Effect of Employee Ownership on Work-From-Home and Employment Response to Covid-19 Shock

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WFH Area of Contention

- **The pandemic triggered wider adoption of remote work.**
  - Based on 1.2 billion job postings on Indeed, the share of job postings advertising remote work more than quadrupled since the onset of the pandemic.
  - Increase in pandemic severity raised advertised remote work but declines had no effect (Adrjan et al. 2022).

- **WFH can create value for workers and for firms.**
  - Less commuting time, work-life balance, better-than-expected WFH experiences
  - Reduce spending in major city centers by 5-10 percent relative to the pre-pandemic situation (Barrero, Bloom & Davis 2021)
  - Save on building costs

- **It is unclear whether WFH raises or lowers productivity.**
  - Randomized control trial at the third-largest global travel agent in China – performance increase (Bloom, Han & Liang 2022)
  - Difference-in-difference design using data from the call-centers of a US Fortune 500 retailer – negative effect on output (Emanuel and Harrington 2023)
  - Field Experiment in Bangladesh – positive impact on intrafirm communication (Choudhury et al. 2022)

Employee Ownership and WFH

- **Employee ownership (EO) and WFH: Maximizing full value of WFH to firm**
  - Discrepancy between employers' and workers' valuations of benefits that WFH offers workers.
  - EO companies try to benefit the workers in total as owners and as employees.

- **Demand for working from home is higher among workers than among employers.**
  - Demand for working from home
  - Willingness to pay for working from home

  →Bargaining

- How does employee ownership affect bargaining?
  - EO firm takes account of workers' preferences and "capital" preference to attain ideal point.
  - Workers are "working for themselves."

  →Maximizing

- **Novel data on ESOP and WFH "COVID Business Survey"**

Employee Stock Ownership Plan

- **Employee Stock Ownership Plan (ESOP)**
  - The most common structure for broad-based employee ownership in the U.S.
  - Approximately 6,500 U.S. companies have an ESOP, and 14 million U.S. workers are ESOP participants (National Center for Employee Ownership).

- **Firm performance**
  - A meta-analysis on employee ownership found a positive relationship to firm performance (O'Boyle, Patel & Gonzalez-Mulé 2016).

- **Employment stability and survival**
  - The greater survival rate of EO companies is linked to their greater employment stability (Park, Kruse & Sesil 2004).
  - ESOPs preserved employment better in the financial crisis in 2008 (Kurtulus and Kruse 2017).

- **Employee outcomes**
  - Greater involvement in employee ownership programs is generally linked to greater participation in decisions, higher quality supervision and treatment of employees, more training, higher pay and benefits, grater job security, and higher job satisfaction (Kruse, Freeman & Blasi 2008).

- **Motivation and worker participation**
  - Evidence on the presence and size of the equity ownership & profit sharing incentives (Blasi and Kruse 2023).
  - EO companies perform better when employee ownership is combined with worker participation (General Accounting Office 1987).

Research Question

COVID Shock -

1. **Did ESOP firms preserve more jobs ?**
2. **Did ESOP firms use more homeworkers ?**
3. **How do ESOP firms use WFH in employment adjustment ?**

Data Set – COVID Business Survey

- **COVID-19 Responses by Businesses With and Without Employee Ownership Survey**
  - Developed by Douglas Kruse and Joseph Blasi at Rutgers University
  - Conducted by SSRS on behalf of the Employee Ownership Foundation (EOF)
  - The field period was August 5 to September 24, 2020
  - 747 respondents reporting on firms with more than 465,000 workers
    - 247 from the ESOP Association (TEA) membership list
    - 500 from a panel of working professionals
  - The distribution of the panel completes aligns with the employee size distribution in the TEA
  - SSRS conducted quality control checks and developed sample weights

