Employment Protection and Consumption: Evidence from Italy

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Motivation

People care about job safety (Baghai et al. 2023):

- Rothwell and Crabtree 2019: 91% of Americans view job security as a crucial aspect of their employment and their life
- BCG 2023: employees prioritize job security over pay
- Censis 2025: 50% of Italian employees in the private sector would prefer a job in the public sector due to higher employment stability

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Labour market reforms in Southern Europe after 2008 (OECD 2016):

- reduction in firing costs for firms
- policymakers' aim: increase labour flexibility and firms' productivity
- workers' perspective: reduction in employment protection
  $\Rightarrow$ employment risk $\uparrow$
- **macro models**: employment risk $\uparrow \Rightarrow$ precautionary savings $\uparrow$

This Paper (I)

"*What is the impact of employment risk on household consumption and labour supply?*"

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Two challenges:

1. Employment risk is endogenous (Fuchs-Schündeln and Schündeln 2005)
   - workers choose occupations according to their risk preferences
   - need an exogenous variation for causality

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   - need an exogenous variation for causality

2. Employment risk affects permanent income as well
   - need to *control* for permanent income (Y_P) but...
   - Y_P is not observable
     $\Rightarrow$ need a structural model to tell apart the *sole* effect of risk

This Paper (II)

How I address (1):

- leverage on a major labour market reform in Italy in 2015 known as the *Jobs Act* (JA)
- reduced employment protection for workers hired after March 6, 2015, by firms with 15+ employees ("large" firms)
- compare consumption and hours worked of workers affected by the JA with workers under the previous regulation - called the *Chart of Labour* (COL)

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How I address (2):

- standard incomplete market model with employment risk heterogeneity
- calibrate the model with MSM to match data on wealth and labour market
- run the empirical analysis on simulated data, **controlling for** Y_P
- two account model à la Auclert et al. 2024
- allocation of savings in liquid or liquid assets

Preview of the Results

Empirical Results:

- JAs spend 3% less than COLs on at-home food (relative to income)
- 8% difference in imputed consumption (Blundell et al. 2008)
- effect concentrated in the highest-income regions (in the North)
- weak effect on hours worked

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Model Results:

- 5.5% average difference in consumption between JA and COL workers
- $\simeq$ 2% controlling for Y_P
  $\Rightarrow$ employment risk accounts for roughly 40% of the total effect
- JAs save mostly in liquid assets (Graves 2025)

Outline

1. Employment Protection in Italy
2. Data, Empirical Specification and Results
3. Further Results
4. The Model
5. Conclusions

Literature I: the impact of (income) risk on savings

1. **Euler Equation approach**: estimate the EE using microdata
   - Dynan 1993, Bertola et al. 2005, Fagereng et al. 2017, Christelis et al. 2020, Crump et al. 2022, Sciacchetano 2024, Guiso and Jappelli 2024
2. **Structural approach**: match data with the income fluctuation model
   - Hubbard et al. 1994, Carroll 1997, Gourinchas and Parker 2002, Cagetti 2003, Low et al. 2010, Krusell et al. 2010, Kaplan and Violante 2010, 2014
3. **Direct Survey Questions**: elicit motives for saving via survey questions
   - Guiso et al. 1992, 1996, Jappelli and Pistaferri 2025, Graves 2025
4. **Quasi-Natural Experiments**: exogenous variation in risk/insurance
   - Kantor and Fishback 1996, Gertler and Gruber 2002, Fuchs-Schündeln and Schündeln 2005, Clark et al. 2022

Contribution:

1. exploit a time-based discontinuity in employment protection
2. (model-based) decomposition of the total effect in risk and Y_P effects

Literature II: the effects of the *Jobs Act*

The unintended consequences of the *Jobs Act* on:

- **fertility**: De Paola et al. 2021, De Paola et al. 2024
- **mobility and on-the-job search**: Bertoni et al. 2023
- **interest rates on mortgages**: Mistrulli et al. 2023

Contribution:

- unintended consequence also on consumption
- **policy messages**:
  1. possible demand-side effect of the JA
  2. employment risk fosters consumption and wealth inequality

The Jobs Act

Employment Protection in Italy

Chart of Labour (1970):

- applies to workers of firms with 15+ employees hired until March 6, 2015
- **reinstatement** in case of unjust dismissal (same wage and positions)
- strong protection against unemployment

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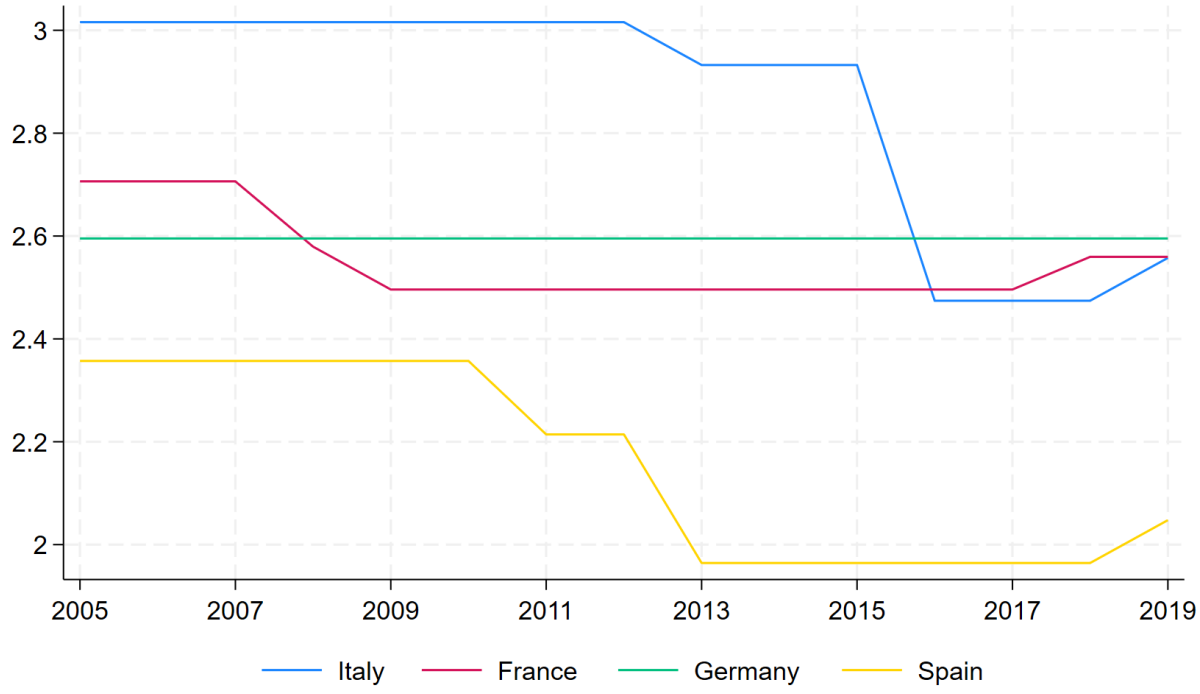
Jobs Act (2015):

- applies to workers hired from March 7 onwards
- reinstatement only in case of **discrimination** by the employer
- **graded security**: monetary compensation increasing with tenure
- **reduced protection** in the current occupation
  $\Rightarrow$ **higher** risk of becoming unemployed
  $\Rightarrow$ **higher** job displacement costs (Jarosch 2023, Bertheau et al. 2023)

Did the JA reduce employment protection? YES!



- drop in the OECD employment protection index in 2015/2016
- bigger drop than in 2011 (i.e., the Fornero Reform used by Clark et al. 2022)
- matches with evidence of JA workers feeling less safe (Bertoni et al. 2023)

Data and Empirical Results

Data

See Summary Stats

Participation, Labour and Unemployment Survey (PLUS)

- 2014 and 2018 representative cross-sections of the 18-75 population
- information on firm size and hiring day (before/after March 7)
- information on tenure (in 5-year bins)
- only in 2018: elicitation of risk aversion See Question
- at-home food spending and weekly hours worked
- sample characteristics: private sector employees with open-ended contracts

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Household Budget Survey (HBS)

- detailed info on household spending from 2014 to 2018
- Italian counterparts of the CEX in the United States
- impute log total spending from HBS in PLUS (Blundell et al. 2008)

Labour Force Survey (LFS)

- look at hiring patterns before and after the reform
- net aggregate employment flows

Empirical Specification

I estimate the following equation, with employees of **large firms** in 2018.

$$Y_{i\tau s} = \beta \, Jobs\ Act_{i\tau s} + \varphi \mathbf{X}_{i\tau s} + \gamma_{\tau} + \theta_{s} + \varepsilon_{i\tau s} \tag{1}$$

Where:

