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Shared capitalism, social capital, and intra-organizational dynamics

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Abstract

Purpose – The purpose of this paper is to explore employee participation in ownership and control in a modern corporation and its impacts on intra-organizational social capital and workplace dynamics.

Design/methodology/approach – Using the National Bureau of Economic Research Shared Capitalism Survey, it explores the varieties of organizational governance and tests the effects of shared capitalist programs and policies via multivariate regression analyses.

Findings – It presents empirical support for the main working hypothesis that employee participation in ownership and control enhances worker trust for the firm, which in turn promotes commitment to performance and innovation at workplace.

Practical implications – The empirical findings here imply that scaling worker participation can enhance productivity potentials of a firm.

Originality/value – Above all, this paper takes a look at shared capitalism and workplace participation in decision making through the lens of social capital.

Keywords Social capital, Organizational trust, Shared capitalism, Workplace participation

Paper type Research paper

Introduction

This research project is to explore participatory organizational governance in a modern corporation and its implications. There are two avenues in which employees can engage with their firms: first, financial participation such as employee ownership, profit/gain sharing, broad-based stock options and any other form of equity and profit distribution; and second, participation in decision-making processes such as employee involvement (EI) on the board or participation in deciding work rules on the shop floor. In other words, employees can participate in either ownership or management of a firm they work for.

For this research project, we follow the footsteps of economic sociologists to envision a firm as an economic organization embedded in social structure. One of the foremost functions of a firm in the market is, of course, to produce profits. However, at the same time, people interact with one another at their workplaces in both tasks and social relationships. Tasks and roles often create inter-personal, inter-unit or inter-department relationships; social relationships in turn create opportunities for collaboration or conflict that might have not been imagined or conceived before. In that sense, a firm is a space of social mechanisms and potentials. We hereby regard a firm as socially embedded and constructed, especially within and across "ongoing social relations" (Granovetter, 1985), and thus take a look at the relationship between social and economic elements in its life and beyond.

More specifically, this paper takes issue with the structure of corporate ownership and control in today's world and explores the viability of an alternative model of capitalism with employee-engaging industrial programs and policies. We will take a look at the effects of shared capitalist compensation practices and participatory management on the formation of social capital within a firm and its impact on workplace commitment.

Theoretical framework

To begin with, we distinguish corporate ownership structures from management practices. Ownership claims can be conceptually distinguished from workplace decision-making processes.

Based upon this distinction, we categorize major forms of ideal types in organizational governance as in Table I.

On the one hand, a typical capitalist firm is owned and controlled by capital – usually by shareholders in modern joint stock companies. Most of the corporations as we know of today are empirical variations of this ideal type.

On the other hand, a worker co-op, or a democratic workplace, is owned and controlled by labor[1]. Although relatively few in existence, worker ownership and control are vibrant around the world. For instance, Mondragon has flourished in a couple of decades with successful local networks of more than hundred cooperative enterprises in manufacturing, retail and financial industries with global sales of EURO 15bn – the largest industrial complex in the Basque country, Spain (Arando et al., 2011, 2015; Whyte, 1995; Whyte and Whyte, 1988). More recently, European financial cooperatives and community banks have survived and performed better than giant banks and conventional financial institutions during the global financial crisis in 2008 (Birchall and Ketilson, 2009; Birchall, 2013). In North America, we also observe Canadian and American workplaces with labor participation in ownership and control (Hoffmann, 2006; Nightingale, 1979; Rothschild, 1986).

In addition, group practices in the professions such as law and medicine are another example in which individuals participate more actively in ownership and control; professionals themselves are usually capital investing owners and workers at the same time in many law firms and group practices in medicine.

In between the two ideal types, there are various forms of organizational governance in the continuous spectrums of labor participation in ownership and control. For instance, we can observe firms in which voices of the labor are represented in decision making through institutions such as co-determination in Germany. In the European Union, we also observe the institutions of works councils, or information and consultation bodies for employees in European multinational corporations on the progress of the business and any significant decisions affecting employment or working conditions. Labor unions and EI committees are other general institutions of labor participation in corporate decision making.

An employee ownership firm is another example in which we observe labor participation in ownership and control (Ben-Ner and Jones, 1995). For instance, in the USA, employees hold stocks of their own companies, through which they exercise their ownership and control rights (Blasi et al., 1996; Kruse et al., 2010). Likewise, in Japan, there are large publicly traded firms with employee ownership and involvement (Jones and Kato, 1995; Kato and Morishima, 2002).

Shared capitalism

Furthermore, we can conceive of a firm in which employees hold stakes in ownership or share greater portions of revenues. More specifically, there are four practices or programs under this umbrella concept of a "shared capitalist" firm (Kruse et al., 2010): profit sharing; gain sharing; employee ownership; and broad-based stock options.

First, in profit sharing, employees are rewarded with certain shares of profits made by the firm. Second, in gain sharing, workers are offered payments based on the performance of

	Capital ownership	Labor ownership
Capital control	A typical firm	Employee ownership
Labor control	Co-determination	Worker co-op
	Works council	Professional practice

Table I.
Ideal types in corporate ownership and control

their respective worksites or units rather than of the firm. Third, employees can hold stocks of their own firms. For instance, in the USA, a major form of employee ownership is the Employee Stock Ownership Plan (ESOP), a program under the federal legislation allowing the establishment of an employee ownership trust for ESOP hopeful companies. In addition, employees often acquire employer stocks at discounted prices through the Employee Stock Purchase Plan (ESPP). They can also exercise their stock options or buy the shares on the open stock market such as the New York Stock Exchange. Fourth, in broad-based stock option plans, not only top executives but also regular rank-and-file members receive stock options. As a "hybrid" between performance bonus and employee ownership, a stock option gives an employee the right to buy stock at a set price anytime during a specified period.