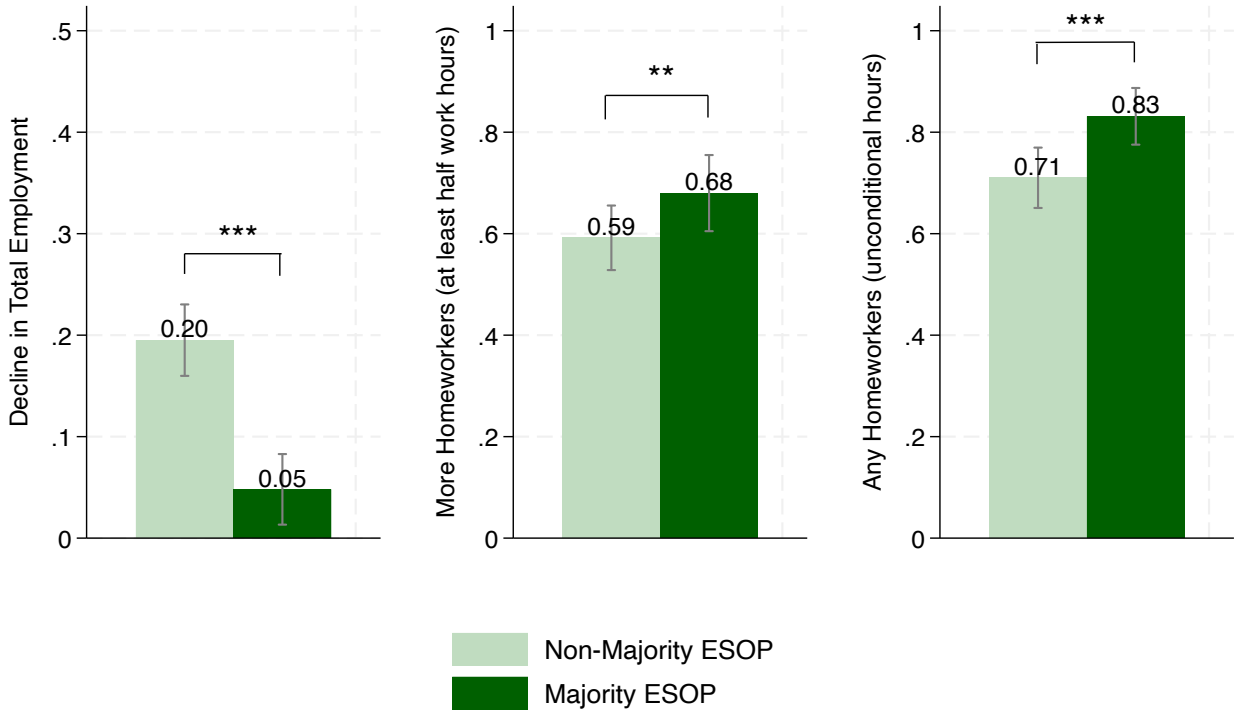
- **The goal of the survey was to understand the effects of COVID-19 on businesses that do and do not have an ESOP in place for their employees.**
  - Company characteristics
  - Employee ownership
  - Change of employment
  - Other employment outcomes related to furlough, work sharing, hours cut, and pay cut
  - Protective measure and federal assistance

Variable Construction

- **Majority-ESOP**
  - More than 50% of the employees are owners, AND, they own more than 50% of the company
- **Work-From-Home (WFH)**
  - WFH1: Any increase in homeworkers (work at home at least half of their work hours)
  - WFH2: Sent any workers to work at home (unconditional hours)
- **Percent Change in Employment**
  - White-collar: executive/senior level officials and managers, mid-level officials and managers, and professionals
  - Blue-collar: technicians, sales workers, administrative support workers, craft workers, operatives, laborers and helpers, and service workers
    - Adjusted for industry employment growth using the Current Employment Statistics data from BLS
- **Other Variables**
  - **Essential business**: The company has been declared an essential business entitled to stay open during the COVID crises
  - **Financial assistance**: Received or expected to receive Paycheck Protection Program (PPP), Economic Injury Disaster Loans (EIDL), SBA Loan Forgiveness, or other programs from the federal government
  - **Stronger shock**: An indicator for companies that have experienced firings (as a percent of total employees) more than the average
  - **Industry-specific unemployment change**: The percentage change in the unemployment rate by industry (2-digit NAICS) from January to August
  - **Profit sharing**: An indicator for companies that have above-the-average percent of employees eligible for profit sharing, gain sharing, or group bonuses
  - **Human capital practices**: An indicator for high motivating practices, measured by the importance of preserving valuable employee skills, ties to customers and clints, a culture of teamwork, employee commitment and loyalty, and a sense of ownership in the company.
  - **Size and region**

Basic Result

- **Majority-ESOP firms preserved more jobs and used WFH more.**



- Average decline in total employment was 14.4%.
- 580 companies sent workers to work at home.
- 438 companies increased the number of homeworkers who work at least half of their work hours.

