



The Role of Broad-Based Employee Ownership Plans in the Mental Health Outcomes of the Formally Incarcerated

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Presentation Outline



- **Background**
- **Research Question**
- **Conceptual Framework**
- **Data**
- **Analysis**
- **Conclusion**
- **Next Steps**

Background



- Each year, roughly 630,000 people are released from the United States prison system and returned to their families and communities
- Psychosocial and emotional wellbeing are directly impacted by incarceration due to the psychological stress of the incarceration (e.g., stressful living conditions, loss of wages, separation from family), and indirectly affected after release due in part to barriers to employment

Background



- Although it is believed that a good job is necessary to successfully transition back into society, the formerly incarcerated face significant barriers finding and maintaining quality employment
- Because of the unequal power structures that can exist in low-skilled jobs between management and workers, many low skilled jobs are undesirable and considered “undignified”: those holding those jobs can be treated as having less value than other positions within the company (Avent-Holt & Tomaskovic-Devey, 2019).

Background



- **Low skilled work is often characterized by lack of freedom and job security which can lead to a struggle to maintain overall emotional well-being (Blustein et al., 2018).**
- **Workers who struggle with depression and anxiety find it more difficult to maintain employment, as depression is associated with higher number of days out of work, poor work performance, and lack of workplace productivity (Kessler, 2012; Lerner & Henke, 2008; Stewart et al., 2003).**

Background



- Firms offering Employee Stock Ownership Plans (ESOPs) often have democratic work place where all workers are “employee- owners”, and everyone is given the opportunity to earn and save for their collective futures (J. Blasi, Kruse, & Freeman, 2018; J. R. Blasi, Freeman, & Kruse, 2013, 2017; Kroncke, 2017).
- In the context of an ESOP, every role in the company is important to the success of the business.

Background



- ESOPs have also been found to improve the economic wellbeing (e.g., better wage and non-wage benefits, job security) of their employees relative to individuals that are not employed in ESOPs (Ana Kurtulus & Kruse, 2017).
- **Businesses with Employee Stock Ownership Plans (ESOPs) can be an opportunity for the recently incarcerated individuals to not only earn a good wage, but to also accumulate assets.**
 - **Our preliminary work finds this to be true for the formerly incarcerated**

Background



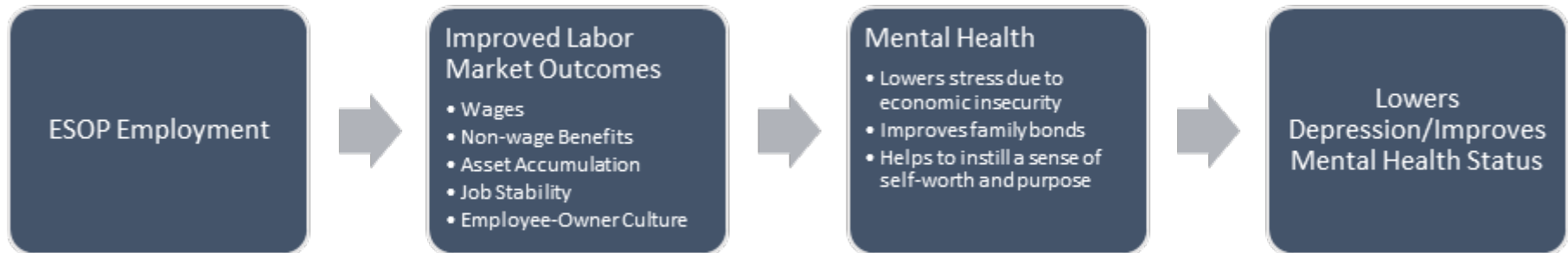
- Despite the labor market benefits of ESOP employment (i.e., improvement in labor market outcomes and economic wellbeing), little is known about the impact of ESOPs on the mental health of its employees
- Nonetheless, mental health is an important mechanism to explore how employee ownership benefits the individual and the firm (e.g., through increased productivity).