In overall, profit and gain sharing are mostly about "sharing revenues" together whereas employee ownership and broad-based stock options are about "sharing ownership" together. According to an analysis of the General Social Survey (2002, 2006), slightly less than half of the American workforce are involved with some form of these shared capitalist programs as defined above, which have grown rapidly from the 1980s onward (Kruse *et al.*, 2010). It is worthy to note that shared capitalist compensation practices are in many occasions accompanied by shared decision making between management and labor: "while shared capitalism provides the *incentive* to improve performance, increased [employee] involvement in decision making can provide the *means* to do so" (Kruse *et al.*, 2010).

Organizational governance, social capital and institutional performance
What, then, are the implications of worker involvement in ownership and control? How and why is this question of organizational governance an important matter of our interest? We hereby put this issue in the context of social capital. As mentioned earlier, economic actions are embedded in ongoing social relations or social structures (Granovetter, 1985) within and across organizations; in other words, "social structure constrains, supports, or derails individual goal-seeking behavior" (Portes and Sensenbrenner, 1993). Social capital, usually conceptualized as norm of reciprocity and network of engagement (Portes, 1998; Putnam, 1993; Woolcock, 1998; Woolcock and Narayan, 2000), is a specific manifestation of social structure. What, then, is the relationship between organizational governance and social capital? How does it affect economic actions in organizations?

First of all, social capital is created and facilitated in organizations such as neighborhood associations, mutual aid societies and cooperatives (Putnam, 1993). More specifically, as opposed to relationships in open market transactions, organizations are more conducive to the development of social capital, which in turn leads to sustainable organizational advantage (Nahapiet and Ghoshal, 1998).

We thus suggest, as in Figure 1, a theoretical idea that organizational governance will have an impact on the formation of social capital, and in turn affect institutional performance. How an organization is structured is related to the ways in which a member's social and economic life is involved with the organization; it is likely to have significance in the formation of social capital within or beyond organizational boundaries such as trust and network of engagement, which in turn enhances institutional performance (Putnam, 1993).
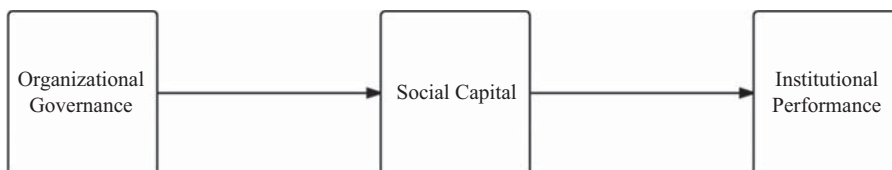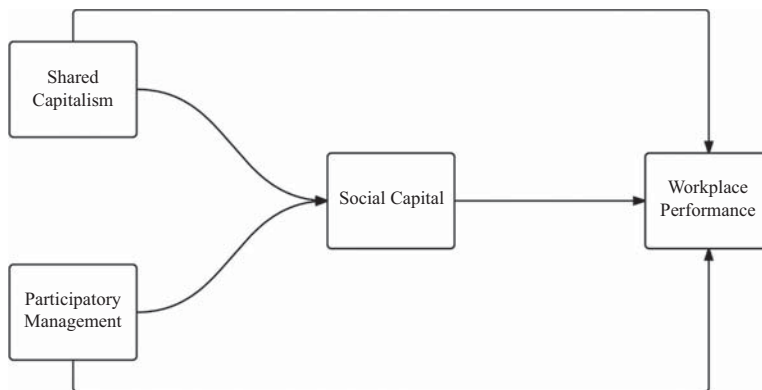

Figure 1.
Organizational governance, social capital, and institutional performance

JPEO

We build upon this idea and make a theoretical framework, as in Figure 2, that shared capitalism and participatory management in organizational governance creates intra-firm social capital, which in turn promotes workplace performance.

Based upon this relationship, we present our working hypotheses between organizational governance, social capital and organizational commitment as in Figure 3. We distinguish organizational trust and norm of reciprocity – e.g., trust in the firm – from particularistic trust, or trust among closed circles of face-to-face workplace relationships, in our conceptualization of social capital:

H1a. Shared capitalism enhances organizational trust among organizational membership.

H1b. Worker participation in decision making enhances organizational trust among organizational membership.

H2. Organizational trust promotes organizational commitment to performance and innovation.

H3a. Organizational trust is a mediator between organizational commitment and shared capitalism.

H3b. Organizational trust is a mediator between organizational commitment and worker participation.

Figure 2.
Relationship between shared capitalism, participatory management, social capital and workplace performance
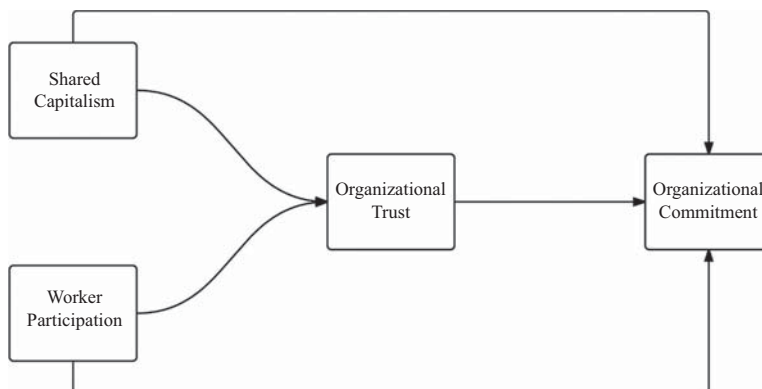
Figure 3.
Working hypotheses

Data

For the purpose of our study, we employ the data set from National Bureau of Economic
Research's (NBER) Shared Capitalism Research Project. The detailed description of this data
set is in the section "Studying shared capitalism" of the Introduction Chapter in the final
publication of the project, *Shared Capitalism at Work: Employee Ownership, Profit and Gain
Sharing, and Broad-based Stock Options* (Kruse *et al.*, 2010)[2]. We hereby adapt this data set
for our study and review its key features for assessment.

