

Workplace Democracy: Current State and Future Directions of the Literature

Michael D. Carr¹

Philip Mellizo²

Introduction

The literature on workplace democracy takes as its starting point that the management and governance structure of a firm greatly influences economic performance of the firm either by unlocking or thwarting the release of knowledge and effort of firm members that could lead to everything from productivity enhancing innovations or the increase in social capital within the enterprise, to a greater sense of group and personal identity. Indeed, the potential for positive social, political, and psychological effects of workplace democracy motivate rich swaths of the literature written on the topic. The present review hints at some of these dimensions, though we focus on presenting the literature on outcome variables traditionally considered and studied by economists. In the following chapter, we first discuss the varied definitions of workplace democracy used by researchers in this field, we then turn to the more recent theoretical literature on workplace democracy, followed by the empirical literature which both derives from and motivates the theoretical work. We conclude with a discussion of the limitations of the existing research and what can be done to start to fill these gaps.

¹ Department of Economics, University of Massachusetts Boston, michael.carr@umb.edu.

² Department of Economics, College of Wooster, pmellizo@wooster.edu.

1. Concept and Complications in Definition

Workplace democracy is a mode of governance where the firm is governed by all individuals that hold a stake in the performance of the firm. Though the basic principle is relatively straightforward, there are substantive differences in the interpretation of what is meant by ‘stakeholders’ and also ‘sharing in the decision-making process’ that determine the form, function, and consequences of workplace democracy.

1.1 Stakeholders, Decision Making, and Accountability

Stakeholders are, in a sense, all individuals whose well-being is directly affected in some way by an enterprise. This list could include capital investors, managers, and workers, but also extend to suppliers, customers, states polities, and community members. Widely varying examples of who the stakeholders are and their respective degree of inclusion can be found in practice. For example, the standard U.S. corporate model identifies capital shareholders as primary stakeholders, and are democratic in the sense that they follow a ‘one-share, one-vote’ principle. At the other end of the spectrum, many worker cooperatives identify all firm members as stakeholders, distributing decision-making power in a one-member, one-vote manner. Somewhere in the middle are hybrid “employee owned” firms that distribute share ownership and thus voting rights to employees. This would include Employee Stock Ownership Plan (ESOP) firms, where some or all workers own shares in the company, and firms based on partnerships such as law firms or accounting firms, where a subset of employees (the partners) own a share of the firm’s revenue.

Similarly, the concept of sharing in the decision-making process is equally complex, and can be manifested in a number of different ways, some of which are formalized in the by-laws of a firm, and others that form part of the specific culture within a firm. For example, workers that

directly participate in decision-making with or define production procedures are fully in line with broad definitions of democracy, even if no formal voting procedures are followed.

One element that helps distinguish and organize some of these complexities that has been used in the literature is the concept of accountability. While managers in corporations are held accountable by shareholders, democratic firms share the burden of accountability across all members of the firm. Again, this could be manifested in many different ways, from including systems of accountability with periodic election of decision-makers (managers), or through mechanisms (formal and informal) that give voice to firm members over their employment. The specific accountability mechanisms are, once again, extremely diverse, ranging from the adoption of workers councils or unions that hold management accountable in either consultative or direct capacities, to suggestion boxes, to enterprise meetings where decisions are taken collectively and with full participation of all members.³

1.2 Definition and Motivation

Because of these complications, we maintain a broad and flexible understanding of workplace democracy, where any firm that has broad based participation in either financial or production issues lies on the continuum of democratic workplaces. This choice reflects both our understanding of workplace democracy as a concept covering a wide continuum of possible decision, ownership, and financial structures, and because the literature that claims to examine workplace democracy does not itself analyze a single structure. The wide range of possible ownership and decision-making structures that advance democratic principles within the firm create difficult challenges for research, but also has the advantage of allowing researchers to

³ Ben-Ner and Jones (1995) provide a useful taxonomy of ownership and decision-making structures. They categorize structures by the interaction between variation along control rights held by employees and return rights held by employees.

evaluate the effects of the intensity or trajectory of workplace democracy. As will be seen, of particular importance in the literature are the complementary relationships between different aspects of workplace democracy.

