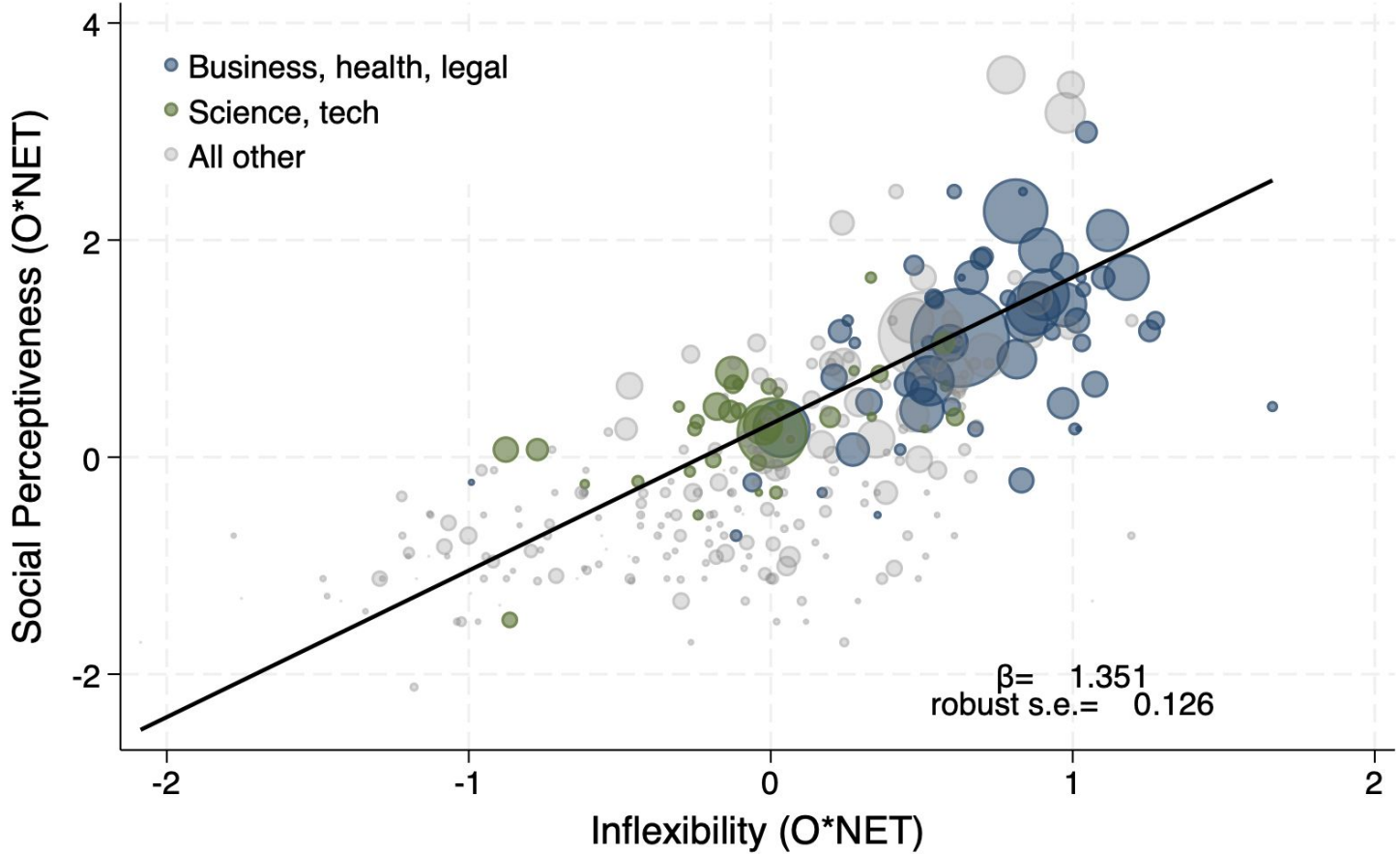


Illustrative occs labelled

Source: ACS 2015-2019, O*NET 2013. Observations are 311 3-digit occupations and are weighted by number of college educated workers employed. Coefficient (robust standard errors) is 1.173 (0.391) when limiting to top male earner occs as in first graph.