The NBER Shared Capitalism Survey drew up a sample of firms varying in size, industry
and type of shared capitalist programs. Overall, more than 40,000 employees at 323 worksites
in 14 companies in manufacturing, services, financial and technology industries participated
in the individual-level confidential surveys conducted in the mid-2000s about their experiences
with shared capitalism and accompanying shared decision making. All of the firms have at
least some form of shared capitalist practices including profit sharing, gain sharing, employee
ownership plans such as ESOPs and ESPPs and broad-based stock options.

Our sampling universe is limited to the workplaces in the USA with some form of shared
capitalism, in which slightly less than half of the American workforce are employed according
the General Social Survey (2002, 2006), as noted by Kruse *et al.* (2010). We thus face limits in
generalizing our results to the entire American workforce in the USA, especially those without
any shared capitalist compensation; an ideal research design would randomly select and
assign firms to treatment and control groups, and then implement a variety of programs and
practices of our interest only within the treatment group. However, this is not practically
feasible and our data set is based upon a survey sample of select shared capitalist firms.

From the original NBER data set, we selected and adjusted the outcome, mediator and
explanatory variables of our interest at the individual level. As in the descriptive statistics in
Table II, we have two outcome variables to measure commitment to performance and
innovation: willingness to work harder to help the company and willingness to make efforts

Variable	Mean	SD	Min.	Max.
Willing to work harder	4.05	0.89	1	5
Willing to make innovation[a]	3.11	0.80	1	4
Organizational trust	2.40	1.15	0	4
Profit sharing (0/1)	0.76	0.42	0	1
Gain sharing (0/1)	0.23	0.42	0	1
Hold employer stock (0/1)	0.75	0.43	0	1
Hold stock options (0/1)	0.30	0.46	0	1
High profit sharing (0/1)	0.46	0.50	0	1
High gain sharing (0/1)	0.15	0.35	0	1
High employee ownership (0/1)	0.39	0.49	0	1
High stock options (0/1)	0.16	0.37	0	1
Employee involvement (EI) team (0/1)	0.36	0.48	0	1
Job decisions	3.35	0.84	1	4
Department decisions	2.62	1.02	1	4
Company decisions	1.70	0.83	1	4
Job security	3.11	0.72	1	4
Formal training (0/1)	0.60	0.49	0	1
Individual bonus (0/1)	0.32	0.47	0	1
High individual bonus (0/1)	0.21	0.40	0	1
High fixed pay above market level (0/1)	0.09	0.28	0	1
High total pay above market level (0/1)	0.14	0.35	0	1
Fixed pay (base pay + overtime)	57,398	41,978	750	1,000K

Notes: n (all observations except [a]) $= 24,917$. [a]n (observations) $= 16,420$

Table II.
Descriptive statistics

for innovation. They are both ordinal categorical variables, ranging from "1" (strongly disagree) to "5" (strongly agree) for the willingness to work harder and from "1" (not at all) to "4" (to a great extent) for the willingness to make innovation.

Our mediator variable measures an employee's level of organizational trust in the firm by asking "trustworthiness [of the firm] in keeping its promises," ranging from "0" (F) to "4" (A) in the typical ABCDF grading scale with C being the hypothetical benchmark average. Our explanatory variables are in two groups: shared capitalism and worker participation. The four basic shared capitalism variables measure whether a worker is eligible for the following programs: profit sharing, gain sharing, employee stock ownership and stock options. The additional four variables measure whether a worker receives greater benefits than a median employee beneficiary in each program: high profit sharing (company-level bonus more than 5 percent of fixed pay), high gain sharing (department- or unit-level bonus more than 13 percent of fixed pay), high employee ownership (both vested and unvested stocks more than 29 percent of annual earnings) and high stock options (stock options more than 103 percent of fixed pay). Finally, the four participation variables measure whether workers participate in special teams and taskforces such as EI teams or are actively involved with job, department and company decisions.

In addition to the aforementioned major explanatory variables, we introduce other conditions, policies and programs that might affect our mediator and outcome variables. First, job security and formal training are critical parts of the work environment that might affect organizational trust and organizational commitment at workplace. Second, in testing the validity of our working hypotheses that group-level incentives in shared capitalism are effective, we introduce individual-level incentives. We first check whether a worker is eligible for individual bonus and see if he or she belongs to the high individual bonus group, receiving greater benefits than a median employee beneficiary (individual-level bonus more than 15 percent of fixed pay). We further check an employee's relative wage *vis-à-vis* the market – whether he or she receives greater fixed or total pay than the other typical worker with similar experience and job description in the same region. If a worker receives more than a median "efficiency wage" employee who gets 10 percent above the market level (e.g. 15 percent above the market level in pay), then he or she belongs to the groups for high (fixed or total) pay above the market level. We also consider the absolute wage level by taking into account the amount of fixed pay itself (base pay with overtime)[3].

Besides the explanatory variables (shared capitalism and worker participation) and other proxies of our interest (work environment and individual incentives) in Table II, we include demographic backgrounds and occupational characteristics as controls at the individual level. Demographic backgrounds include age, gender, race, marital status, family size and number of kids, college education, graduate degree and disability status; occupational characteristics include occupation type, management level, hourly pay status, supervisory status, tenure in years, hours worked per week and union status.