- $Y_{i\tau s} \in \left\{ (food/income)_{i\tau s}, \log_{BPP}(c_{i\tau s}), weekly\ hours\ worked_{i\tau s} \right\}$
- γ_{τ} (bins of 5 years) and θ_{s} are tenure and sector FEs
- $\mathbf{X}_{i\tau s}$ are controls (age, education, gender, family size, civil status...)
- $Jobs\ Act_{i\tau s}$ dummy equal to 1 if hired starting from March 7, 2015
- **Identification Assumption:** workers do not choose the hiring date $\Rightarrow$ *Jobs Act* as good as randomly assigned conditioning on X

Difference-in-Differences

Main Results: Food over Income

Dependent Variable: Food over Family Income $\times 100$

	(1)	(2)	(3)	(4)
Panel A: North of Italy				
Jobs Act	-1.68**	-1.75**	-2.71**	-2.76**
	(0.68)	(0.68)	(1.21)	(1.23)
Observations	2262	2262	2262	469
Panel B: South and Centre of Italy				
Jobs Act	0.74	0.59	0.68	0.55
	(1.03)	(1.05)	(1.57)	(1.63)
Observations	1461	1461	1461	304
Controls	✓	✓	✓	✓
Job Sector FE		✓	✓	✓
Tenure			✓	$\leq$ 5 years

Notes: Standard errors, clustered at the individual level, in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Main Results: Log of Food over Income

Dependent Variable: Log of Food over Family Income $\times 100$

	(1)	(2)	(3)	(4)
Panel A: North of Italy				
Jobs Act	-6.25**	-6.58**	-11.32**	-11.80**
	(2.87)	(2.89)	(5.08)	(5.06)
Observations	2227	2227	2227	435
Panel B: South and Centre of Italy				
Jobs Act	-0.34	-0.89	-0.50	-1.51
	(3.75)	(3.81)	(6.10)	(6.30)
Observations	1461	1461	1461	304
Controls	✓	✓	✓	✓
Job Sector FE		✓	✓	✓
Tenure			✓	$\leq$ 5 years

Notes: Standard errors, clustered at the individual level, in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Main Results: BPP Imputation

Details on the Imputation

Dependent Variable: BPP-Imputed Log of Spending $\times 100$

	(1)	(2)	(3)
Jobs Act	-8.58**	-8.68**	-7.91**
	(3.58)	(3.59)	(3.62)
Observations	3753	3753	3753
Job Sector Dummies		✓	✓
RA Dummies			✓

Notes: Standard errors, clustered at the individual level, in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

- difference in imputed consumption between 8-8.5%
- column 3: controlling for risk aversion, results are practically unchanged

Main Results: Weekly Hours Worked

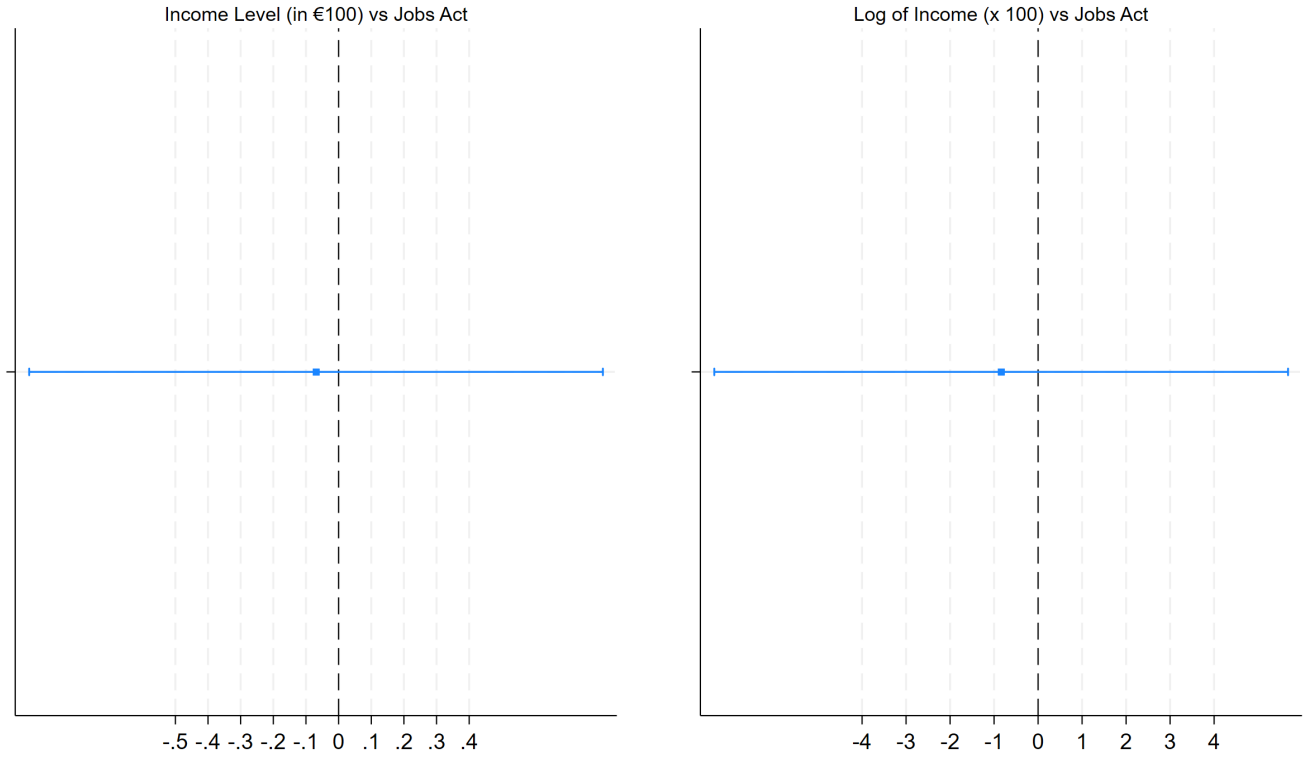
Dependent Variable: Weekly Hours Worked

	(1)	(2)	(3)	(4)
Panel A: North of Italy				
Jobs Act	1.32***	1.13**	0.41	0.17
	(0.47)	(0.46)	(0.84)	(0.86)
Observations	2105	2105	2105	2105
Panel B: South and Centre of Italy				
Jobs Act	0.67	0.73	-0.75	-1.04
	(0.65)	(0.64)	(0.98)	(1.02)
Observations	1425	1425	1425	310
Income	✓	✓	✓	✓
Controls	✓	✓	✓	✓
Job Sector FE		✓	✓	✓
Tenure			✓	$\leq$ 5 years

Notes: Standard errors, clustered at the individual level, in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