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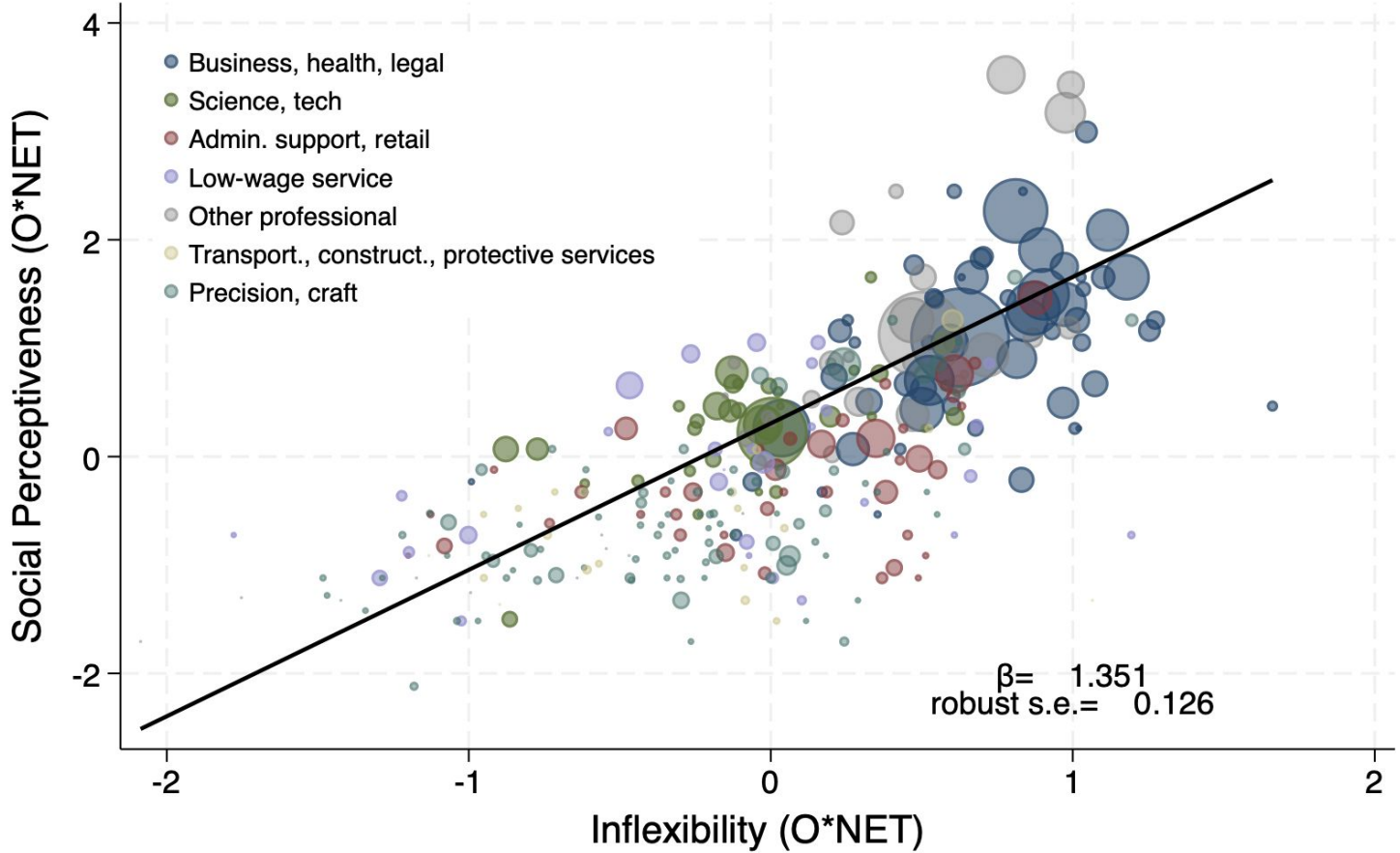