Majority-ESOP Firms Preserved More Jobs

- **The ESOP companies maintain employment better than non-ESOP companies.**
- **Consistent with ESOPs having higher employment growth rates in normal times (Rosen and Quarrey 1987, Winther et al. 1994) and having lower job loss in the face of an economic downturn (Kurtulus and Kruse 2017).**

	Dependent Variable: Percent change in total employment from January to August						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Majority-ESOP	0.147***	0.126***	0.129***	0.147***	0.109***	0.117***	0.107***
	(0.025)	(0.025)	(0.031)	(0.025)	(0.028)	(0.026)	(0.028)
Essential Business		0.127***			0.125***	0.129***	0.123***
		(0.035)			(0.035)	(0.034)	(0.034)
50-99 Employees			-0.058		-0.056	-0.031	-0.057
			(0.039)		(0.036)	(0.032)	(0.036)
100-249 Employees			-0.053*		-0.045	-0.027	-0.045
			(0.032)		(0.030)	(0.029)	(0.030)
250-499 Employees			-0.058*		-0.068**	-0.051*	-0.069**
			(0.034)		(0.033)	(0.030)	(0.033)
500-999 Employees			-0.067		-0.075	-0.057	-0.074
			(0.048)		(0.047)	(0.048)	(0.048)
1000+ Employees			0.019		0.001	-0.005	0.003
			(0.046)		(0.045)	(0.037)	(0.046)
Midwest				0.039	0.035	0.014	0.035
				(0.041)	(0.040)	(0.040)	(0.040)
South				0.026	0.029	0.023	0.030
				(0.036)	(0.037)	(0.036)	(0.037)
West				-0.012	-0.009	-0.001	-0.007
				(0.042)	(0.041)	(0.039)	(0.042)
Stronger Shock						-0.119***	
						(0.033)	
Financial Assistance							0.011
							(0.031)
N	699	699	699	699	699	689	699
Y Mean	-0.14	-0.14	-0.14	-0.14	-0.14	-0.14	-0.14