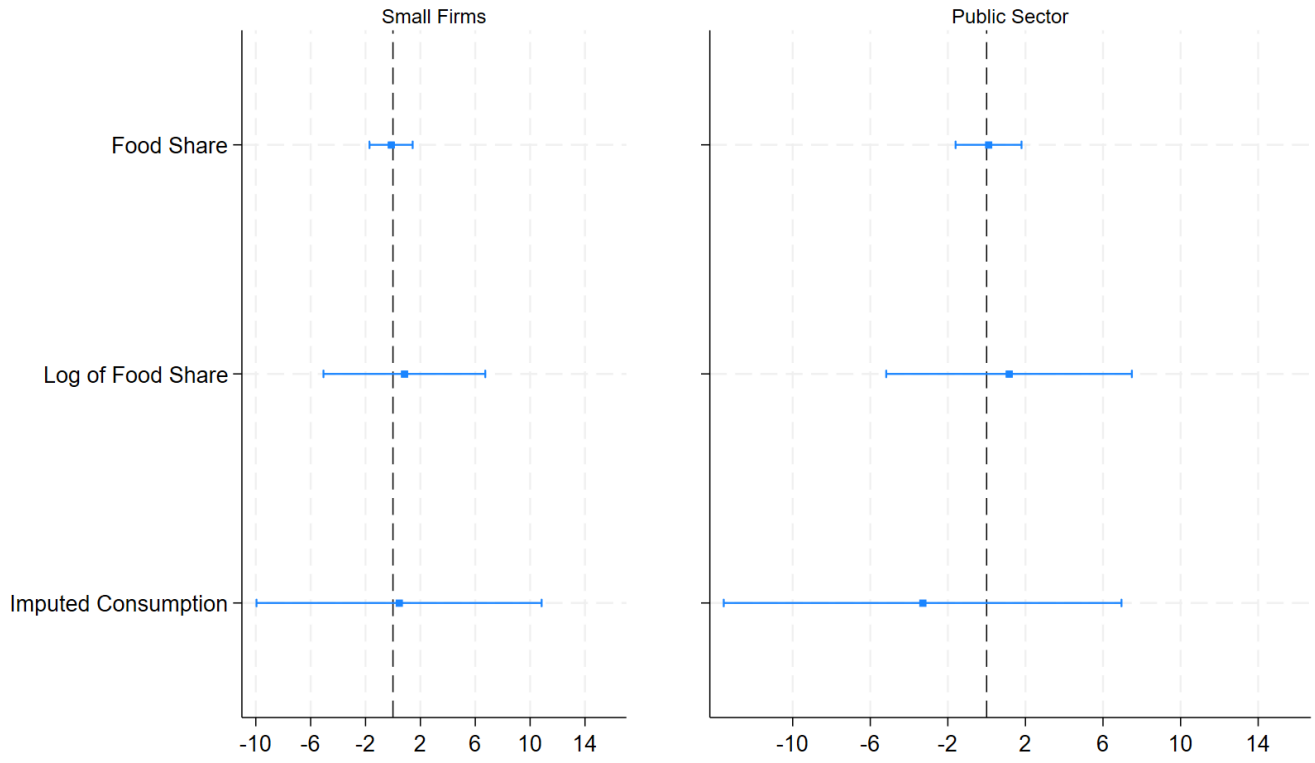
Placebo Tests

Placebo I: Regress Income vs Jobs Act



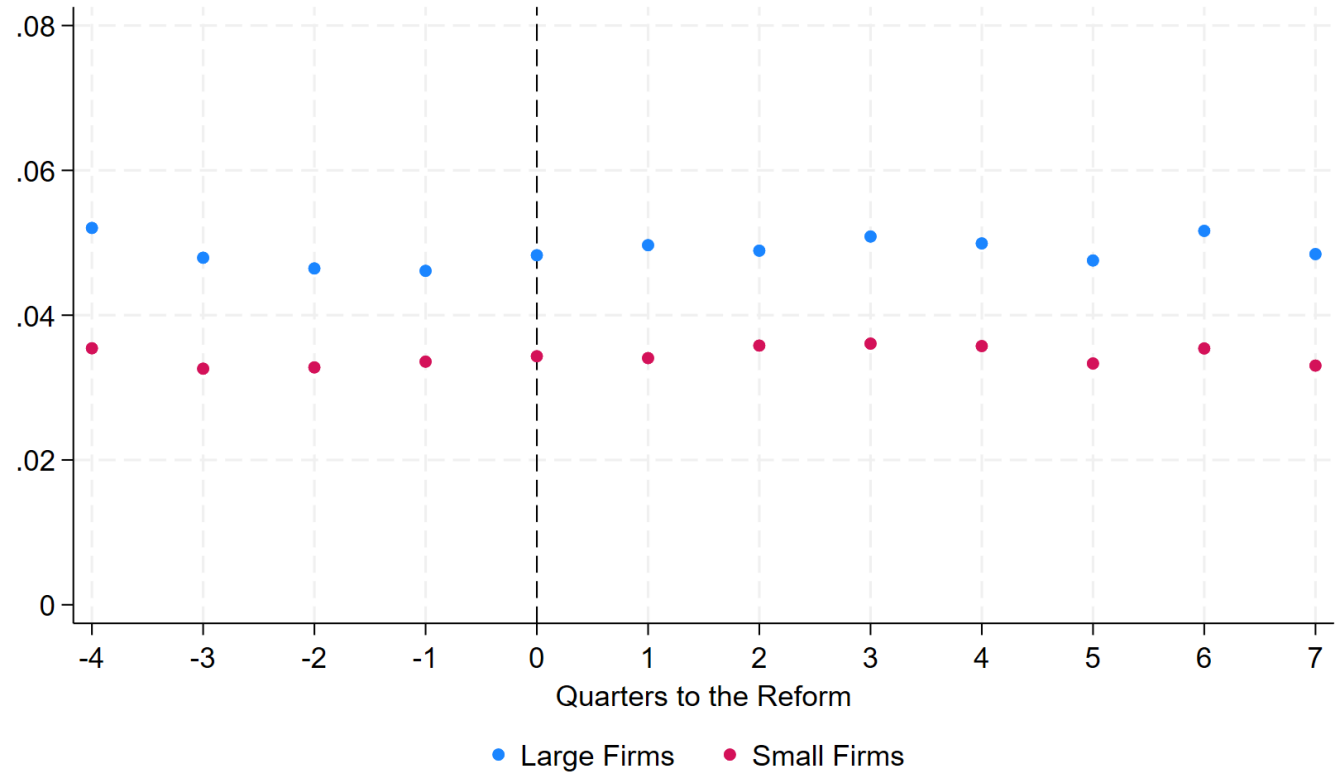
- no income differences between JA and COL workers
- variation in Y_P only coming from different separation rates

Placebo II: Small Firms and Public Sector



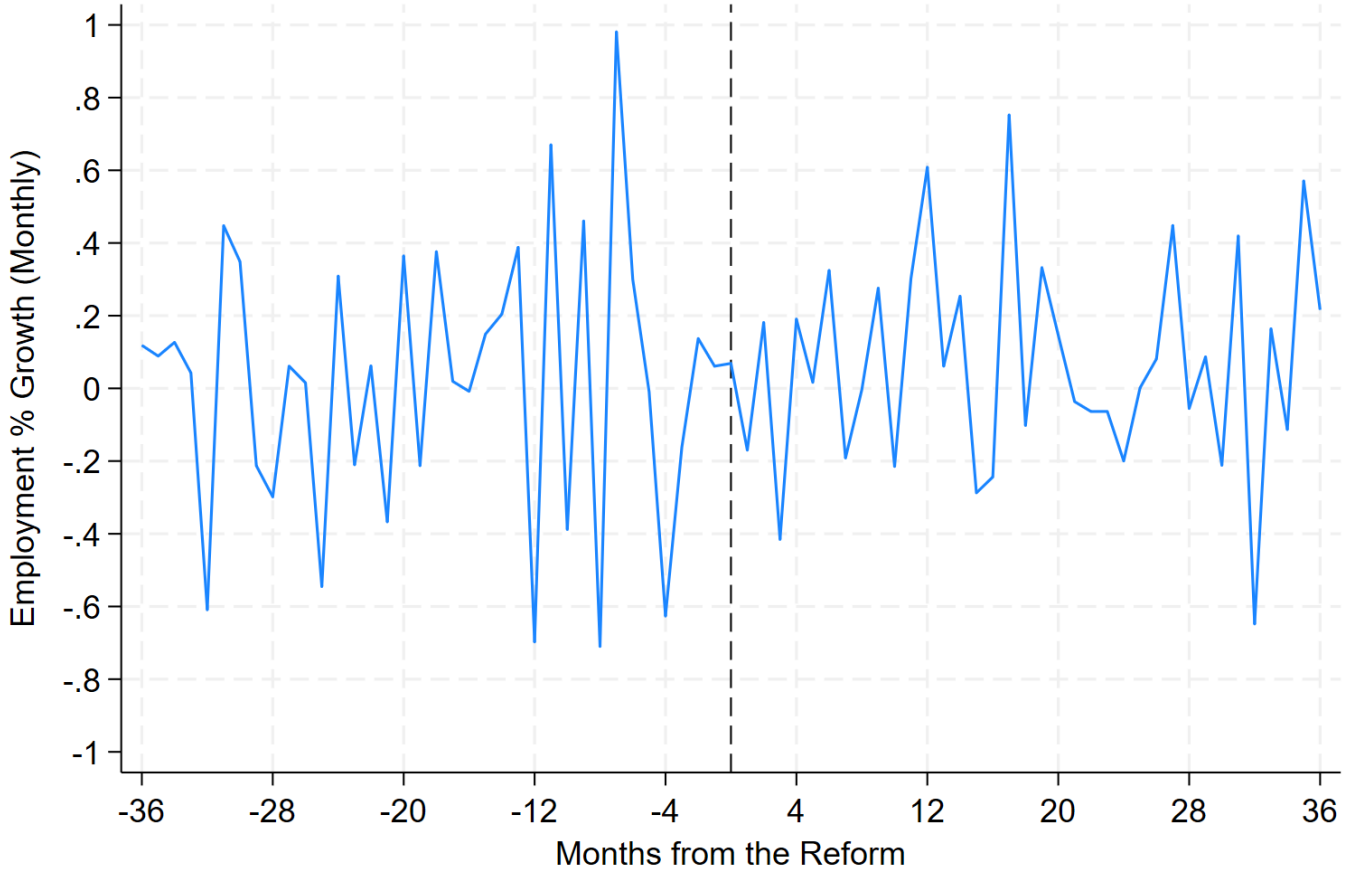
- small firm and public sector worker not involved in the reform
- no economically and statistically significant effect

Placebo IIIa: Hiring Rates Before around 2015-Q1



- smooth hiring rates before and after the reform

Placebo IIIb: Net Employment Growth



- no changes in the trend of net employment after the reform (Fana et al. 2015)

Further Results

- Heterogeneity See
  - by age: effect only for under-40 (Gourinchas and Parker 2002)
    $\Rightarrow$ weaker precautionary saving motive for the elderly
  - by education: stronger for college graduates
    $\Rightarrow$ high-education much more to lose from the JA
- Only workers of firms with 20+ employees See
  $\Rightarrow$ results not driven by marginal firms' sorting into the reform

The Model

Why do I need a model?