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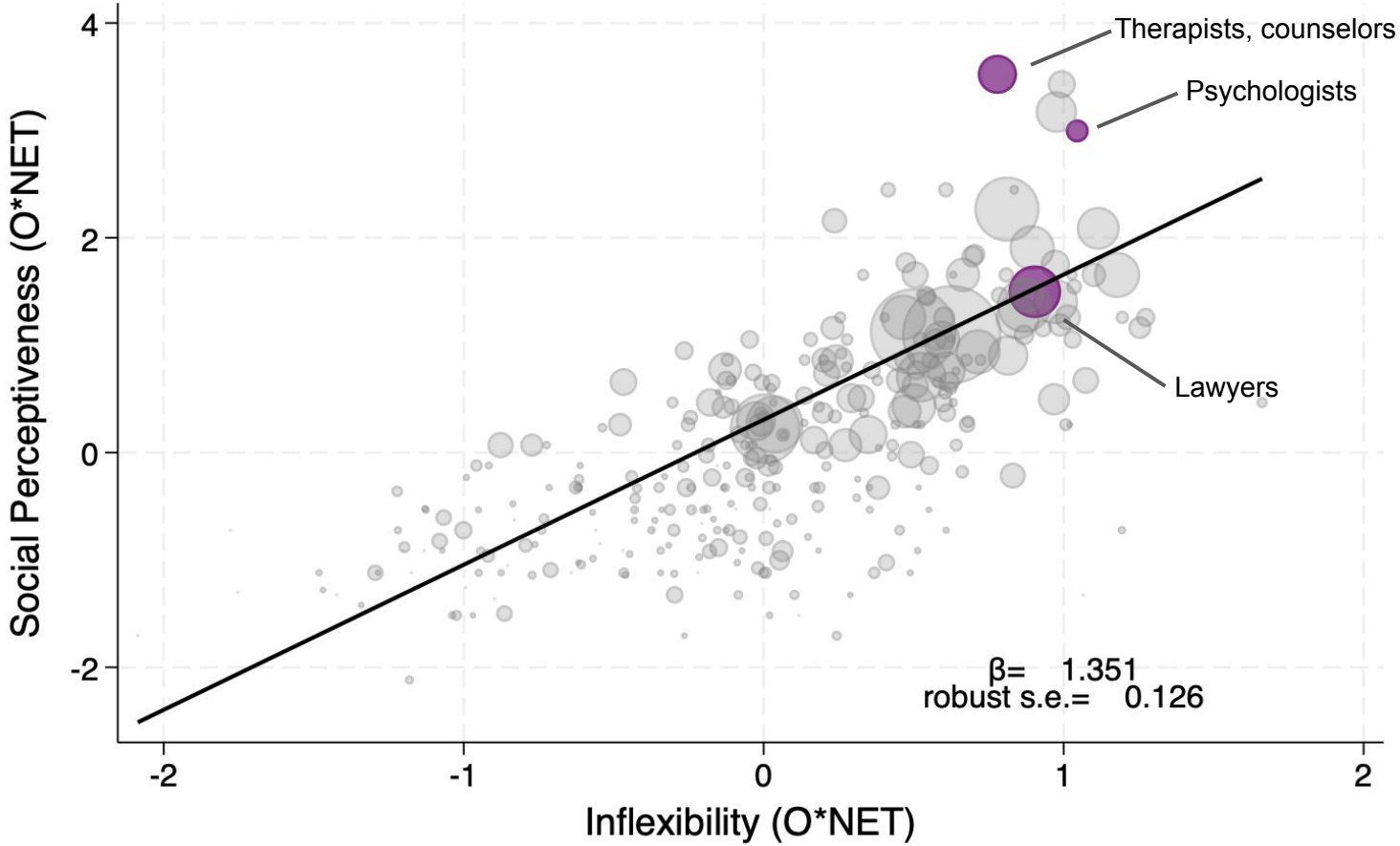