Research Question



- Does ESOP employment impact the mental health of employees who work in ESOP firms compared to non-ESOP employees?
- Do the effects of ESOP employment on mental health vary by incarceration status?

Conceptual Framework



Research Hypotheses



- If ESOP employment represents a good job, we hypothesize that working at an ESOP will improve mental health of its employees.
- In addition, the employee-owner culture and mentality often encouraged at ESOP firms (Kruse & Blasi, 1995) may be especially healing to formerly incarcerated individuals who:
 - may have spent years with little autonomy in a dehumanizing environment (citation),
 - are often not treated as full citizens when they return to free society (Uggen, Vuolo, Lageson, Ruhland, & Whitham, 2014).

Data



- **1997 National Longitudinal Survey of Youth (NLSY97)**
- **Youthful respondents born between 1980 and 1984**
- **Ideal data source because it has information on employment benefits, including ESOPs, employment history, mental health status, and incarceration**
- **17 waves of the survey (first wave collected in 1997)**
- **8,984 individuals initially interviewed (51% males and 49% females)**

Data



- **Oversample of black and Hispanic respondents**
- **Survey also collects data on human capital (i.e., education, training, achievement scores, and health), crime, substance use, parents, childhood and family experiences, household, marital status, children, and non-cognitive tests**
- **Key Dependent variable constructed from the five-item short version of the Mental Health Inventory (MHI-5).**
- **Sample restricted to those employed**

Methods: Descriptive Analysis



- **Multivariate Regression Analysis**

- **Base model for economic outcomes:**

- $Y_i = \beta_0 + \beta_1 ESOP_i + \beta_2 \beta_3 X_i + \varepsilon_i$

- Y_i is a vector of mental health outcomes calculated from the five-item short version of the Mental Health Inventory (MHI-5)
 - ESOP: equal to 1 if currently employed at an ESOP and 0 otherwise
 - X_i is a vector of controls that are correlated with ESOP firm status and the outcome variables such as education, age, criminal history, race, gender, location, mental health status in 2000, and total years incarcerated.

- All regressions weighted to account for sample attrition

Methods: Descriptive Analysis



- **Dependent variables: Mental Health Inventory (MHI-5):**
 - **MHI-5 asks respondents:**
 - 5 questions that ask how often the respondent felt blue, nervous, depressed, happy, and peaceful
 - Each question is a four point likert scale: all of the time, most of the time, some of the time, none of the time
(Multinomial Logit)
 - **Depression Scale: calculated by summing the responses of the MHI-5 and transforming scores to a zero- 100pt scale (OLS)**
 - **Binary outcome for depression: equal to 1 if Depression Scale < 52, and 0 otherwise (Logit)**

Prevalence of ESOP Employment among Formerly Incarcerated and Non-Incarcerated



Type	Non-ESOP	ESOP	Total
Not Incarcerated	3,629 (80%)	887 (20%)	4516 (100%)
Incarcerated	289 (90%)	31 (10%)	320 (100%)
Total	3918 (81%)	918 (19%)	4836 (100%)

Summary Statistics: Formerly Incarcerated



Variable	Non-ESOP			ESOP		
	Obs	Mean	Std.	Obs	Mean	Std.
Married	289	0.315	0.465	31	0.355	0.486
Male	289	0.824	0.382	31	0.839	0.374
Female	289	0.176	0.382	31	0.161	0.374
White	289	0.491	0.501	31	0.419	0.502
Black	289	0.256	0.437	31	0.323	0.475
Hispanic	289	0.221	0.416	31	0.226	0.425
Other	289	0.031	0.174	31	0.032	0.180
Age	289	32.408	1.509	31	32.355	1.355
Youth Mental Health in 2000	289	15.311	2.740	31	15.387	2.404
High School Degree or Less	289	0.913***	0.281596	31	0.710	0.461
Some College or More	289	0.087***	0.281596	31	0.290	0.461
Total Years Incarcerated	289	1.366	2.041	31	1.250	2.862
Father Incarcerated	289	0.138	0.346	31	0.065	0.250
Mother Incarcerated	289	0.042	0.200	31	0	0
Rural	289	0.183	0.388	31	0.194	0.402
Urban	289	0.803	0.399	31	0.806	0.402
Unknown	289	0.007	0.083	31	0	0
Outside U.S.	289	0.007	0.083	31	0	0
Northeast	289	0.111	0.314	31	0.065	0.250
North Central	289	0.263	0.441	31	0.161	0.374
South	289	0.384**	0.487221	31	0.581	0.502
West	289	0.235	0.425	31	0.194	0.402
Outside U.S.	289	0.007	0.083	31	0	0