What, then, do our data look like? Of the sample population of employees ($n = 24{,}917$), 76 percent are eligible for profit sharing, 23 percent for gain sharing, 75 percent for employee ownership and 30 percent for stock options. A total of 46 percent receive high profit sharing, and 15 percent high gain sharing; slightly less than 40 percent are high employee owners while 16 percent are high stock option holders. About 36 percent participate in EI teams; they, on average, are involved the most with job decisions, less with department decisions, and the least with company decisions. About 60 percent have received at least a single formal training in the recent 12 months at the time of the survey. About 32 percent of the employees receive a kind of individual bonus; 21 percent receive high individual bonus. About 9 percent receive high efficiency wages in fixed pay, and 14 percent high efficiency wages in total pay. They earn, on average, $57,000 annually. On average, they show organizational trust in their firms between the grades of

C and B; they agree mildly that they are willing to work harder to help the company to succeed; and they are willing to make efforts for innovation to some extent.

Demographically, they are on average 41 years old, and less than one-third of them are female employees; less than 4 percent are African Americans and slightly less than 9 percent Asian Americans; more than 70 percent are married; they, on average, have one kid to live in three-person households; about 30 percent graduated from college and 15 percent have graduate degrees; and slightly less than 5 percent have disability lasting six months or more. At their workplaces, slightly less than 40 percent are in production, maintenance and delivery work; about 30 percent are professional and technical staff in areas such as engineering, finance and marketing; 11 percent are in lower management and 27 percent assume supervisory roles; about 40 percent get paid in hourly terms; they, on average, have worked nine years at their firms and work slightly more than 46 h weekly; and slightly less than 8 percent of them are union members[4].

Method

Our outcome and mediator variables are all ordinal categorical variables, ranging from "1" (strongly disagree) to "5" (strongly agree) for willingness to work harder, from "1" (not at all) to "4" (to a great extent) for willingness to make innovation and from "0" (F) to "4" (A) for organizational trust. Accordingly, we motivate and begin with an ordered probit model, which assumes that higher values on the dependent variable imply "higher" outcomes as in the following where Y_i is an observed dependent variable, Y_i^* is a latent dependent variable, $\Phi(\varepsilon)$ is a cumulative normal distribution function for the latent dependent variable, X_i is a matrix of covariates, β is a vector of estimated coefficients, m is a particular level of category in the dependent variable hierarchy and T_m is a latent threshold variable:

$$\Phi(\varepsilon) = \int_{-\infty}^{\varepsilon} \frac{1}{\sqrt{2\pi}} \exp\left(-\frac{t^2}{2}\right) dt$$

$$Y_i^* = X_i\beta + \varepsilon \tag{1.1}$$

$$E\left(Y_i^*|X_i\right) = \alpha + X_i\beta \tag{1.2}$$

$$P(Y_i = m|X_i) = P\left(T_{m-1} \leqslant Y_i^* < T_m|X_i\right) \tag{2.1}$$

$$P(Y_i = m|X_i) = \Phi(T_m - X_i\beta) - \Phi(T_{m-1} - X_i\beta) \tag{2.2}$$

First, in the cumulative distribution function, $\Phi(\varepsilon)$, the error term ε is normally distributed with mean 0 and variance 1. Second, as in Equations (1.1) and (1.2), we assume that the errors are distributed normally around the regression line $E\left(Y_i^*|X_i\right) = \alpha + X_i\beta$. As in Equation (2.1), the probability of outcome m corresponds to the area of the error distribution between the cut points T_{m-1} and T_m. As in Equation (2.2), we calculate this probability in terms of the cumulative distribution function Φ.

For instance, with our outcome variable on willingness to work harder or make efforts for innovation, we assume that there is a latent variable of an employee's organizational commitment in a continuous spectrum. What we observe, however, is only the answers to the respective survey question prompts in ascending categories, ranging from "1" (strongly disagree) to "5" (strongly agree) or from "1" (not at all) to "4" (to a great extent). Likewise, with our mediator variable, what we observe is only the self-reported grade of trust ranging from "0" (F) to "4" (A), reflecting each employee's latent level of organizational trust.

We note that there could be selectivity biases in "who participates in shared capitalism." For instance, shared capitalist firms might be better performing ones in general from the very beginning; in other words, high performers may be attracted to the very idea of shared capitalism and choose to do so. Or, these firms might have unobservable characteristics suitable for trust or organizational commitment. To deal with the aforementioned selectivity biases, we employ fixed effects to control for unobservable entity-specific characteristics and see how our variables of interest differ across individuals. We introduce fixed effects for both firms and countries as a few firms in the sample have worksites outside the USA.

We acknowledge that there could be selectivity biases at the individual level. Unobserved individual characteristics such as a worker's disposition may affect his or her responses to mediator (organizational trust) or outcome variables (willingness to work harder or make efforts for innovation). For instance, "glass-half-full" employees, or those with positive attitudes and outlooks, might have responded more positively than "glass-half-empty" ones. In addition, it is challenging to distinguish behavioral changes of affected workers from employee self-sorting; shared capitalism and employee participation may attract workers with strong organizational trust and commitment to begin with. However, as our data set is not longitudinal, we cannot control for these selectivity biases at the individual level.

Results

In Table III, we estimate the effects of shared capitalism and worker participation on organizational trust. Among the noteworthy control variable effects, we find that favorable work environment in job security and formal training are associated with greater organizational trust ($p < 0.05$); individual incentive programs such as high individual bonus and high total pay above the market level are also associated with greater trust in the firm ($p < 0.05$).