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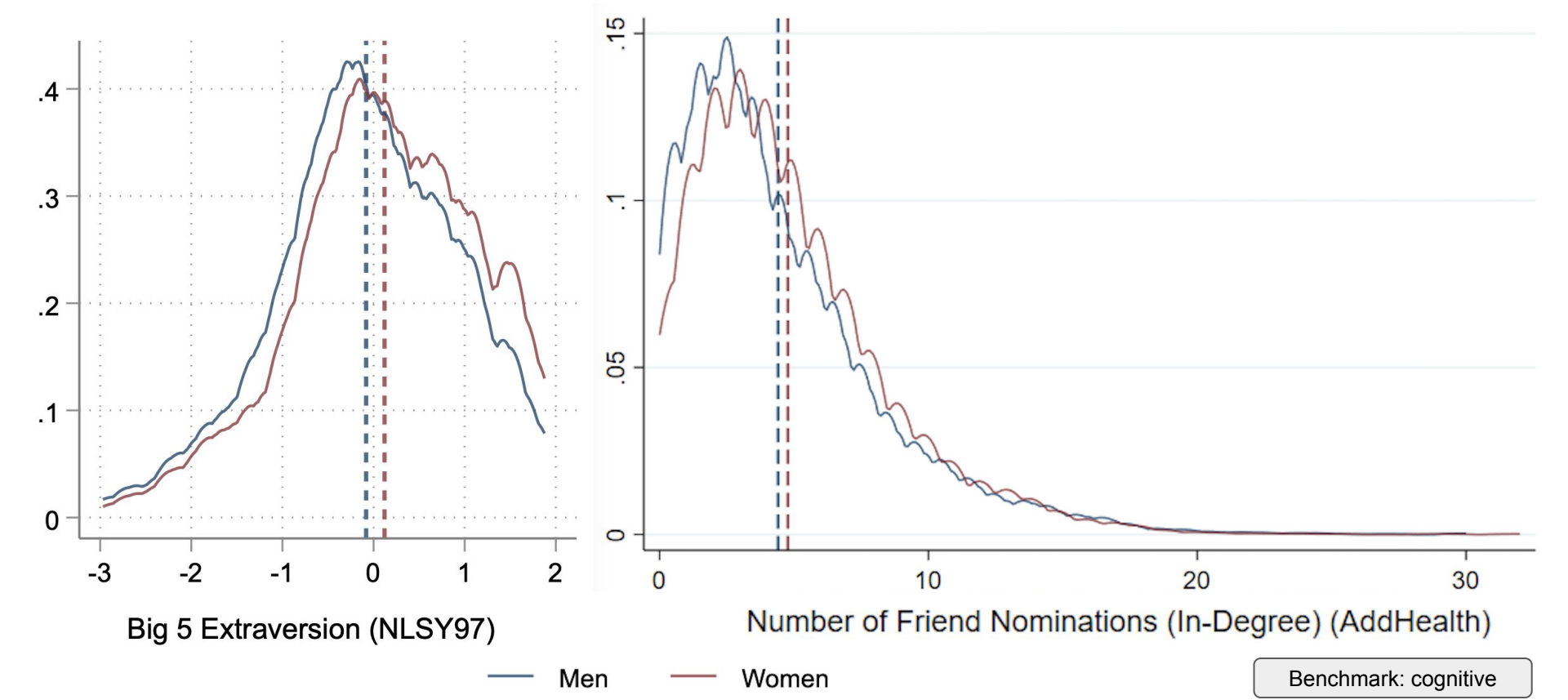
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And, women more skilled socially (broadly defined)



Benchmark: cognitive

Source: NLSY97 (left) and AddHealth (right). Graphs plot kernel density plots for measures of social skills: Big 5 Extraversion (as in Deming (2017)) on the left and number of others who nominated you as their friend in middle/high school (as in Lleras-Muney et al (2023)). Dotted lines indicate the average value. For additional evidence, see work showing women score higher on the Reading the Mind in the Eyes test across countries and across age (Greenberg et al 2023).

Despite earning less, women *more* likely to sort into inflexible jobs

	Women's relative sorting, $\log(p_{ow}/p_{om})$	Women's relative wages, $\log(w\bar{a}ge_{ow}/w\bar{a}ge_{om})$
	(1)	(4)
Inflexibility_o	0.543**	-0.033*
	(0.239)	(0.018)
$\text{Social Perceptiveness}_o$		
Obs.	311	311
R-squared	0.05	0.03
Other Task Controls		

Source: ACS 2015-2019 and O*NET 2013. Observations are 3-digit occupation codes. Sample is FTFY college-educated workers, and observations are weighted by (college-educated) employment. Columns 1-3 regress the log(fraction women sorting into an occ / fraction men sorting into an occ) on the inflexibility measure, social perceptiveness, and other task controls (routine intensity, analytical intensity). Columns 4-6 regress the log(women's wages / men's wages) on the same set of independent variables. Women's relative wages obtained from the coefficient on the interaction term between a female dummy and occupation FE from a regression of log earnings on quartic in age, education, race dummies, log weeks worked, log usual hours worked, and occ FE.