- The negative effect of the *Jobs Act* might come from:
  1. an increase in risk $\Rightarrow$ **stronger precautionary saving motive**
  2. a decrease in Y_P $\Rightarrow$ lower consumption (PIH)

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- Not possible to disentangle these two effects using PLUS:
  - they go in the same direction
    $\Rightarrow$ not obvious which one prevails Econometrics
  - controlling for earnings in the regression is not enough
  - Y_P also contains UI (not considered in the empirical analysis)

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- The model allows me to:
  - simulate consumption and wealth for JA and COL workers
  - compute the PDV of income for each simulated individual
  - run the empirical analysis with simulated data, controlling for PDV
  - isolate the effect of (1) while keeping (2) fixed
  - study the allocation of savings between liquid and illiquid assets

Setup

- Time is infinite and discrete, a period is 1 year
- No aggregate risk $\Rightarrow$ no mass-layoffs
- Two types of consumers/workers
  1. safe employees (mimic COL workers): low separation rate
  2. risky employees (mimic JA workers): high separation rate
- Employment risk regulated by Π_j with $j \in \{COL, JA\}$
  - job finding rate f
  - job separation rate s_j, with $s_{JA} > s_{COL}$
  - jointly calibrate these parameters with MSM
- Productivity and Income
  - log of productivity modeled as a AR(1) with ρ and σ_ε
  - productivity draw *independent* of employment state
  - income when employed: wage rate $w \times$ productivity
  - income when unemployed: UI replacement rate $b(p_t) \times$ productivity
- Households can save in one asset with a constant return r

Formal Model

See Calibration Details

$$\max_{\{a_{j,t+1}, c_{j,t}\}} \mathbb{E}_0 \sum_{t=0}^{\infty} \beta^t \left[\frac{c_{j,t}^{1-\gamma} - 1}{1-\gamma} \right] \quad j \in \{COL, JA\}$$

$$a_{j,t+1} = (1+r)a_{j,t} + y\Big(e_t(e_{t-1}, \Pi_j), p_t\Big) - c_{j,t}$$

$$a_{j,t+1} \geq 0$$

$$y\Big(e_t(e_{t-1}, \Pi_j), p_t\Big) = \begin{cases} w \times p_t & \text{if} \quad e_t = 1 \\ b(p_t) \times p_t & \text{if} \quad e_t = 0 \end{cases}$$

$$b(p_t) = \begin{cases} 0.75 \times p_t & \text{if} \quad p_t \leq 0.5 \times \overline{p} \\ 0.5 \times \overline{p} & \text{if} \quad p_t > 0.5 \times \overline{p} \end{cases}$$

$$\log(p_t) = \rho \log(p_{t-1}) + \varepsilon_t, \quad \varepsilon_t \sim N(0, \sigma_\varepsilon^2)$$

$$\Pi_j = \begin{bmatrix} 1-f & f \\ s_j & 1-s_j \end{bmatrix}$$

$$s_{JA} > s_{COL}$$

OLS with Simulated Data

See Stationary Distributions See Simulated Income Paths

Dependent Variable:	Log of Simulated Consumption (x 100)		
	(1)	(2)	(3)
Jobs Act	-5.523***	-2.327***	-5.747***
	(0.115)	(0.107)	(0.388)
PDV of Income		1.715***	1.697***
		(0.005)	(0.005)
Initial Wealth		0.202***	0.222***
		(0.010)	(0.011)
Jobs Act x PDV of Income			0.127***
			(0.013)
Jobs Act x Init. Wealth			-0.148***
			(0.030)
Empirical Counterpart	- 8%	·	·

- column 1: drop in consumption of 5%
- column 2: controlling for Y_P the effect is still sizable: 2% $\simeq$ 40% of the effect
- column 3: the effect is smaller for higher levels of PDV and tenure

Two Account Model: Setup

Calibration

- liquid asset b: r_b and no costs of adjustment
- illiquid asset a: $r_a > r_b$ but infrequent and costly adjustment
- Auclert et al. 2024: χ iid. prob. of adjustment of a
- Graves 2025: adjustment costs $\psi(a_{j,t+1}, a_{jt})$

$$\max_{\{a_{j,t+1}, b_{j,t+1}, c_{j,t}\}} \mathbb{E}_0 \sum_{t=0}^{\infty} \beta^t \left[\frac{c_{j,t}^{1-\gamma} - 1}{1-\gamma} \right] \quad j \in \{COL, JA\}$$

$$b_{j,t+1} + a_{j,t+1} + \psi(a_{j,t+1}, a_{jt})\, \mathbb{I}_{adj=1} + d_{jt}\, \mathbb{I}_{adj=1} = (1 + r_b) b_{j,t} + y_{jt} - c_{j,t}$$

$$a_{j,t+1} = (1 + r_a) a_{j,t} + d_{jt}\, \mathbb{I}_{adj=1}$$

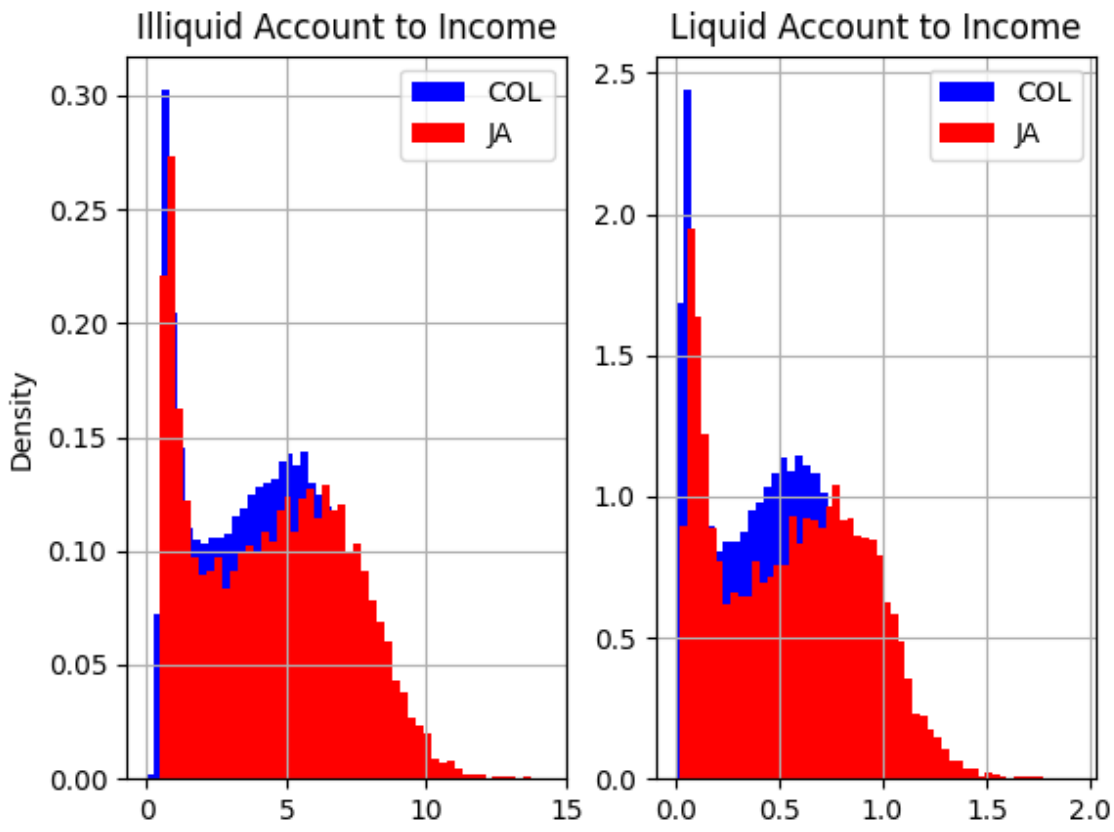
$$\psi(a_{j,t+1}, a_{jt}) = k |a_{j,t+1} - a_{j,t}|$$