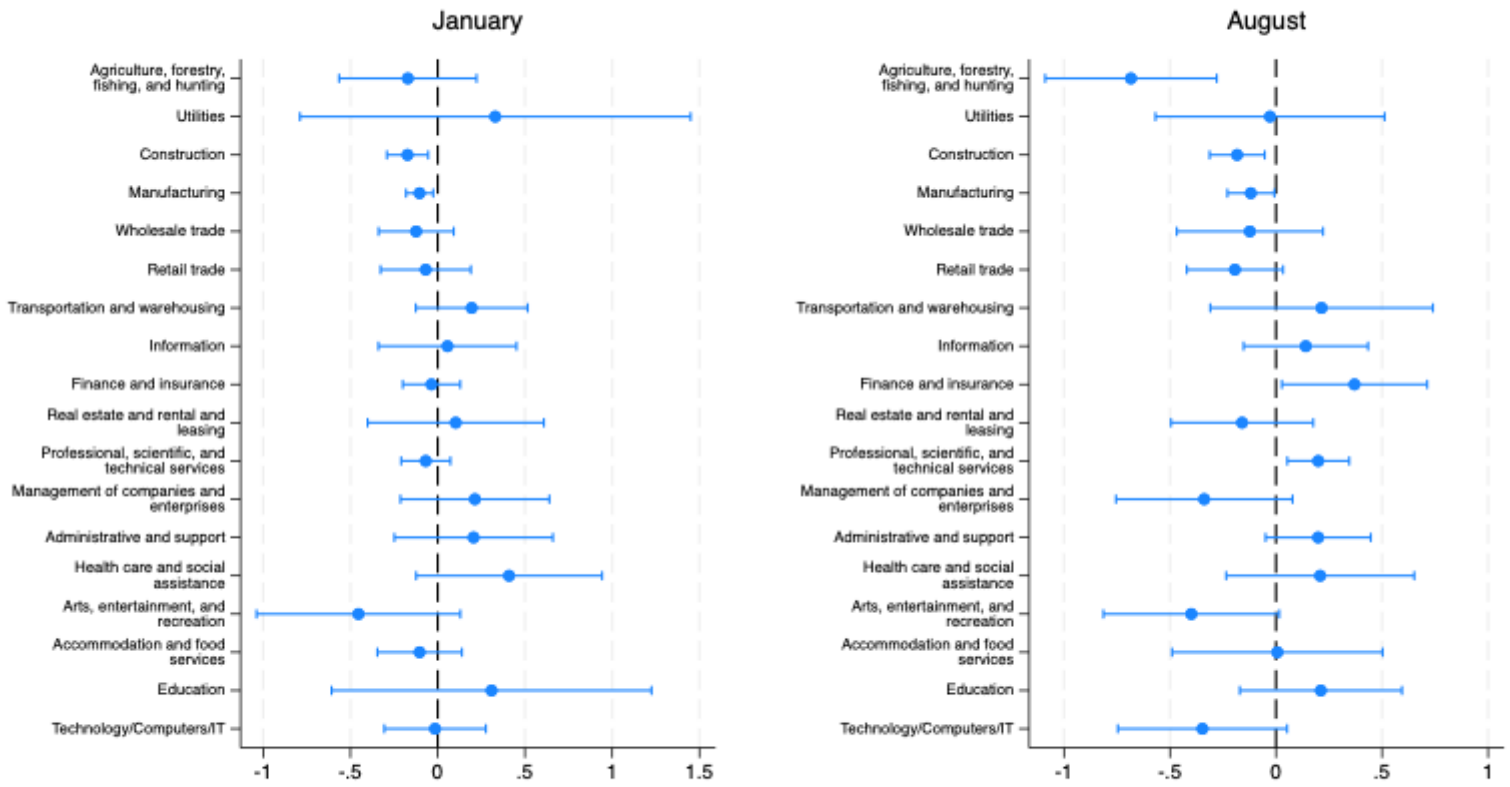
Majority-ESOP Firms Used WFH More – Measure 1

- **Majority-ESOP Firms Used WFH More.**
- **Measure 1: Increase in the percent of homeworkers from January to August (work at home at least half of their work hours)**

Dependent Variable: Any increase in homeworkers (at least half of work hours)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Majority-ESOP	0.088*	0.099**	0.108**	0.084*	0.112**	0.106*	0.101*
	(0.050)	(0.050)	(0.053)	(0.050)	(0.055)	(0.056)	(0.055)
Essential Business		-0.063			-0.067	-0.061	-0.079
		(0.058)			(0.058)	(0.059)	(0.058)
50-99 Employees			0.059		0.047	0.044	0.043
			(0.099)		(0.100)	(0.100)	(0.097)
100-249 Employees			0.125		0.108	0.108	0.105
			(0.098)		(0.099)	(0.100)	(0.096)
250-499 Employees			0.211**		0.207**	0.214**	0.201**
			(0.103)		(0.104)	(0.105)	(0.102)
500-999 Employees			0.254**		0.241**	0.248**	0.252**
			(0.101)		(0.102)	(0.101)	(0.101)
1000+ Employees			0.221**		0.200*	0.226**	0.216*
			(0.109)		(0.112)	(0.112)	(0.114)
Midwest				0.010	0.008	-0.002	0.008
				(0.075)	(0.075)	(0.077)	(0.075)
South				0.116*	0.103	0.104	0.109
				(0.069)	(0.070)	(0.071)	(0.070)
West				0.098	0.090	0.086	0.101
				(0.073)	(0.075)	(0.075)	(0.075)
Stronger Shock						-0.041	
						(0.058)	
Financial Assistance							0.076
							(0.057)
N	689	689	689	689	689	674	689
Y Mean	0.62	0.62	0.62	0.62	0.62	0.62	0.62