Similar when controlling for analytical, routine

	Women's relative sorting, $\log(p_{ow}/p_{om})$		Women's relative wages, $\log(w\bar{a}ge_{ow}/w\bar{a}ge_{om})$	
	(1)	(2)	(4)	(5)
Inflexibility$_o$	0.543**	0.552**	-0.033*	-0.043**
	(0.239)	(0.220)	(0.018)	(0.017)
Social Perceptiveness$_o$				
Obs.	311	311	311	311
R-squared	0.05	0.13	0.03	0.17
Other Task Controls		X		X

Source: ACS 2015-2019 and O*NET 2013. Observations are 3-digit occupation codes. Sample is FTFY college-educated workers, and observations are weighted by (college-educated) employment. Columns 1-3 regress the log(fraction women sorting into an occ / fraction men sorting into an occ) on the inflexibility measure, social perceptiveness, and other task controls (routine intensity, analytical intensity). Columns 4-6 regress the log(women's wages / men's wages) on the same set of independent variables. Women's relative wages obtained from the coefficient on the interaction term between a female dummy and occupation FE from a regression of log earnings on quartic in age, education, race dummies, log weeks worked, log usual hours worked, and occ FE.

Sorting reverses once controlling for social

	Women's relative sorting, $\log(p_{ow}/p_{om})$			Women's relative wages, $\log(w\bar{a}ge_{ow}/w\bar{a}ge_{om})$	
	(1)	(2)	(3)	(4)	(5)
Inflexibility$_o$	0.543**	0.552**	-0.157	-0.033*	-0.043**
	(0.239)	(0.220)	(0.250)	(0.018)	(0.017)
Social Perceptiveness$_o$			0.555***		
			(0.185)		
Obs.	311	311	311	311	311
R-squared	0.05	0.13	0.21	0.03	0.17
Other Task Controls		X	X		X

→ *Are women **BETTER** at social jobs or do they **LIKE** them more? Wage predictions help adjudicate…*

Source: ACS 2015-2019 and O*NET 2013. Observations are 3-digit occupation codes. Sample is FTFY college-educated workers, and observations are weighted by (college-educated) employment. Columns 1-3 regress the log(fraction women sorting into an occ / fraction men sorting into an occ) on the inflexibility measure, social perceptiveness, and other task controls (routine intensity, analytical intensity). Columns 4-6 regress the log(women's wages / men's wages) on the same set of independent variables. Women's relative wages obtained from the coefficient on the interaction term between a female dummy and occupation FE from a regression of log earnings on quartic in age, education, race dummies, log weeks worked, log usual hours worked, and occ FE.

Slope of wage gap wrt inflexibility *doubles*

	Women's relative sorting, $\log(p_{ow}/p_{om})$			Women's relative wages, $\log(w\bar{a}ge_{ow}/w\bar{a}ge_{om})$		
	(1)	(2)	(3)	(4)	(5)	(6)
Inflexibility$_o$	0.543**	0.552**	-0.157	-0.033*	-0.043**	-0.087***
	(0.239)	(0.220)	(0.250)	(0.018)	(0.017)	(0.021)
Social Perceptiveness$_o$			0.555***			0.034***
			(0.185)			(0.010)
Obs.	311	311	311	311	311	311
R-squared	0.05	0.13	0.21	0.03	0.17	0.21
Other Task Controls		X	X		X	X

→ *Consistent with women being comparatively **BETTER** at social jobs*

→ *Benchmark: avg within-occ gender wage gap is **-0.16 log points** (85 cents to the male dollar)*