$$b_{j,t+1} \geq 0, \quad a_{j,t+1} \geq 0$$

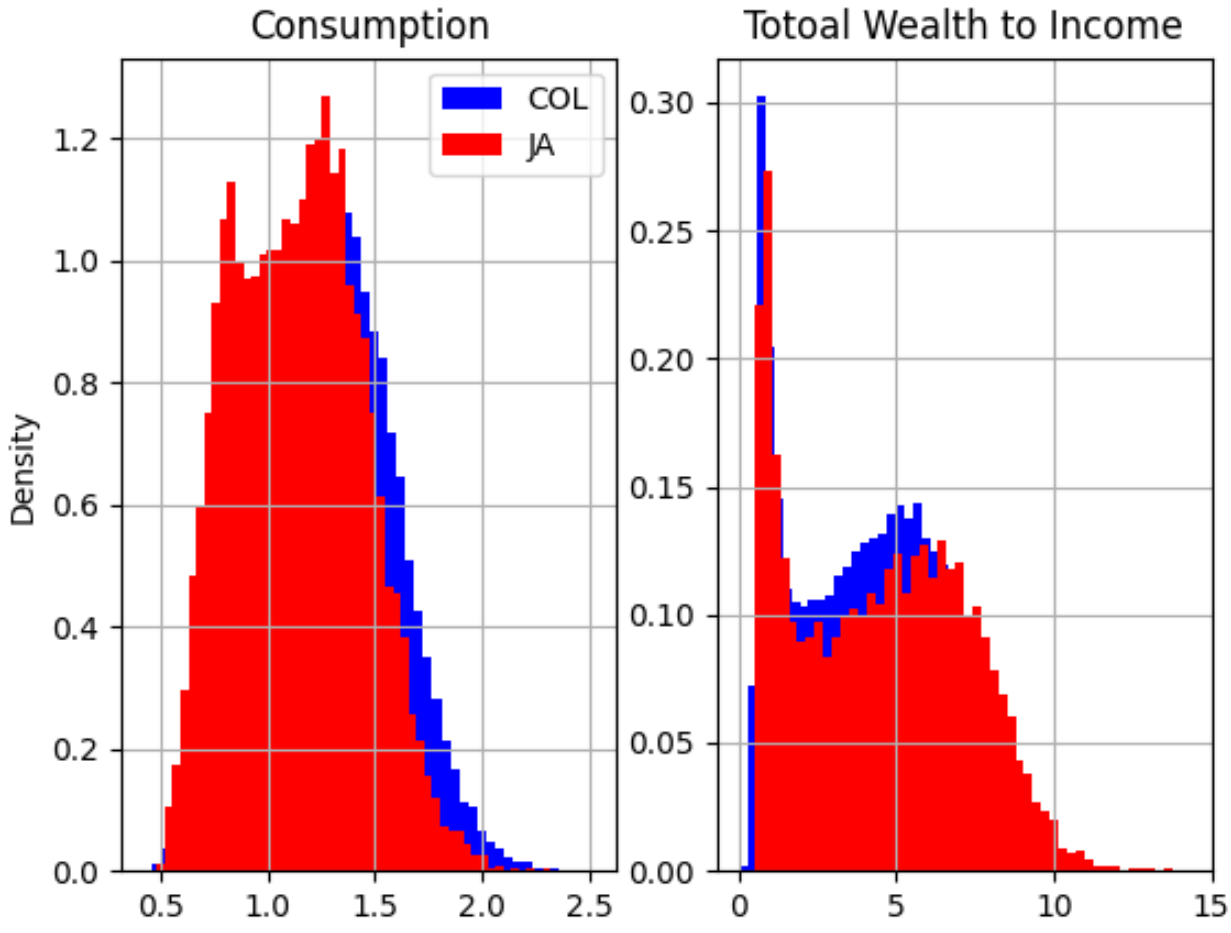
Two Account Model: Results (I)

Differences between JA and COL

%Δ a/y	%Δ b/y	%Δ (a+b)/y	%Δ c
10.53	24.20	11.96	-6.78



Two Account Model: Results (II)



Conclusion

- JA workers spend 3% less on food than COL workers
- 8% difference in imputed consumption
- BHA model with ex-ante risk heterogeneity to rationalize the result
- model-implied difference in consumption around 5%
- 40% of the effect in the model attributable to risk
- increase in savings mostly in liquid assets (Graves 2025)
- no significant effect on labour supply

Thank You!!

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Appendix

Summary Statistics

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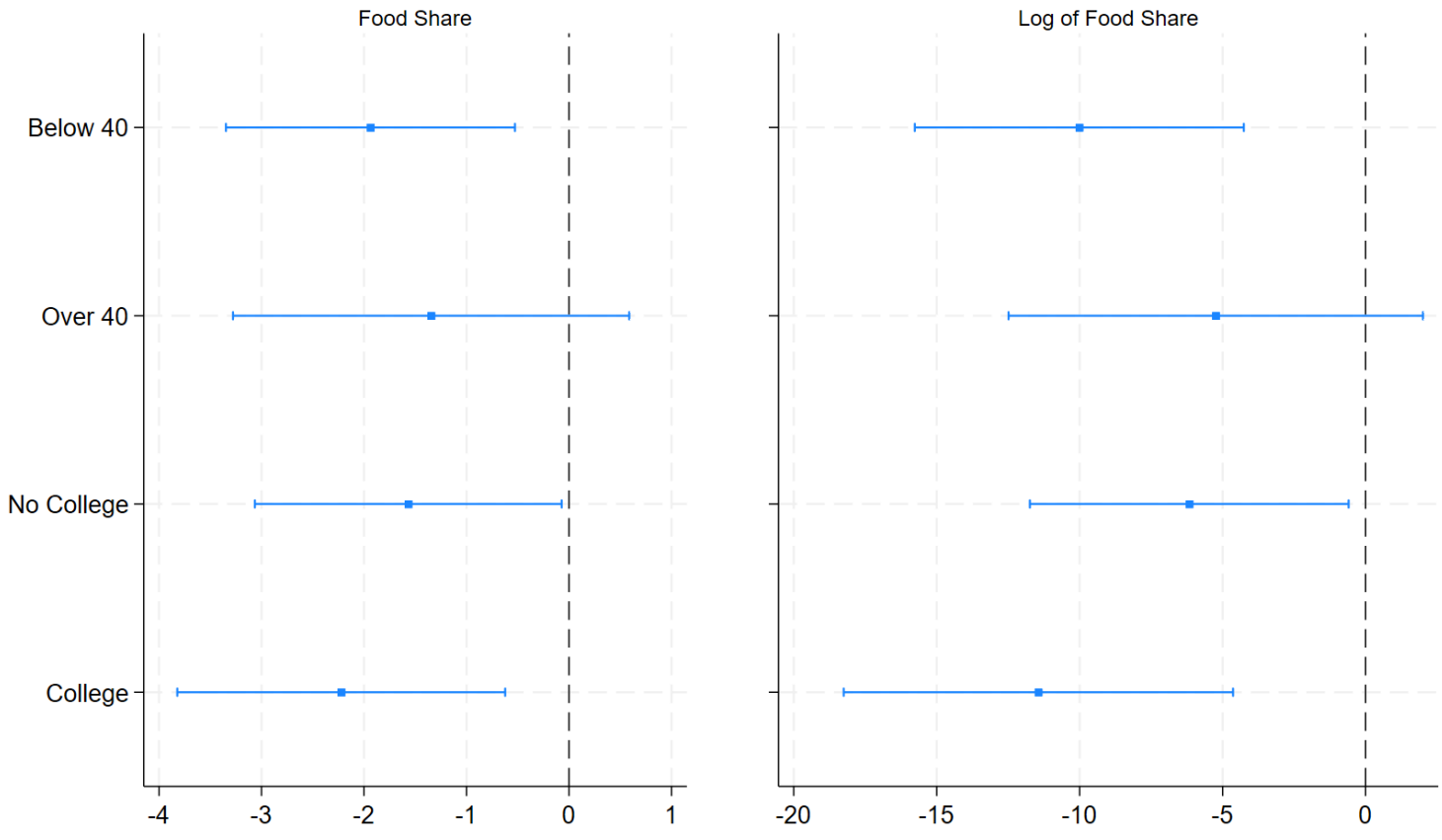
Summary Statistics by contract type: only big firm employees

	JA		COL	
	Mean	Sd	Mean	Sd
Between 18 and 24	0.12	0.33	0.02	0.14
Between 25 and 29	0.20	0.40	0.05	0.23
Between 30 and 39	0.31	0.46	0.26	0.44
Between 40 and 49	0.24	0.43	0.37	0.48
Between 50 and 64	0.13	0.34	0.29	0.45
Male	0.63	0.48	0.66	0.48
Married	0.41	0.49	0.63	0.48
Family Size	2.99	1.22	3.02	1.18
South and Islands	0.20	0.40	0.17	0.38
Centre	0.20	0.40	0.21	0.41
North	0.60	0.49	0.62	0.48
Low Education	0.23	0.42	0.37	0.48
Middle Education	0.52	0.50	0.49	0.50
High Education	0.26	0.44	0.14	0.35
Food Share (%)	27.14	12.81	29.55	12.19
Food Consumption (€100)	6.49	4.12	6.74	4.00
Individual Net Income (€100)	13.43	5.33	14.01	5.22
Family Net Income (€100)	24.42	10.69	23.13	10.62
Weekly average hours worked	38.24	9.05	37.42	8.20