Majority-ESOP Firms Used WFH More – Measure 1

Percent of Homeworkers in January and August by Industry - Difference between Majority ESOP and Non-Majority ESOP Firms



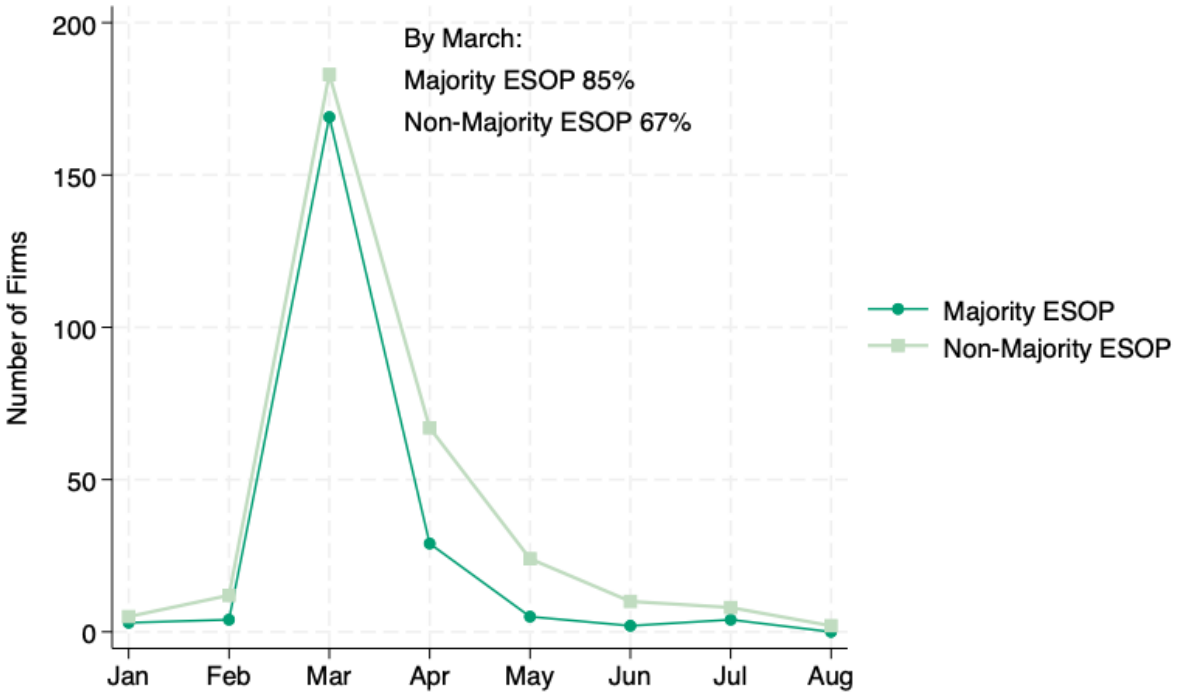
Majority-ESOP Firms Used WFH More – Measure 2

- **Majority-ESOP Firms Used WFH More.**
- **Measure 2: Sent any workers to work at home from January to August (unconditional hours)**

	Dependent Variable: Sent any workers to work at home (unconditional hours)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Majority-ESOP	0.121***	0.125***	0.144***	0.122***	0.149***	0.147***	0.136***
	(0.042)	(0.042)	(0.043)	(0.042)	(0.045)	(0.046)	(0.044)
Essential Business		-0.025			-0.031	-0.054	-0.043
		(0.053)			(0.053)	(0.053)	(0.055)
50-99 Employees			0.072		0.070	0.058	0.062
			(0.086)		(0.088)	(0.088)	(0.084)
100-249 Employees			0.101		0.097	0.116	0.092
			(0.084)		(0.086)	(0.086)	(0.082)
250-499 Employees			0.186**		0.186**	0.182**	0.177**
			(0.087)		(0.089)	(0.090)	(0.085)
500-999 Employees			0.221***		0.219**	0.236***	0.228***
			(0.085)		(0.087)	(0.087)	(0.085)
1000+ Employees			0.193**		0.190**	0.205**	0.205**
			(0.090)		(0.094)	(0.094)	(0.094)
Midwest				-0.001	-0.003	0.012	-0.000
				(0.068)	(0.069)	(0.069)	(0.069)
South				0.040	0.028	0.019	0.035
				(0.061)	(0.062)	(0.065)	(0.061)
West				0.015	0.007	-0.019	0.020
				(0.065)	(0.066)	(0.069)	(0.066)
Stronger Shock						0.093*	
						(0.048)	
Financial Assistance							0.085
							(0.053)
N	742	742	742	742	742	689	742
Y Mean	0.75	0.75	0.75	0.75	0.75	0.76	0.75