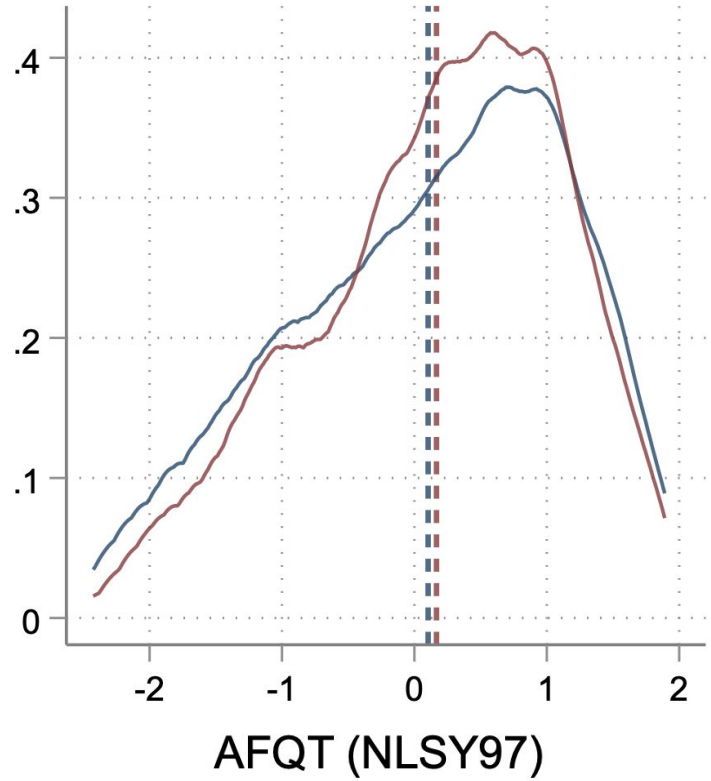
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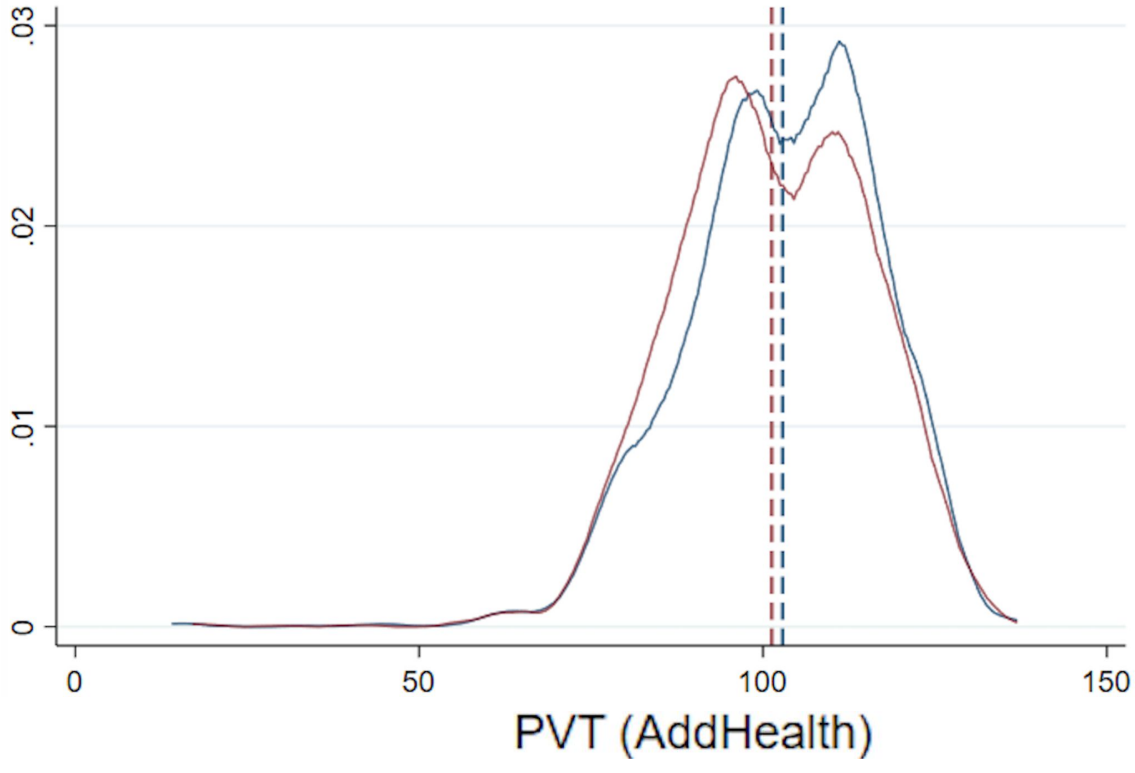
Remaining questions

- Is inflexibility a *binding constraint* on sorting into social occs?
  - Use Wasserman (2023) variation to unpack in causal way
  - Leverage claims data to evaluate heterogeneity by patient-relationship-intensity
- Are there other dimensions of social skills that matter for this?
  - Deming (2017): coordination, persuasion, negotiation
  - Additional variables in O*NET: teaching, service
- How do one's social skills impact marriage market and fertility? Does this mute/worsen consequences of this tradeoff?
- What is constraining firms from lowering cost of flexibility? Technology?