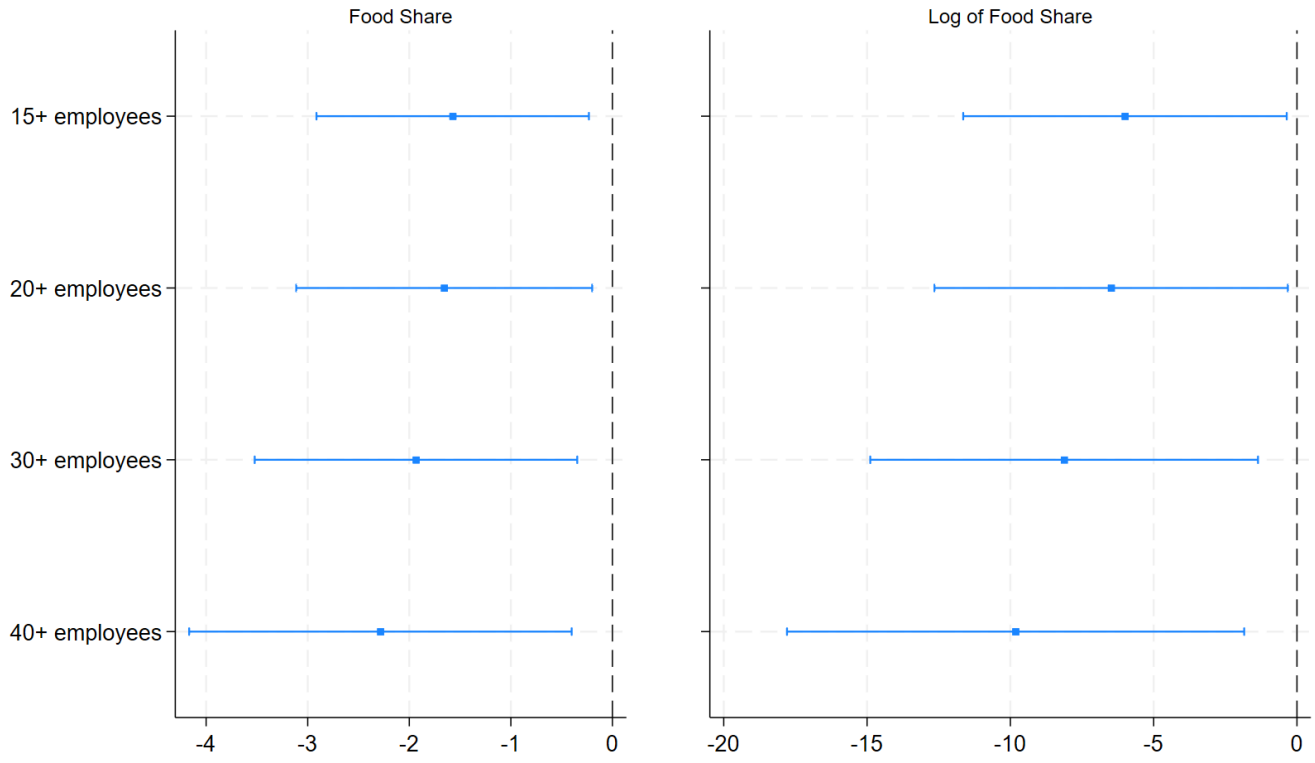
Heterogeneity

Back



Bigger Firms

Back



- results significant also for firms with more than 40+ employees
- no firms' dimensional sorting to benefit from lower firing costs

Question on Risk Aversion

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Imagine you are being offered a lottery ticket for which you have 50 % chance of winning your net annual income. Would you exchange the ticket for...

1. *5 % of your annual income*
2. *10 % of your annual income*
3. *25 % of your annual income*
4. *50 % of your annual income*
5. *75 % of your annual income*

Back of Envelope Calculation of the Saving rate

Back

- I start from the identity (Heathcote et al. 2023, Fagereng et al. 2021)

$$Y \equiv C + S$$

- I split consumption into food and non-food consumption, therefore having:

$$Y = C_F + C_{NF} + S$$

- Dividing both sides by Y and multiplying and dividing C_O by C_F I get:

$$1 = \frac{C_F}{Y}\left[1 + \frac{C_{NF}}{C_F}\right] + \frac{S}{Y}$$

$$\frac{S}{Y} = 1 - \frac{C_F}{Y}\left[1 + \frac{C_{NF}}{C_F}\right]$$

- Differencing between JA and COL workers:

$$\Delta\frac{S}{Y} \equiv \left(\frac{S}{Y}\right)^{JA} - \left(\frac{S}{Y}\right)^{COL} = -\Delta\left(\frac{C_F}{Y}\right)\frac{C}{C_F} = -\beta\frac{C}{C_F}$$

BPP Imputation

Back

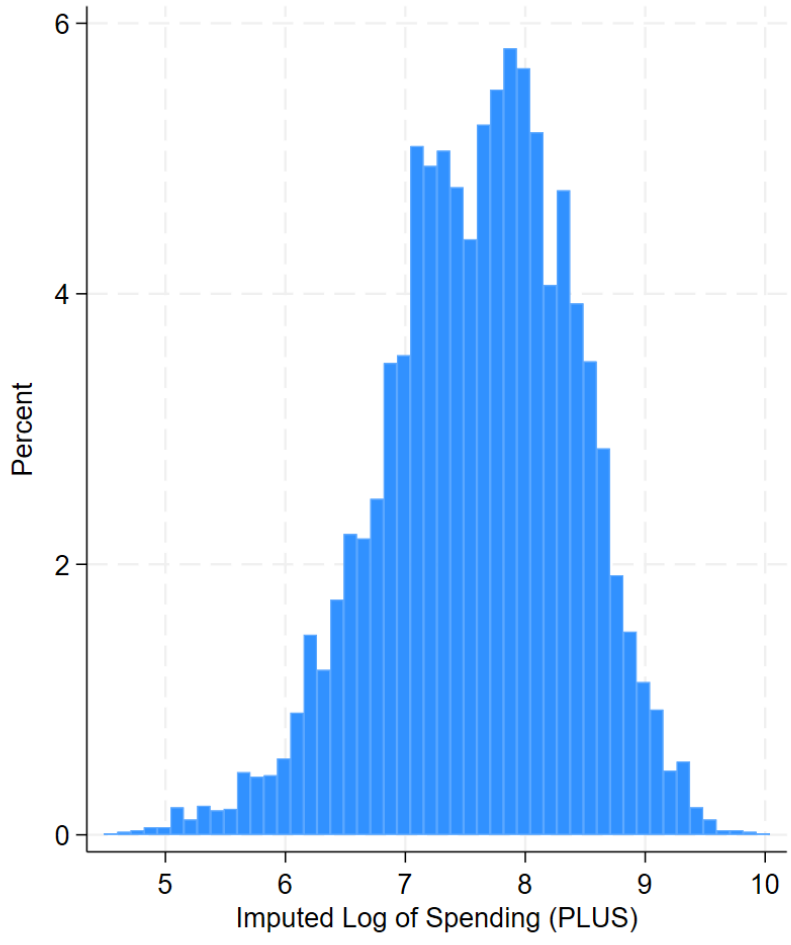
- I estimate in HBS the following demand equation with OLS:

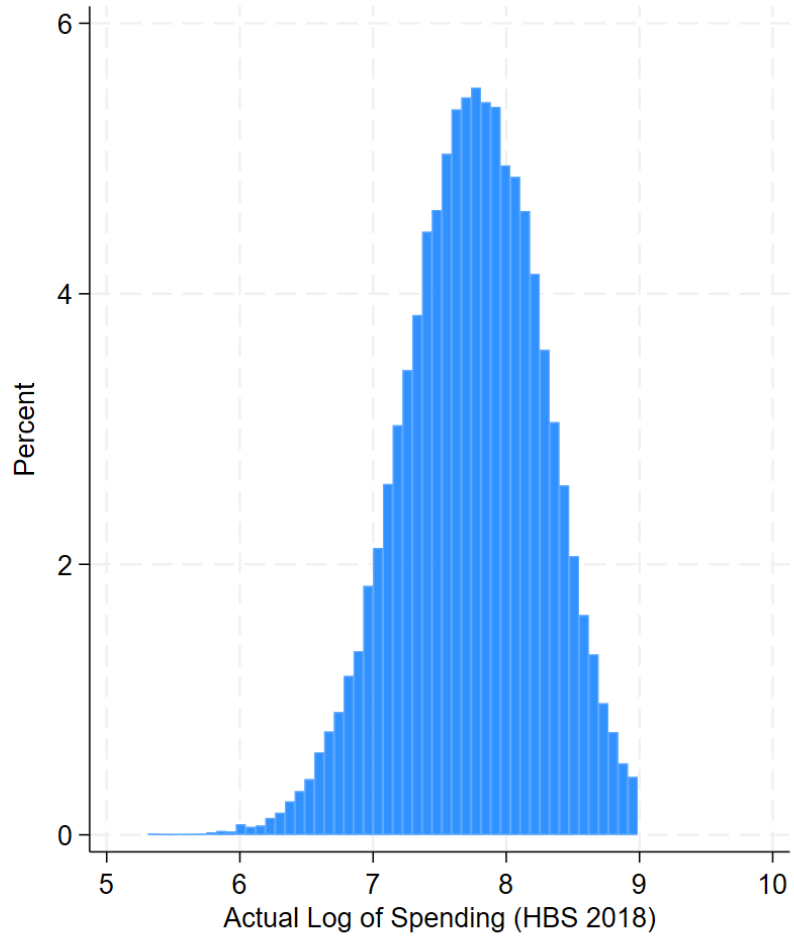
$$\log(f_i) = \alpha + \mu \mathbf{X}_i + \delta \log(c_i) + \varepsilon_i \tag{2}$$

- $\log(c_i)$ and $\log(f_i)$ are food and total spending
- δ is the elasticity of food spending w.r.t. total spending
- X_i are demographic characteristics common across PLUS and HBS
- Compute $\log_{BPP}(c_i)$ in PLUS using $\hat{\mu}$ and $\hat{\delta}$ See Distribution See Binscatter

BPP Imputation: Goodness of the Imputation (I)

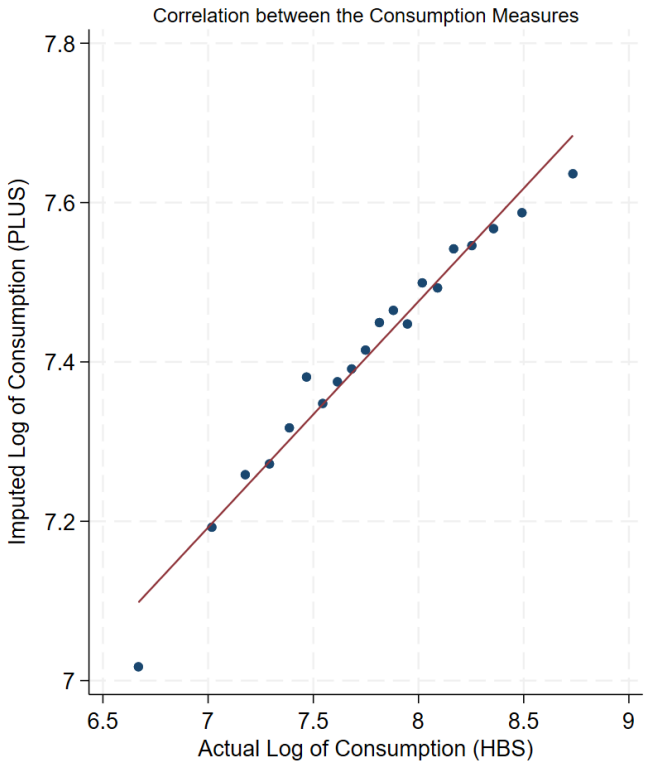
Back

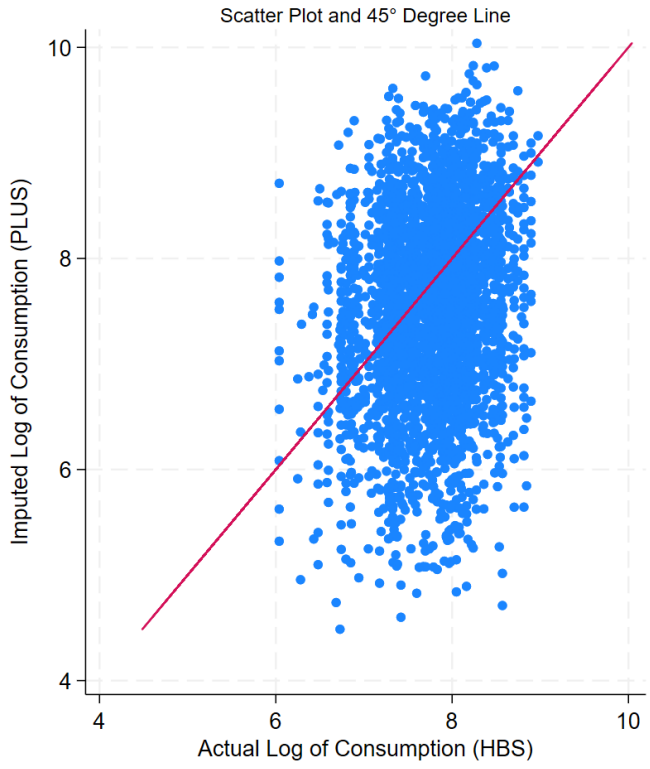




BPP Imputation: Goodness of the Imputation (II)

Back





Difference-in-Differences

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- Instead of eq (1), I could estimate the following D-in-D specification:

$$Y_{it} = \beta \textit{Jobs Act}_{it} \times \textit{Large}_{it} + \delta \textit{Jobs Act}_{it} + \gamma \textit{Large}_{it} + \varphi \mathbf{X}_{it} + \lambda_t + \varepsilon_{it}$$

- Where:
  - $\textit{Jobs Act}_{it}$ is defined as above (hired after March 6, 2015)
  - $\textit{Large}_{it}$ dummy equal to 1 if working in a 15+ employees firm
  - β is the coefficient of interest

- Issues (Boeri and Garibaldi 2019 and Mistrulli et al. 2023):
  1. selection into big/small firms driven by unobservables
     - selection in bigger firms $\Rightarrow$ negative bias (upper bound of the effect)
     - selection in smaller firms $\Rightarrow$ positive bias (lower bound of the effect)
  2. hiring subsidy for all firms starting from January 2015
     - distortion of wages
     - incentive for the marginal firm (14 employees) to hire one employee
     - firm dimension easily manipulable
  3. not possible to check parallel trends (only 2014 before the reform)

Difference in Differences: Results

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	Food Share (1)	Hours Worked (2)	Imputed (3)
Jobs Act x Large	-1.15	1.05	-12.03**
	(0.83)	(0.71)	(6.08)
Employed in a Big Firm	-1.46***	3.26***	12.53***
	(0.26)	(0.21)	(1.85)
Jobs Act	-0.15	0.24	-0.03
	(0.74)	(0.62)	(5.03)
Observations	12116	12608	11105

Notes: All regressions include a time dummy for 2018. Firms between 10 and 14 are excluded. Standard errors, clustered at the individual level, in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Econometric Justification of the Model

Back

- I essentially estimate this reduced form model:

$$\log(C_{it}) = \alpha + \beta JA_{it} + \varepsilon_{it}$$

- However, the true model is likely to more closely resemble the following equation:

$$\log(C_{it}) = \alpha + \beta JA_{it} + \gamma PDV_i + \delta A_{it} + \xi_{it}$$

- Where PDV_i is the present discounted value of income and A_{it} is assets.