Net of the controls along with firm- and country-fixed effects, we find positive effects of shared capitalism and worker participation on organizational trust in both Models 1 and 2 (*H1a* and *H1b*). First, gain sharing, high profit sharing and high stock options are associated with greater organizational trust ($p < 0.05$). Second, participation in job, department and company decisions along with EI teams are associated with greater trust in the firm ($p < 0.05$).

In Table IV, we estimate the effects of organizational trust on willingness to work harder. Among the noteworthy control variable effects, we find that favorable work environment in job security and formal training are associated with greater willingness to work harder ($p < 0.05$); individual incentive programs such as high fixed and high total pay above the market level are also associated with greater commitment to performance at workplace ($p < 0.05$).

Net of the controls along with firm- and country-fixed effects, we find positive effects of organizational trust on commitment to performance in Models 1 and 2 (*H2*). Interestingly, *vis-à-vis* the excluded grade of trust (F) in Models 1 and 2, the higher the grade of organizational trust, the greater the commitment to performance ($p < 0.05$). We also observe direct effects from shared capitalism and worker participation on willingness to work harder. Being eligible for profit sharing is associated with greater worker motivation ($p < 0.05$); participations in job, department and company decisions along with EI teams are also associated with greater worker motivation ($p < 0.05$).

In Table V, we estimate the effects of organizational trust on willingness to make efforts for innovation. Among the noteworthy control variable effects, we find that favorable work environment in formal training are associated with greater willingness to make efforts for innovation ($p < 0.05$); individual incentive programs, interestingly, are not at all associated with greater commitment to innovation at workplace ($p < 0.05$). A possible interpretation is

Variables	(1) Organizational trust	(2) Organizational trust
Shared capitalism		
Profit sharing	−0.03 (0.02)	−0.02 (0.02)
Gain sharing	0.06* (0.03)	0.06* (0.03)
Hold employer stock	−0.04 (0.02)	−0.04 (0.02)
Hold stock options	0.01 (0.04)	0.01 (0.04)
High profit sharing	0.08* (0.02)	0.08* (0.02)
High gain sharing	−0.01 (0.04)	−0.01 (0.04)
High employee ownership	0.00 (0.02)	0.00 (0.02)
High stock options	0.08* (0.03)	0.08* (0.03)
Worker participation		
Employee involvement (EI) team	0.05* (0.02)	0.05* (0.02)
Job decisions	0.18* (0.01)	0.18* (0.01)
Department decisions	0.13* (0.01)	0.13* (0.01)
Company Decisions	0.21* (0.01)	0.21* (0.01)
Work environment		
Job security	0.25* (0.01)	0.25* (0.01)
Formal training	0.17* (0.01)	0.18* (0.01)
Individual incentives		
Individual bonus	0.04 (0.03)	0.04 (0.03)
High individual bonus	0.11* (0.03)	0.11* (0.03)
High fixed pay above market level	0.01 (0.03)	0.01 (0.03)
High total pay above market level	0.25* (0.02)	0.25* (0.02)
Income		Yes
Controls	Yes	Yes
Company fixed effects	Yes	Yes
Country fixed effects	Yes	Yes
Constant cut1	−0.39 (0.26)	−0.45 (0.31)
Constant cut2	0.36 (0.26)	0.30 (0.31)
Constant cut3	1.31* (0.26)	1.25* (0.31)
Constant cut4	2.47* (0.26)	2.41* (0.31)
Pseudo R^2	0.12	0.12
Observations	24,883	24,883

Notes: Standard errors in parentheses. *$p < 0.05$

Intra-organizational dynamics

Table III.
Ordered probit regressions of organizational trust

that innovation is likely to be carried out in teams, and that individual incentives are not congruous with such team activities.

Net of the controls along with firm- and country-fixed effects, we find positive effects of organizational trust on commitment to innovation in Models 1 and 2 (*H2*). Interestingly, *vis-à-vis* the excluded grade of trust (F) in Models 1 and 2, only the highest grade of trust in the firm is associated with greater commitment to innovation ($p < 0.05$). We also observe direct effects from shared capitalism and worker participation on willingness to make efforts for innovation. Participation in job and department decisions along with EI teams are associated with greater commitment to innovation ($p < 0.05$). Among the four shared capitalist programs, we find that only high employee ownership is associated with greater commitment to innovation ($p < 0.05$). We suppose that an employee who has great stakes in his or her own firm is more likely to pay attention to long-term improvement in products and services of the company. Why so? It usually takes a long time for research and development to succeed; even after, it will probably take some time for a rank-and-file member to receive benefits from such a success. Therefore, as an employee stock owner is allegedly more likely