The theoretical benefits that have been posited to arise from the democratization of the firm are as numerous and varied as the concept itself. For example, workplace democracy has been theorized as a potential vehicle for everything from fostering human empowerment (Dahl, 1986), to increasing community participation (Mill, 1962), inequality reduction (Sen, 1966). Greater workplace democracy has also been posited to contribute to employment stability (Svejnar et al., 1982), higher productivity (Ben-Ner and Jones 1995), cost saving on monitoring inputs (Bowles and Gintis 1993), greater possibilities for innovation (Hoskisson et al., 2002), and more ethical business practices (Schumpeter 2012).

These claims, however promising, ultimately require empirical substantiation. In the following sections, we first summarize the theoretical literature on the effects of workplace democracy, followed by a brief summary of the regularities arising from the empirical record of three broad democratic constructs.

2. Theory

In his seminal essay, Ronald Coase (1937) described firms as “islands of conscious power in [an] ocean of unconscious cooperation,” to underscore his view that firms are planned economies based on the managed coordination of resources. For Coase, firms derive their power from their ability to skip the market to organize production. For most economists, however, the primary lesson taken away from Coase is that all coordinating mechanisms have positive transactions costs which, once considered, give rise to the large class of “make, buy, or integrate” problems at

the heart of so much post-war economic theory of the firm. But the issue over *how* exactly management/control works, and whether there are systematic economic benefits that are endogenous to managerial procedure, democratic or otherwise, has largely been lost among economists. As Demsetz (1997, p. 426) notes “[n]eoclassical theory’s objective is to understand price-guided, not management guided, resource allocation. The firm ... is that well known ‘black-box’ into which resources go and out of which goods come, with little attention paid to how this transformation is accomplished.”

The adherence to strict neoclassical methodological conventions (e.g. utilitarian framework, rational economic agents, and optimization) creates some challenges for the development of theory germane to workplace democracy, but it also produced a rich and influential tradition of formal theory that put topics such as participation, labor management, and asset re-distribution, squarely in the economics mainstream journal outlets. The importance of formal theory in keeping a political topic like Workplace Democracy relevant within economics cannot be understated. We lamentingly agree with Oliver Hart (1989, p. 1757) who notes that, “theories [of the firm] that attempt to incorporate real world features ... often lack precision and rigor, and have therefore failed, by and large, to be accepted by the theoretical mainstream.” It is partly for this reason that our summary of recent theoretical work on workplace democracy is largely intuitive and non-technical. We divide the theoretical issues that have been grappled with into three main categories: 1) incentive and personnel issues, 2) types of workers, and 3) capital investment and credit constraints.

2.1 Incentive effects

The more recent theoretical literature on workplace democracy has focused largely on the incentive effects of workplace democracy, in particular in the context of team production. Team

production presents a unique challenge because neither individual absolute nor relative output is verifiable, implying that firms must either pay a flat wage to workers or reward groups based on team output, but cannot reward individuals based on individual effort or output. But, paying a flat-wage will result in free-riding if workers are self-interested. Financial participation that ties effort to pay is argued to solve this problem by making the residual claimants of the surplus (the owners) the same as the producers of the surplus (the workers) (Bowles 1985, Holmstrom 1982). This is precisely the goal of worker cooperatives, ESOPs, partnerships and other worker ownership schemes. Because the workers and the owners are now the same people, it is said that these payment schemes align the incentives of the workers and the firm.⁴

Simply making workers the owners of the surplus they produce may not be sufficient to overcome the incentive problems inherent in paying a flat wage if workers are self-interested. The primary issue is the 1/N problem: if a group of N workers are all residual claimants to the same surplus, then a given worker only earns 1/N of the total surplus, blunting the incentive effect of being residual claimant. The 1/N problem is largely insurmountable absent some method for workers to enforce work norms on their fellow workers, or a method to select for workers who are not self-interested.⁵ The problem is that, as Alchian and Demsetz (1972) argue, monitoring suffers from exactly the same free-riding problem that effort provision suffers from