- A straightforward application of OLS algebra yields:

$$\hat{\beta} = \beta + \frac{Cov\left[\gamma PDV_i + \delta A_{it}, JA_{it}\right]}{Var\left(JA_{it}\right)}$$

$$= \underbrace{\beta}_{\text{True effect of Employment Risk}} + \underbrace{\frac{Cov\left[\gamma PDV_i + \delta A_{it}, JA_{it}\right]}{Var\left(JA_{it}\right)}}_{\text{PIH Channel}}$$

Calibration

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Parameter	Description	Value	Source/Target
Preference Parameters			
γ	Relative Risk Aversion	2	Standard
β	Discount Factor	0.959	Average Wealth-to-Income ratio
Productivity Process			
ρ	Persistence of AR(1)	0.95	Jappelli et al. (2024)
σ_ε	Std of the shock	0.50	Jappelli et al. (2024)
n_e	Number of States	7	
Job Market Flows			
s_{LOW}	COL Job Separation Rate	0.0492	Average tenure of COLs
s_{HIGH}	JA Job Separation Rate	0.0998	Average Unemployment Rate in 2016-2019
f	Job Finding Rate	0.501	Volatility of Unemployment Rate in 2016-2019
Asset Grid			
a_{min}	Borrowing Constraint	0	Standard
a_{max}	Maximum Value of Asset	50	Standard
n_a	Number of Asset Grid-points	100	Standard
Prices			
w	Wage Rate	1	Normalization
r	Annual Interest Rate	0.02	Jappelli et al. (2024)

Targeted Moments

Back

I jointly estimate the following parameters with MSM ($\rightarrow$ informative target):

- $\beta \rightarrow$ average wealth-to-Income Ratio
- $s_{COL} \rightarrow$ average tenure in years of COLs
- $s_{JA} \rightarrow$ average unemployment rate between 2016 and 2019
- $f \rightarrow$ standard deviation of unemployment between 2016 and 2019

Parameter	Estimate	Moment	Source	Model	Data
β	0.96	Wealth to Income Ratio	SHIW 2016	4.61	4.64
s_{COL}	0.05	COLs Years of Tenure	LFS 2018	18.06	18.31
s_{JA}	0.10	Unemployment Rate	FRED 2016-2019	10.33	10.75
f	0.50	Std Unemployment Rate	FRED 2016-2019	0.85	0.87

Distributions of Consumption and PDV of Income

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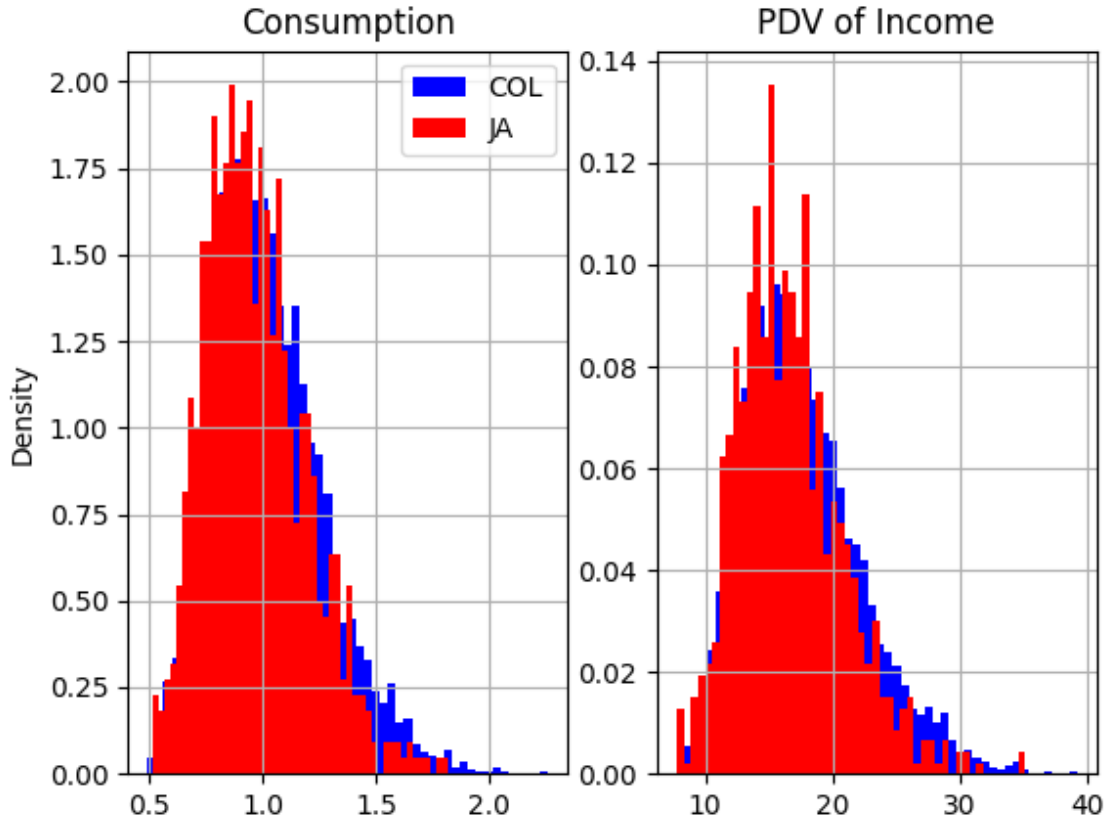

- lower average consumption for JAs compared to COLs but...
- lower average PDV of income as well $\left[PDV_i \equiv \sum_{t=0}^{200} \frac{y_{it}}{(1+r)^t} \right]$

Two Account Model: Calibration

Back

Parameter	Value	Moment	Source	Model	Data
β	0.92	Illiquid Wealth to Income Ratio	SHIW 2016	4.12	4.14
χ	0.24	Liquid Wealth to Income Ratio	SHIW 2016	0.46	0.38
γ	1	-	Standard	-	-
k	0.10	-	Graves (2025)	-	-
r_b	- 0.02	-	-	-	-
r_a	0.10	-	-	-	-
s_{COL}	0.04	COLs Years of Tenure	LFS 2018	18.57	18.31
s_{JA}	0.13	Unemployment Rate	FRED-FED 2016-2019	10.29	10.75
f	0.50	Std Unemployment Rate	FRED-FED 2016-2019	0.73	0.87

Simulated Income Paths

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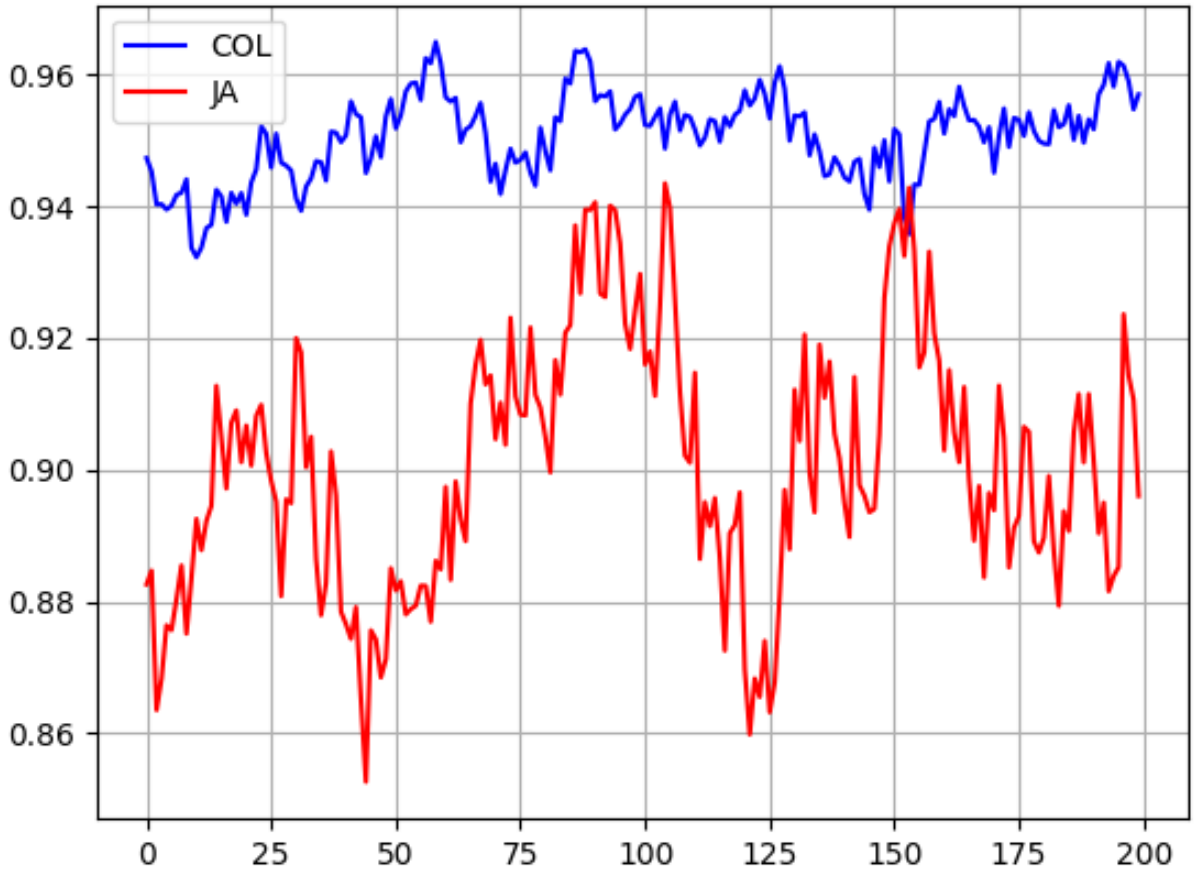

- higher income for COL workers on average and...
- higher volatility for JA