*** p<0.01, ** p<0.05, * p<0.1

Summary Statistics: Non-Incarcerated



Variable	Non-ESOP			ESOP		
	Obs	Mean	SD	Obs	Mean	SD
Married	3,629	0.467	0.498983	887	0.480	0.499893
Male	3,629	0.459***	0.498391	887	0.563	0.496349
Female	3,629	0.541***	0.498391	887	0.437	0.496349
White	3,629	0.510**	0.499973	887	0.467	0.499174
Black	3,629	0.250**	0.433192	887	0.285	0.451779
Hispanic	3,629	0.202	0.401536	887	0.212	0.408921
Other	3,629	0.038	0.191288	887	0.036	0.186586
Age	3,629	32.274	1.472622	887	32.224	1.489752
Youth Mental Health in 2000	3,629	15.346	2.480391	887	15.450	2.416907
High School Degree or Less	3,629	0.547	0.497856	887	0.540	0.498677
Some College or More	3,629	0.453	0.497856	887	0.460	0.498677
Total Years Incarcerated	3,629	0	0	887	0	0
Father Incarcerated	3,629	0.052	0.222775	887	0.047	0.212508
Mother Incarcerated	3,629	0.010	0.100471	887	0.007	0.082013
Rural	3,629	0.168***	0.373998	887	0.126	0.332339
Urban	3,629	0.818***	0.385789	887	0.862	0.344613
Unknown	3,629	0.004	0.064167	887	0.007	0.082013
Outside U.S.	3,629	0.010	0.097745	887	0.005	0.06704
Northeast	3,629	0.168*	0.373753	887	0.142	0.3493
North Central	3,629	0.206	0.404371	887	0.221	0.415134
South	3,629	0.397	0.489244	887	0.396	0.48928
West	3,629	0.220	0.414419	887	0.237	0.425329
Outside U.S.	3,629	0.010	0.097745	887	0.005	0.06704

*** p<0.01, ** p<0.05, * p<0.1

Results: Depression Scale and Depressed



VARIABLES	Depression Scale (OLS)		Depressed (Logit)	
	Formerly Incarcerated	Non-Incarcerated	Formerly Incarcerated	Non-Incarcerated
ESOP	4.2886* (2.2436)	1.2074** (0.5726)	-0.1160* (0.0681)	0.0051 (0.0106)
Married	4.7453** (1.9711)	2.8658*** (0.4856)	-0.0636 (0.0425)	-0.0387*** (0.0093)
Women	-13.0108*** (2.8551)	-1.9889*** (0.4777)	0.1056*** (0.0400)	0.0214** (0.0089)
Black	0.0332 (2.4288)	2.7077*** (0.6381)	0.0249 (0.0459)	-0.0278** (0.0112)
Hispanic	0.8021 (2.4847)	2.5389*** (0.6236)	0.0223 (0.0476)	-0.0362*** (0.0126)
Other	-8.6884* (4.9793)	0.9784 (1.1303)	0.1982*** (0.0597)	-0.0330 (0.0236)
Age	-0.2325 (0.6420)	-0.1825 (0.1586)	-0.0016 (0.0111)	-0.0008 (0.0028)
MENTAL HEALTH Scale in 2000	1.2874*** (0.3744)	1.9031*** (0.1148)	-0.0177*** (0.0060)	-0.0156*** (0.0017)
Father Incarcerated	-2.0046 (3.0323)	-1.1134 (1.1630)	0.0147 (0.0468)	0.0115 (0.0189)
Mother Incarcerated	1.8444 (6.3286)	-1.3321 (2.5232)	-0.0331 (0.0871)	0.0061 (0.0447)
Some College	-3.3040 (3.2928)	0.3886 (0.4800)	-0.0600 (0.0814)	-0.0272*** (0.0090)
Total Years Incarcerated	0.9194** (0.4017)	-	-0.0127 (0.0111)	-
Rural	1.2260 (2.5972)	0.3340 (0.6274)	0.0042 (0.0470)	-0.0001 (0.0117)
Northeast	0.7427 (3.4085)	-0.7797 (0.6896)	-0.0613 (0.0766)	0.0044 (0.0122)
North Central	1.1273 (2.6496)	-1.0384* (0.6237)	-0.0093 (0.0478)	-0.0050 (0.0118)
West	5.1892** (2.6119)	-0.9795 (0.6433)	-0.0559 (0.0502)	0.0100 (0.0121)
Constant	59.0641*** (21.8416)	48.4268*** (5.5292)		
Observations	320	4,516	320	4,516
R-squared	0.2082	0.1234	0.1796	0.0782