Majority-ESOP Firms Used WFH More – Measure 2

- **Majority ESOP companies are more likely to sent workers to work at home by March.**



- Among the 272 Majority ESOP companies, 216 reported sending workers to work at home by March.
- Among the 473 Non-Majority ESOP companies, 311 reported sending workers to work at home by March.

White-Collar

Dependent Variable: Percent Change in White-Collar Jobs				
	(1)	(2)	(3)	(4)
Panel A. WFH1: Any increase in homeworkers (at least half of work hours)				
Majority-ESOP	0.043**		0.045**	-0.013
	(0.022)		(0.022)	(0.032)
WFH1		-0.032	-0.035	-0.062*
		(0.024)	(0.024)	(0.032)
WFH1 x Majority-ESOP				0.086**
				(0.039)
Essential Business	0.049	0.050	0.045	0.049
	(0.032)	(0.032)	(0.032)	(0.032)
Industry-Specific Unemployment Change	-0.010**	-0.010**	-0.010**	-0.010**
	(0.004)	(0.004)	(0.004)	(0.004)
Profit Sharing	0.056**	0.066***	0.058**	0.059**
	(0.024)	(0.023)	(0.024)	(0.023)
Human Capital Practices	0.046**	0.051**	0.047**	0.043*
	(0.022)	(0.022)	(0.022)	(0.022)
N	652	636	636	636
Y Mean	-0.11	-0.11	-0.11	-0.11
Panel B. WFH2: Sent any workers to work at home (unconditional hours)				
Majority-ESOP	0.043**		0.043**	-0.002
	(0.022)		(0.022)	(0.038)
WFH2		-0.006	-0.013	-0.027
		(0.026)	(0.026)	(0.035)
WFH2 x Majority-ESOP				0.054
				(0.043)
Essential Business	0.049	0.043	0.038	0.039
	(0.032)	(0.032)	(0.033)	(0.033)
Industry-Specific Unemployment Change	-0.010**	-0.011**	-0.011**	-0.011**
	(0.004)	(0.004)	(0.004)	(0.004)
Profit Sharing	0.056**	0.059***	0.051**	0.052**
	(0.024)	(0.022)	(0.024)	(0.024)
Human Capital Practices	0.046**	0.054***	0.050**	0.049**
	(0.022)	(0.021)	(0.021)	(0.021)
N	652	649	649	649
Y Mean	-0.11	-0.10	-0.10	-0.10

- The breakdown shows that our data is consistent with other studies of WFH in pandemic that WFH is important for white-collar occupations.
- Employment is negatively affected by a higher industry-specific unemployment rate.
- Both profit sharing incentives and strong human capital practices have a positive impact on employment changes.