⁴ Although there exist a number of ways that the complications generated by team production can be theorized, perhaps the most straight forward and familiar is in the context of a principal agent framework (Shapiro and Stiglitz (1984), Bowles and Gintis (1985, 1993), Akerlof and Yellen (1990), Alchian and Demsetz (1972), Holmstrom (1982)).⁴ In these models, the goal of the owner(s) of a firm is to extract the optimal amount of effort from the workers in the firm. However, because effort is fundamentally unknowable and unenforceable, the owners must resort to some combination of indirect monitoring and wage premiums to ensure optimal effort. Assuming self-interested utility maximizing workers, if individual output is verifiable, then firms can pay a piece-rate and participatory workplaces are unlikely to arise.

⁵ There have been a couple of theoretical solutions to the 1/N problem that do not require monitoring, however, in practice all they really do is utilize an algebraic trick whereby individual income is no longer divided by N (Bowles (1985, 2009), Holmstrom (1982)). The models assume that rather than paying workers a fraction of the surplus, each worker is paid the entire surplus minus the amount necessary to pay all other workers the same amount. So, although mathematically it appears as if every extra dollar a given worker contributes to the surplus passes fully into his or her earnings, in reality it does not. One might call this the 1-N problem.

because the benefit to monitoring is a public good whose reward is spread across all members of the group. Alchian and Demsetz (1972) argue that in all firms, regardless of how the surplus is divided, monitoring should be centralized because the monitor can always be rewarded based on the performance of the group she or he is monitoring. The implication is that free-riding is inherent to democratic workplaces with financial participation, or any other scheme that relies on mutual monitoring.

In addition to the incentive problems inherent to firms where self-interested workers are the residual claimants, there is a second set of problems that results broadly from self-selection issues. If the surplus is distributed equally among a group, then the high productivity workers will be underpaid and the low productivity workers will be overpaid. This results in high productivity workers leaving the firm and low productivity workers self-selecting into the firm (i.e. adverse selection) (Ben-Ner and Ellman 2013). In addition, when workers are paid a share of the surplus generated by the firm, their pay fluctuates with the firm's surplus. Importantly, surplus can decrease due shocks that are entirely outside the control of the worker, an issue discussed in more detail below. Although this risk exists to a certain extent in firms where workers are paid a flat wage, income has the potential to be substantially more volatile when worker pay depends directly on the surplus.⁶ Thus, ESOPs and other profit sharing schemes may inadvertently also select for risk preferences of the workers.

⁶ Pencavel (2013) finds that income is more volatile in worker cooperatives, however, cooperatives adjust wages in response to shocks in a manner which reduces employment volatility. Thus,

2.2 Types of Workers

The above discussion was in the context of self-interested workers who, although they may vary by risk preferences, are otherwise identical.⁷ A large body of research in Experimental and Behavioral Economics suggests that it is unreasonable to assume that the typical individual is purely self-interested; instead the population consists of a wide range of preferences over distribution, of which self-interest is only one case (Camerer 2003; Fehr and Schmidt 1999, 2006). Specifically, the population consists of broadly three categories of preferences: self-interested, reciprocal (or conditional cooperators), and altruistic. A self-interested individual considers only his or her own payoff. At the other extreme is a purely altruistic person, who considers both his or her own payoff and the payoffs of others, regardless of how he or she is treated by others. In the middle are conditional cooperators (Fischbacher, Gächter, and Fehr 2001). These individuals behave selfishly if others behave selfishly, and behave altruistically if others behavior altruistically.