Variables	(1) Willing to work harder	(2) Willing to work harder	(3) Willing to work harder
Organizational trust[a]			0.21* (0.01)
Grade of trust (D)	0.14* (0.03)	0.14* (0.03)	
Grade of trust (C)	0.30* (0.03)	0.30* (0.03)	
Grade of trust (B)	0.51* (0.03)	0.51* (0.03)	
Grade of trust (A)	0.85* (0.03)	0.85* (0.03)	
Shared capitalism			
Profit sharing	0.08* (0.02)	0.08* (0.02)	0.08* (0.02)
Gain sharing	0.02 (0.03)	0.02 (0.03)	0.02 (0.03)
Hold employer stock	0.00 (0.02)	−0.00 (0.02)	−0.00 (0.02)
Hold stock options	−0.02 (0.04)	−0.01 (0.04)	−0.01 (0.04)
High profit sharing	−0.03 (0.02)	−0.03 (0.02)	−0.03 (0.02)
High gain sharing	0.05 (0.04)	0.05 (0.04)	0.06 (0.04)
High employee ownership	−0.01 (0.02)	−0.01 (0.02)	−0.01 (0.02)
High stock options	0.05 (0.03)	0.05 (0.03)	0.05 (0.03)
Worker participation			
EI team	0.10* (0.02)	0.10* (0.02)	0.10* (0.02)
Job decisions	0.12* (0.01)	0.12* (0.01)	0.12* (0.01)
Department decisions	0.07* (0.01)	0.07* (0.01)	0.07* (0.01)
Company decisions	0.09* (0.01)	0.09* (0.01)	0.10* (0.01)
Work environment			
Job security	0.04* (0.01)	0.04* (0.01)	0.04* (0.01)
Formal training	0.07* (0.02)	0.07* (0.02)	0.07* (0.02)
Individual incentives			
Individual bonus	0.04 (0.03)	0.04 (0.03)	0.05 (0.03)
High individual bonus	0.03 (0.03)	0.04 (0.03)	0.04 (0.03)
High fixed pay > market	0.08* (0.03)	0.08* (0.03)	0.08* (0.03)
High total pay > market	0.09* (0.03)	0.09* (0.03)	0.10* (0.03)
Income		Yes	Yes
Controls	Yes	Yes	Yes
Company fixed effects	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes
Constant cut1	−0.11 (0.27)	−0.45 (0.32)	−0.43 (0.32)
Constant cut2	0.48 (0.27)	0.14 (0.32)	0.17 (0.32)
Constant cut3	1.46* (0.27)	1.12* (0.32)	1.15* (0.32)
Constant cut4	2.79* (0.27)	2.45* (0.32)	2.48* (0.32)
Pseudo R^2	0.08	0.08	0.08
Observations	24,883	24,883	24,883

Table IV.
Ordered probit regressions of willingness to work harder on organizational trust

Notes: Standard errors in parentheses. [a]Grade of trust (F), the lowest grade, as the excluded category in Models (1) and (2). *$p < 0.05$

to have a longer time horizon, we suppose that employee ownership is positively associated with greater commitment to innovation.

Is organizational trust, then, operating as a mediator between organizational commitment and organizational governance practices? We follow the empirical literature on mediation analysis (Aroian, 1947; Baron and Kenny, 1986; Goodman, 1960; MacKinnon *et al.,* 1995; Sobel, 1982) and employ the product-of-coefficients approach to test mediation.

First, in shared capitalism, only gain sharing, high profit sharing and high stock options have statistically significant positive effects upon our mediator of organizational trust ($p < 0.05$, Table II). These three variables are, however, not directly associated with willingness to work harder (Table III); they are not directly associated with willingness to

Variables	(1) Willing to make innovation[a]	(2) Willing to make innovation[a]	(3) Willing to make innovation[a]	
Organizational trust[b]			0.03* (0.01)	Intra-organizational dynamics
Grade of trust (D)	0.02 (0.04)	0.02 (0.04)		
Grade of trust (C)	−0.05 (0.03)	−0.05 (0.03)		
Grade of trust (B)	0.01 (0.04)	0.01 (0.04)		
Grade of trust (A)	0.19* (0.04)	0.19* (0.04)		
Shared capitalism				
Profit sharing	−0.02 (0.03)	−0.02 (0.03)	−0.03 (0.03)	
Gain sharing	0.01 (0.04)	0.01 (0.04)	0.01 (0.04)	
Hold employer stock	0.07* (0.02)	0.05 (0.02)	0.05 (0.02)	
Hold stock options	0.04 (0.06)	0.01 (0.06)	0.01 (0.06)	
High profit sharing	0.00 (0.02)	0.01 (0.02)	0.01 (0.02)	
High gain sharing	0.04 (0.06)	0.05 (0.06)	0.05 (0.06)	
High employee ownership	0.07* (0.02)	0.06* (0.02)	0.06* (0.02)	
High stock options	−0.02 (0.10)	−0.02 (0.10)	−0.02 (0.10)	
Worker participation				
EI team	0.18* (0.02)	0.18* (0.02)	0.18* (0.02)	
Job decisions	0.08* (0.01)	0.08* (0.01)	0.07* (0.01)	
Department decisions	0.03* (0.01)	0.03* (0.01)	0.03* (0.01)	
Company decisions	−0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	
Work environment				
Job security	−0.01 (0.01)	−0.01 (0.01)	−0.01 (0.01)	
Formal training	0.08* (0.02)	0.08* (0.02)	0.07* (0.02)	
Individual incentives				
Individual bonus	0.05 (0.04)	0.05 (0.04)	0.06 (0.04)	
High individual bonus	0.01 (0.05)	0.01 (0.05)	0.01 (0.05)	
High fixed pay > market	−0.00 (0.04)	−0.00 (0.04)	−0.00 (0.04)	
High total pay > market	−0.05 (0.04)	−0.05 (0.04)	−0.05 (0.04)	
Income		Yes	Yes	
Controls	Yes	Yes	Yes	
Company fixed effects	Yes	Yes	Yes	
Country fixed effects	Yes	Yes	Yes	
Constant cut1	−1.78* (0.37)	−0.71 (0.43)	−0.71 (0.43)	
Constant cut2	−1.08* (0.37)	−0.01 (0.43)	−0.00 (0.43)	
Constant cut3	0.48 (0.37)	1.55* (0.43)	1.55* (0.43)	
Pseudo R^2	0.07	0.07	0.07	Table V.
Observations	16,417	16,417	16,417	Ordered probit regressions of willingness to make innovation on organizational trust

Notes: Standard errors in parentheses. [a]Only for a small hi-tech firm and a large multinational manufacturing firm; [b]grade of trust (F), the lowest grade, as the excluded category in Models (1) and (2). *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

make efforts for innovation, either (Table IV). In other words, gain sharing, high profit sharing and high stock options in shared capitalism enhances organizational commitment to performance and innovation only through organizational trust, which are all instances of full mediation (*H3a*). On the other hand, profit sharing affects commitment to performance only directly whereas high employee ownership affects commitment to innovation only directly.