Blue-Collar

Dependent Variable: Percent Change in Blue-Collar Jobs				
	(1)	(2)	(3)	(4)
Panel A. WFH1: Any increase in homeworkers (at least half of work hours)				
Majority-ESOP	0.058*		0.059*	0.028
	(0.030)		(0.030)	(0.038)
WFH1		-0.039	-0.043	-0.058
		(0.026)	(0.027)	(0.035)
WFH1 x Majority-ESOP				0.045
				(0.049)
Essential Business	0.101***	0.100***	0.094**	0.096***
	(0.036)	(0.037)	(0.037)	(0.037)
Industry-Specific Unemployment Change	-0.011**	-0.011**	-0.011**	-0.011**
	(0.006)	(0.006)	(0.006)	(0.006)
Profit Sharing	0.064**	0.078***	0.067**	0.068**
	(0.030)	(0.029)	(0.031)	(0.030)
Human Capital Practices	0.044	0.049	0.043	0.041
	(0.031)	(0.031)	(0.031)	(0.032)
N	641	625	625	625
Y Mean	-0.15	-0.15	-0.15	-0.15
Panel B. WFH2: Sent any workers to work at home (unconditional hours)				
Majority-ESOP	0.058*		0.058*	0.035
	(0.030)		(0.030)	(0.046)
WFH2		-0.015	-0.023	-0.031
		(0.030)	(0.030)	(0.040)
WFH2 x Majority-ESOP				0.028
				(0.051)
Essential Business	0.101***	0.095***	0.089**	0.089**
	(0.036)	(0.036)	(0.036)	(0.036)
Industry-Specific Unemployment Change	-0.011**	-0.014**	-0.014***	-0.014***
	(0.006)	(0.005)	(0.005)	(0.005)
Profit Sharing	0.064**	0.069**	0.058**	0.059**
	(0.030)	(0.027)	(0.029)	(0.029)
Human Capital Practices	0.044	0.061**	0.055*	0.054*
	(0.031)	(0.029)	(0.029)	(0.029)
N	641	638	638	638
Y Mean	-0.15	-0.15	-0.15	-0.15

- **Entitled to essential business is an important factor for the change in blue-collar occupations.**
- **The industry-specific unemployment change has a greater impact on blue-collar jobs than white-collar jobs.**

Discussion

COVID health crisis → Conflict between firm and worker

- **Firms value productivity**
  - Companies paying the same will see lower productivity that reduces profits.
  - If lower productivity but not value health → Firm's decision: choose work at workplace.
- **Workers value health**
  - Demand for working from home is higher among workers.
  - If losing productivity working at home but gain health → Worker's decision: choose work from home.
- **In the real world where firm decides**
  - If productivity at home falls, firm would Max Production and keep workers at workplace, not allowing the compensating differential (first order effect).
- **The ESOP values both**
  - EO companies would be indifferent. They are the firm and they are the worker.
  - Value both health and productivity.
  - If employee owned, firms worry about personal wellbeing because part of the personal wellbeing is the wellbeing of the firm that they own.

Discussion

The ESOP firms are choosing WFH more/faster than the others because the ESOP values the health of workers and the value of firm.

- **Market adjustment → Compensating wage differential**
  - Workers accept lower wages in exchange for health benefits (Olson 2002).
  - On average, workers would sacrifice 5.1% of their earnings for the option to work from home; employers expect a wage cut of 40.7% from candidates who want to work from home during the pandemic (evidence in Poland, Lewandowski et al. 2022).

- **ESOP → Max Health + Production → leads to more/faster WFH**
  - Earnings of workers are Wage + Value of firm
    - Lower the wage
    - The value of the firms go up
  - Eliminating the division between the worker and the firm will therefore make the ideal decision for combination of the two.
  - Decision as a worker working for myself, not a divided decision.

Conclusion and Future Analysis

- We use novel data to examine the relation between WFH and ESOP/ownership of firms and their role in adjusting to employment response in the face of the COVID-19 shock.
- Our finding is consistent with the literature that Majority-ESOP firms had a less of reduction in total employment in recessions.
- ESOP firms made greater use of WFH and WFH played a greater role in saving white-collar jobs than in Non-ESOPs.
- Weaknesses of data and future research
  - Majority ESOP share: more continuous grouping
  - Proxy: reported more homeworkers than the number of total employees
  - WFH hours and breakdown by occupation
  - Follow up survey after COVID
  - Experiment: rule out any selectivity
  - Look inside the employee share ownership/profit sharing incentives in both sets of firms in detail
  - look inside the HR systems/employee participation systems of both sets of firms

Thank You.



Appendix – Survey Questions

Employment

- How many of your employees (both full-time and part-time) were working for pay in the following jobs before the COVID crisis in mid-January, and how many are working for pay today? (Please provide your best estimates if you do not have the exact numbers.)

	Number of Employees	
Job Category	Mid-January	Today
a. Total		
b. Executive/Senior Level Officials and Managers		
c. First/Mid-Level Officials and Managers		
d. Professionals		
e. Technicians		
f. Sales Workers		
g. Administrative Support Workers		
h. Craft Workers		
i. Operatives		
j. Laborers and Helpers		
k. Service Workers		

Appendix – Survey Questions

WFH

- Among all your employees, how many:

(Please provide your best estimates if you do not have the exact numbers.)