The effect of altruism on a democratic workplace is straightforward. As Ben-Ner and Ellman (2013) argue, all else equal, an increase in altruism increases the surplus by blunting the effect of the $1/N$ problem. With conditional cooperators there are a wide range of potential outcomes because conditional cooperators simply reflect the choices made by coworkers. A conditional cooperator in a workplace of altruistic workers will behave as if altruistic, while a conditional cooperator in a workplace of self-interested workers will behave as if self-interested. The ability of a firm with a surplus sharing arrangement to maintain high levels of effort thus hinges on the distribution of preferences among its workers. As conditional cooperators will change strategies based on the choices of others, the success of the firm hinges on the relative

⁷ For an excellent in depth review of the implications of heterogenous preferences for participatory workplaces see Ben-Ner and Ellman (2013).

shares of altruistic and self-interested workers. This argument applies to both effort provision in production and effort provision in monitoring; because both suffer from free-riding, both are determined by the distribution of preferences within the firm.

The theoretical arguments presented above suggest that the success of a participatory workplace hinges on (a) its ability to select for and retain high productivity workers, (b) its ability to select for and retain an altruistic and/or reciprocal workforce, and (c) its ability to manage the risk preferences of its workforce. The empirical literature on, in particular, surplus sharing schemes suggests a fourth condition of success, namely, that surplus sharing schemes do not work without power sharing schemes (Dube and Freeman, 2010). Surplus sharing schemes shift a considerable amount of risk on to workers. It seems quite reasonable to think that workers will not respond positively to this shift in risk if they have no control over the workplace, which is precisely what is found in the empirical literature discussed next. That is, holding the distribution of preferences fixed, the ability for financial participation to solve the $1/N$ problem, and free-riding more generally, depends on the presence of other institutions that promote participation in production.

What is less clear is why this is the case. Some unknown combination of two things likely happen when firms simultaneously engage in financial and production participation. First, the surplus-sharing scheme is perceived differently by the current workers when it comes with participatory management, and vice versa. Second, a firm that simultaneously employs both practices attracts a different set of workers than firms that use only surplus sharing. Reasons for the existence of either one, or both, are numerous and not well understood. One likely possibility is that the extension of both surplus sharing and participatory management is seen as the current owners attempting to cooperate with the current workers, while the extension of

surplus sharing alone is not. The extension of both will cause the conditional cooperators to change their behavior, increasing the surplus generated by the firm, while the extension of one or the other does not trigger this response. Another likely possibility is that high productivity workers self-select into firms where they both have control over the production process and receive a share of the surplus they generate. A third possibility is reverse causation, meaning, it is more likely for high surplus firms to extend participatory management systems than low surplus firms. We return to this in the empirical section, though, we see this as one of the open questions in this literature that deserves considerable attention.

2.3 Capital Investment and Firm Survival

Aside from incentive issues, the other most discussed theoretical issues surrounding democratic firms are capital investment decisions and the role of credit constraints. Dow (2003) provides a more complete review of the literature, from which we borrow. For the present purposes, it is sufficient to highlight three basic issues: maintenance and depreciation, the role of quasi-rents generated from specialized high fixed cost inputs, and credit constraints.

In the early literature on firm management, it was commonly argued that depreciation will be greater when the asset is used without the owner present (Alchian and Demsetz 1972). If the owner of the asset is a group, then the problem can be even more severe again because of the $1/N$ problem. A given individual only receives $1/N$ share of the benefit from limiting depreciation of a physical asset, and thus may free-ride on others' willingness to limit depreciation.

The more complicated issues arise from the financing of high fixed cost capital investments, and who receives the resulting quasi-rents. These issues have implications for both the long-term survival of democratic firms, and for the likelihood of the establishment of a

democratic firm. Williamson (1975, 1979, 1985) argues that information asymmetries can result in potentially costly attempts to appropriate quasi-rents following an investment. Although Williamson's arguments are not directly aimed at worker-owned firms, Dow (2003) argues that if workers are the ones with the specialized, high fixed cost (human) capital, then this problem can be eliminated by making the workers the owners of the firm because they generate the quasi-rents in the first place. If both capital and labor are specific, then the workers with the specialized skills should jointly own the specialized capital. Later work in this tradition, most notably that of Grossman and Hart (1986) and Hart and Moore (1990), focus on whether the owners of a particular asset have adequate incentive to invest in related assets, in particular human capital investments. Similar to Williamson, namely, this literature argues that the group whose investments have the largest effect on the surplus generated by the firm should own the firm. If worker investment in complementary human capital has a larger impact on the surplus than investments in physical capital, then the firm should be worker owned, and vice versa.