Second, in worker participation, all four ways – involvement with job, department and company decisions along with EI teams – have statistically significant positive effects upon organizational trust ($p < 0.05$, Table II). In addition, these four variables directly predict willingness to work harder ($p < 0.05$, Table III). Under the Sobel, Aroian and Goodman tests, we reject the null hypothesis of no mediation for each method of worker participation ($p < 0.01$). In other words, worker participation enhances commitment to performance both directly and indirectly through organizational trust (*H3b*).

Moreover, job and department decisions along with EI teams directly predict willingness to make efforts for innovation ($p < 0.05$, Table III). Under the Sobel, Aroian and Goodman tests, we reject respectively the null hypothesis of no mediation for the above three methods of participation ($p < 0.01$). In other words, worker participation in lower level decisions and EI teams enhances commitment to innovation both directly and indirectly through organizational trust; participation in company decisions affects commitment to innovation only trough organizational trust (*H3b*).

Discussion

Overall, we have confirmed all our working hypotheses as in Figure 4. This paper finds empirical support for the main hypothesis that employee participation in ownership and control empowers workers and enhances organizational trust for the firm, which in turn promotes commitment to performance and innovation at workplace.

Most importantly, it shows that shared capitalism and worker participation are effective corporate institutions and policies beyond individual nudges such as incentives and bonuses. It hints that workplaces are social spaces in which group- or firm-level programs shape and influence organizational dynamics. A firm is not a gathering of individuals as atomic agents but rather a space of people as social beings.

For further research, we may explore complementarity between shared capitalism and employee participation in decision making (Jones *et al.*, 2017; Kato and Morishima, 2002). It is a promising research question to ask whether shared claims to ownership and decision making interact with each other to produce greater effects upon organizational trust, commitment and productivity at workplace. In addition, we may take a closer look at how labor participation policies and institutions actually play out in everyday life within a firm. To do so, an ethnographic fieldwork including participant observation and in-depth interviews will be necessary to explore such dynamics.
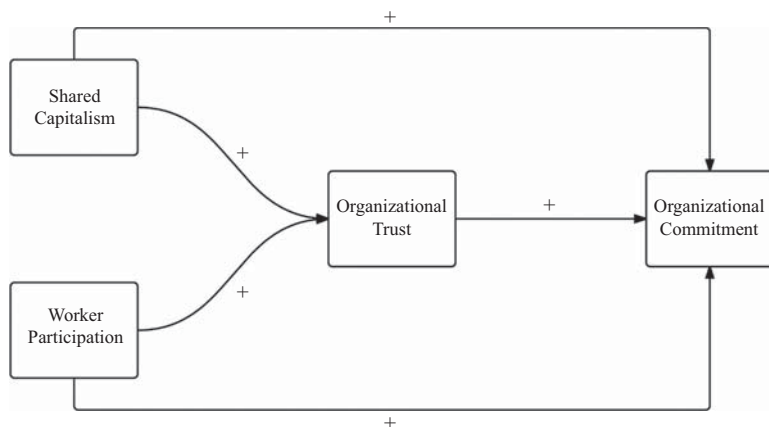
Figure 4.
Relationship between shared capitalism, worker participation, organizational trust and organizational commitment

Modern work, as we see today, usually requires across-the-board collaboration and interaction. The effects of employee empowerment thus have critical implications for organizational performance and institutional prosperity. When we regard a firm as socially embedded and constructed, especially within and across ongoing social relations, we will have better understanding of a firm and its organizational dynamics.

Notes

1. A full worker participation in the management of a worker co-op does not necessarily mean that a firm is run by direct democracy; it can be managed with full worker participation by representation or delegation.

2. "Studying shared capitalism," Introduction, *Shared Capitalism at Work: Employee Ownership, Profit and Gain Sharing, and Broad-based Stock Options*: www.nber.org/chapters/c8085 (accessed May 2018).

3. We acknowledge potential endogeneity bias caused by introducing wage level as a control variable.

4. A plausible way to overcome the limits to generalization is to see whether the demographic backgrounds and occupational characteristics in this NBER Shared Capitalism data set are similar to those backgrounds and characteristics in the General Social Survey (GSS).

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Appendix. Variable definitions (Source: National Bureau of Economic Research (NBER) Shared Capitalism Survey)

Categories of variables

Organizational commitment:

(1) Willing to work harder to help the company

(2) Willing to make efforts for innovation

Organizational trust:

(1) Trust in the firm

Shared capitalism:

(1) Profit sharing

(2) Gain sharing

(3) Hold employer stock

(4) Hold stock options

(5) Profit sharing as percent of pay:

- High profit sharing

(6) Gain sharing as percent of pay:

- High gain sharing

(7) Employer stock as percent of pay:

- High employee ownership

(8) Stock options as percent of pay:

- High stock options

Worker participation:

(1) Employee involvement (EI) team

(2) Involved in job decisions

(3) Involved in department decisions

(4) Involved in company decisions

Work environment:

(1) Job security

(2) Formal training

Individual incentives:

(1) Individual bonus

(2) Individual bonus as percent of pay:

- High individual bonus

(3) Fixed pay difference from market:

- High fixed pay above market level

(4) Total compensation difference from market:

- High total pay above market level

Income:

(1) Fixed pay (base pay + overtime)

Controls:

(1) Demographic backgrounds

(2) Occupational characteristics

1. Organizational commitment

Willing to work harder to help the company:

To what extent do you agree or disagree with this statement? "I am willing to work harder than I have to in order to help the company I work for succeed?" (1–5 scale, 1 = strongly disagree, 2 = disagree, 3 = neither, 4 = agree, 5 = strongly agree)

Willing to make efforts for innovation[a]:

To what extent are the following statements true of you personally? "I would be willing to be more involved in efforts to develop innovative products and services." (1–4 scale, 1 = not at all, 2 = very little, 3 = to some extent, 4 = to a great extent)

[a]Only for a small hi-tech firm and a large multinational manufacturing firm

2. Organizational trust

Trust in the firm:

If you were to rate how well this company takes care of workers on a scale similar to school grades, what grade would you give in these areas? (C is an average grade.) "Trustworthiness in keeping its promises" (0 = F, 1 = D, 2 = C, 3 = B, 4 = A)

3. Shared capitalism

Profit sharing:

"In your job are you eligible for any type of performance-based pay, such as individual or group bonuses, or any type of profit sharing? What does the size of these performance-based payments depend on? Company profits or performance?" (0 = no, 1 = yes)

Gain sharing:

"In your job are you eligible for any type of performance-based pay, such as individual or group bonuses, or any type of profit sharing? What does the size of these performance-based payments depend on? Work group or department performance?" (0 = no, 1 = yes)

Hold employer stock:

Any employer stock held through Employee Stock Ownership Plan, Employee Stock Purchase Plan, 401(k), exercised stock options or open market purchases (0 = no, 1 = yes)

Hold stock options:

"Do you currently hold any stock options in your company (vested or unvested)?" (0 = no, 1 = yes)

Profit sharing as percent of pay:

If "yes" to profit sharing, answer to "What was the approximate total dollar value of the payment(s) you received [in the most recent year of bonuses]?" divided by base pay + overtime, otherwise 0.

High profit sharing:

1 if profit sharing as percent of pay is above the NBER sample median (5 percent) among those who receive profit sharing bonuses, otherwise 0.

Gain sharing as percent of pay:

If "yes" to gain sharing, answer to "What was the approximate total dollar value of the payment(s) you received [in the most recent year of bonuses]?" divided by base pay + overtime, otherwise 0.

High gain sharing:

1 if gain sharing as percent of pay is above the NBER sample median (13 percent) among those who receive gain sharing bonuses, otherwise 0.

Employer stock as percent of pay:

If "yes" to "hold employer stock," answer to "Please give a general estimate of how much cash you would get if all this stock were sold today?" divided by annual earnings, otherwise 0.

High employee ownership:

1 if employer stock as percent of pay is above the NBER sample median (29 percent) among those who hold employer stock, otherwise 0.

Stock options as percent of pay:

If "yes" to "Hold stock options," the sum of answers to questions about value of vested and unvested stock, divided by base pay + overtime, otherwise 0.

High stock options:

1 if stock options as percent of pay is above the NBER sample median (103 percent) among those who hold stock options, otherwise 0.

4. Worker participation

EI team:

"Some companies have organized workplace decision making in ways to get more employee input and involvement. Are you personally involved in any team, committee or task force that addresses issues such as product quality, cost cutting, productivity, health and safety or other workplace issues?" (0 = no, 1 = yes)

Involved in job decisions:

"How much involvement and direct influence do YOU have in: Deciding HOW to do your job and organize the work?" (1–4 scale, 1 = none, 2 = only a little, 3 = some, 4 = a lot)

Involved in department decisions:

"How much involvement and direct influence do YOU have in: Setting GOALS for your work group or department?" (1–4 scale, 1 = none, 2 = only a little, 3 = some, 4 = a lot)

Involved in company decisions:

"How much involvement and direct influence do YOU have in: Overall company decisions?" (1–4 scale, 1 = none, 2 = only a little, 3 = some, 4 = a lot)

5. Work environment

Job security:

"Thinking about the next twelve months, how likely do you think it is that you will lose your job or be laid off?" (1–4 scale, 1 = very likely, 2 = fairly likely, 3 = not too likely, 4 = not at all likely)

Formal training:

"In the last twelve months have you received any formal training from your current employer, such as in classes or seminars sponsored by the employer?" (0 = no, 1 = yes)

6. Individual incentives

Individual bonus:

"In your job are you eligible for any type of performance-based pay, such as individual or group bonuses, or any type of profit sharing? What does the size of these performance-based payments depend on? Individual performance?" (0 = no, 1 = yes)

Individual bonus as percent of pay:

If "yes" to individual bonus, answer to "What was the approximate total dollar value of the payment(s) you received [in the most recent year of bonuses]?" divided by base pay + overtime, otherwise 0.

High individual bonus:

1 if individual bonus as percent of pay is above the NBER sample median (15 percent) among those who receive individual bonuses, otherwise 0.

Fixed pay difference from market:

"Do you believe your fixed annual wages are higher or lower than those of employees with similar experience and job descriptions in other companies in your region? By what percent is it higher or lower?" (%)

High fixed pay above market level:

1 if fixed pay premium is above the NBER sample median (10 percent) among those who get paid better than market in fixed pay, otherwise 0.

Total compensation difference from market:

"Do you believe your total compensation is higher or lower than those of employees with similar experience and job descriptions in other companies in your region? By what percent is it higher or lower?" (%)

High total pay above market level:

1 if total pay premium is above the NBER sample median (10 percent) among those who get paid better than market in total pay, otherwise 0.

7. Income

Fixed pay ($): yearly base pay + overtime (natural log)

8. Controls

Demographic backgrounds: age, gender, race, marital status, family size, number of kids, college education, graduate degree and disability status

Occupational characteristics: occupation type, management level, hourly pay status, supervisory status, tenure in years, hours worked per week and union status

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