Robust standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Results: Individual Questions for MIH-5



	Formerly Incarcerated (n=320)					Non-Incarcerated (n=4,516)				
	All of the Time	Most of the Time	Some of the Time	None of the Time	Pseudo-Rsquared	All of the Time	Most of the Time	Some of the Time	None of the Time	Pseudo-Rsquared
How Often R Been Nervous	-19.4725*** (1.1915)	-1.0980 (1.2113)	-0.2726 (0.4433)	(reference) -	0.185	-0.4621 (0.3603)	0.1077 (0.1789)	(reference) -	0.0009 (0.0893)	0.0583
How Often R Did Not Feel Calm/Peaceful in Past Month	-21.7404*** (0.6392)	-0.4963 (0.5064)	(reference) -	-0.9624 (0.7972)	0.142	-0.4533* (0.2508)	-0.1968** (0.0937)	(reference) -	-0.0581 (0.1649)	0.0619
How Often R Felt Down or Blue in	-22.9417*** (0.8902)	-0.8350 (0.7740)	-0.5632 (0.4026)	(reference) -	0.114	-0.0573 (0.4665)	-0.1262 (0.2080)	(reference) -	0.2061** (0.0884)	0.0483
How Often R Was Not a Happy Person	-22.6482*** (0.8657)	-0.9498* (0.5730)	(reference) -	-0.8267 (0.7346)	0.115	-0.2366 (0.4245)	-0.1943* (0.1018)	(reference) -	-0.0301 (0.1364)	0.0487
How Often R Depressed	-22.1485*** (2.1502)	-1.4228 (0.9778)	-0.2457 (0.4911)	(reference) -	0.143	0.5232 (0.5611)	-0.5803* (0.3295)	-0.0550 (0.1102)	(reference) -	0.0527

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Conclusion



- For both the formerly incarcerated and non-incarcerated, ESOP employment is associated with decreased depression.
- The magnitude of the effect is larger for the formerly incarcerated versus the non-incarcerated.
- Looking at the individual components of the scale we see:
 - Formerly incarcerated who work in ESOP firms are less likely to report feeling nervous, blue, unhappy, or not peaceful, or depressed all of the time versus some or none of the time when compared to those that don't work in ESOP firms.

Conclusion



- **Looking at the individual components of the scale we see:**
 - **The non-incarcerated who work at an ESOP are less likely to report feeling sad or blue, depressed, or unhappy most of the time versus some or none of the time. Moreover, they are more likely to report feeling down or blue none of the versus some of the time when compared to those who don't work at an ESOP.**

Limitations and Future Work



- **Limitations**
 - Selection/endogeneity
 - Complete case analysis
 - Heterogenous Effects
- **Future Work**
 - Multiple imputation
 - Longitudinal analysis (Fixed Effects) to control for time invariant heterogeneity
 - Also bring in those convicted but not incarcerated as a third comparison group



Thank You!

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