The above analyses assume perfect capital markets. In the absence of perfect capital markets, an individual or group of individuals who want to start a firm must either (1) fund the initial fixed costs of the firm through personal wealth, (2) borrow the fixed costs from a bank, or (3) acquire funds from investors who would then be owners of the firm but not workers in the firm. Limited wealth of most individuals makes (1) difficult even for comparatively small firms, and (2) difficult with larger firms because of collateral requirements in borrowing.⁸ Additional problems that arise with debt financing are the familiar moral hazard and adverse selection problems. Of particular importance are the fact that workers can leave a failing firm or declare bankruptcy, thus avoiding full responsibility for debt repayment. The result is a high prevalence

⁸ The notable exception to this are the plywood firms studied in Craig and Pencavel (1992). These firms were funded via worker buy-ins.

of firms financed by investor-owners, who theoretically have the proper incentive to make efficient levels of investments in the firm and/or firms with a single or small number of owners that are uniquely responsible for decision-making in the firm. That is, credit constraints make decrease the likelihood of the establishment of a democratic firm with a large number of owners.

3. Basic Empirical Findings

The empirical literature in economics on democratic workplaces is more narrowly focused than the theoretical literature. This is due in part to data limitations that make the kind of large scale analyses familiar to economists impossible. Data availability also limits the ability of researchers to directly test the implications of the theoretical work, so the relationship between the two is not as direct as is ideal. The latter problem is only recently being addressed with a combination of new and better data, and controlled laboratory experiments.

2.1 Employee Participation

Ben-Ner and Jones (1995) and Levine and Tyson (1990) provide excellent reviews of the early empirical literature on the effects of participation in decision-making on firm performance. This literature is based largely on case studies and other small-scale surveys. It suggests that participatory decision-making can increase firm performance, but is not universally beneficial. Levine and Tyson (1990) identify four general characteristics of a firm's management system that should be present for both employee support of participatory decision making and increased firm performance: profit or gain sharing, job security, support of group cohesiveness, and guaranteed individual rights. This is consistent with the empirical literature reviewed in Ben-Ner and Jones (1995), which routinely finds that profit/gain sharing schemes only boost firm performance if accompanied by participatory management structures and vice versa. Although

there is general agreement on the importance of each of these four institutions, the connection between these specific institutions and the three necessary conditions implied by the theoretical literature remains an open question. Profit/gain sharing is a form of financial participation, and job security and group cohesiveness may both help firms select workers with the right preferences and promote participation in production, but to our knowledge there has been little systematic research in this area.

Recently, there has been a promising move towards alternative methodologies and improved data. Mellizo et al (2014) use a controlled lab experiment to evaluate the effects of employee determination of their group's compensation scheme on effort provided on an onerous production task. Groups of workers that voted to determine their compensation scheme provided more effort than groups that had no say over how they would be compensated, conditional on compensation scheme. This result suggests that employee control over decisions that affect their conditions of work may increase motivation regardless of the actual decision taken. Why this might be the case remains an open, and important, question.

Despite the increase in productivity, it is not immediately obvious that employees enjoy participating in decision-making. Research investigating the effects of employee participation on subjective well-being is extensive, and while the direction of causation is contested, a wide range of studies find that the subjective well-being of workers is higher in participatory firms (Godard (2001); Knudsen, Busck, and Lind (2011); Spector (1997); Wood (2008)). One study by Carr and Mellizo (2013), drawing on data from an extensive survey on employee attitudes, finds that measures of worker participation in firm decision making are equally if not more important in determining subjective well-being as worker pay.