	Mid-January	Today
a. Work at home at least half of their work hours?		
b. Work part-time (<30 hours per week?)		
c. Are women?		

- If you sent workers to work at home due to the COVID crisis, on what date (approximately) did you start sending them to work at home? (Please enter the Month/Date – MM/DD)

_____

99/99 Did not send workers to work at home

Appendix – Survey Questions

Ownership

- Approximately what percent of your employees have any ownership in your company or own any shares of stock in it, through an Employee Stock Ownership Plan (ESOP), 401k plans, profit-sharing plans, other retirement plans, an Employee Stock Purchase Plan, or restricted stock? (Please provide your best estimates if you do not have the exact numbers.)

  ____%

- Does your company offer an Employee Stock Ownership Plan (ESOP) to its employees?

  1 Yes
  2 No

- If your company has an Employee Stock Ownership Plan (ESOP), approximately what percent of the company is owned by the ESOP? (Please provide your best estimates if you do not have the exact numbers.)

  ____%

Appendix – Survey Questions

Essential Business

- Has your company been declared an "essential" business entitled to stay open during the COVID crisis?

  1 Yes
  2 No

Financial Assistance

- Since March 13, 2020, has your company received, or do you expect to receive, financial assistance from any of these programs from the federal government? (Please select all that apply)

  1 Paycheck Protection Program (PPP)
  2 Economic Injury Disaster Loans (EIDL)
  3 SBA Loan Forgiveness
  4 Other Federal Programs
  5 This company has not received financial assistance from any Federal Program.

Appendix – Survey Questions

Profit Sharing

- Before the COVID crisis hit in January, what percent of your company's employees: (The numbers in each row are independent, and not designed to sum to 100%.)

	%
a. Received employer-sponsored training at some point in 2019?	
b. Were receiving information on company performance on a regular basis?	
c. Were involved in quality circles or employee involvement groups or committees?	
d. Were eligible for profit sharing, gain sharing, or group bonuses?	

Human Capital Practices

- How important were the following in motivating your company's efforts to keep people employed since the COVID crisis began? Please answer on a scale of 0 to 10.

	Not at all important 0	1	2	3	4	Somewhat important 5	6	7	8	9	Highly important 10	Web Blank 99
a. Preserving valuable employee skills												
b. Preserving ties to customers and clients												
c. Preserving a culture of teamwork												
d. Preserving employee commitment and loyalty												
e. Preserving a sense of ownership of the company												

Appendix – Summary Statistics

	Majority-ESOP		Non-Majority-ESOP		Difference
	(1)	(2)	(3)	(4)	(1)-(3)
	Mean	N	Mean	N	
Percent of homeworkers in January (at least half of work hours)	0.1376	256	0.2083	471	-0.0708**
Percent of homeworkers in August (at least half of work hours)	0.3910	258	0.4189	447	-0.0279
Any increase in the use of homeworkers (at least half of work hours)	0.6799	244	0.5919	445	0.0881*
Sent any workers to work at home (unconditional hours)	0.8313	271	0.7101	471	0.1212***
Percent change in total employed as of January employees	-0.0480	258	-0.1951	441	0.1470***
Percent change in white-collar jobs as of January employees	-0.0384	245	-0.1428	415	0.1044***
Percent change in blue-collar jobs as of January employees	-0.0705	245	-0.2000	404	0.1295***
Any employees with work sharing	0.2022	270	0.4110	472	-0.2088***
Any workers had hours cut	0.3554	270	0.6286	473	-0.2731***
Any workers had pay cut	0.2694	271	0.5725	471	-0.3031***
Essential business	0.8470	272	0.6777	473	0.1694***
Financial assistance	0.7969	272	0.6520	473	0.1449***
Stronger shock	0.1984	254	0.2679	437	-0.0695
Profit sharing	0.6909	268	0.3258	464	0.3651***
Human capital practices	0.4411	272	0.2421	473	0.1990***