Appendix

Pattern unique relative to other dimensions of ability





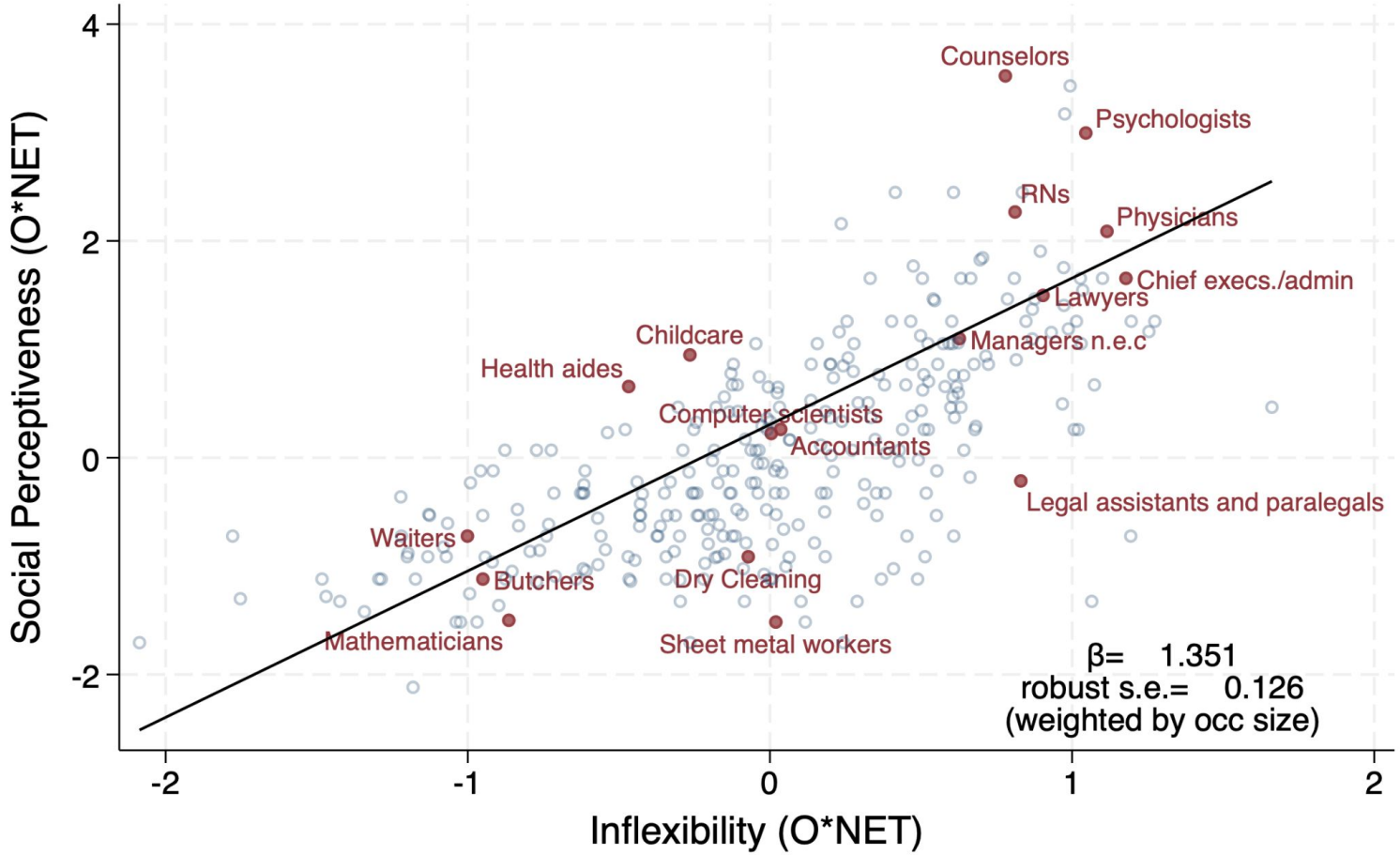
Men Women

Back

Source: NLSY97 (left) and AddHealth (right). Graphs plot kernel density plots for measures of cognitive skills: Armed Forces Qualifying Test (as in, e.g., Deming (2017)) on the left and the Picture Vocabulary Test score (as in Lleras-Muney et al (2023)). Dotted lines indicate the average value.

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