2.2 Financial Participation

As discussed above, many proponents of workplace democracy advocate for greater alignment of the ‘product and producer’ so that the flow of benefits and costs attribute to those responsible for their production. However, the theoretical literature highlights the difficulties inherent in overcoming group free-rider problems via financial incentives alone. Group incentives schemes such as gain sharing, profit sharing, and share ownership are ubiquitous in the U.S. economy and have been shown to be, on average, positively *associated* with firm performance (e.g. Weitzman and Kruse (1990); Blasi, Conte, and Kruse, (1996); Kruse, (2002); Freeman and Dube, (2000)), consistent with theoretical arguments about the likelihood of free-riding with heterogeneous workers. Identifying whether a causal relationship exists has proven to be extremely difficult. The literature suggests that firms that provide group financial incentives also tend to employ progressive management practices that encourage workers to become more involved in both firm-level and shop-floor decision-making and planning, thus making it impossible to disentangle the effect of financial participation per se from the effect of participation in general (e.g. Freeman and Dube, (2000); Conyon and Freeman (2002)). Though, as noted, in situations where some firms have both forms of participation and some firms have only financial participation, the firms with both perform better (Dube and Freeman 2010).

In an effort to mitigate some of the confounds that complicate identification of causality, Mellizo (2013) uses a controlled laboratory experiment that randomly assigns subjects to one of three compensation contracts used to incentivize an onerous effort task. Two of the compensation contracts are group-incentive schemes where subjects have an incentive to free-ride on the efforts of their co-workers, and the third (control) is a flat-wage contract. The findings show that both group incentive schemes resulted in sustained, higher performance

relative to the flat-wage compensation contract. Further, the data show an absence of free-riding behavior under the two group-incentive schemes over the duration of study.

The empirical work that investigates the effect of financial participation on job satisfaction, however, is ambiguous. Several studies show higher satisfaction, while others show no relationship or even lower satisfaction (Kruse, Blasi, and Freeman (2010)). Kruse, Blasi, and Freeman (2010) draws from two extremely rich data sets (the General Social Survey and National Bureau of Economic Research company data), and find that job satisfaction is positively linked to financial participation, but that it is only statistically significant in the NBER data. This effect, however, disappears when controlling for the presence of other progressive HR policies suggesting important complementarities, and meaningful differences in effect across firms.

2.3 Research on Worker Cooperatives

As opposed to firms with only financial participation, a worker cooperative is both owned and operated by the workers. Pencavel's (2013) review of the literature on worker cooperatives underscores that evidence regarding the relative performance of cooperative firms versus traditional firms is mixed.⁹ A subset of the literature finds robust evidence that cooperative firms are more efficient than non-cooperative firms, while others have been unable to find any measureable differences.¹⁰ The mixed results are not surprising, as the theoretical literature discussed above highlights the fact that the success of a cooperative firm will depend more

⁹ See also Dow (2003) and Bonin, Jones, and Putterman (1993) for reviews of the literature.

¹⁰ Craig and Pencavel (1992) find, in a study of plywood manufacturing firms in the Northeast United States, that coop firms can produce the same output with less input. Fakhfakh, Perotin, and Gago (2010), using data on a large sample of French firms, also find that coop firms can produce the same amount of output with fewer inputs. Defourny, Lovell, and N'gbo (1992) also use French data, but report no measurable differences between traditional and coop firms, though interestingly they do find considerable productivity differences within coop firms. Jones (2007), using data on a set of Italian firms, finds no consistent productivity differences between coop and traditional firms.

heavily on both the structure of production and the composition of the workforce than a traditional firm, in addition to significant impediments to estimating the relationship including both data quality and difficulties in identifying cooperatives.

As for well-being, there is little systematic research on subjective well-being, however Pencavel (2002) and Pencavel and Craig (1994) find that employment is more volatile in traditional firms, while wages (though not necessarily earnings) are more volatile in coops. This is due to differences in how firms adjust to shocks: traditional firms cut workers and/or work hours while coops cut wages, holding employment and work hours relatively fixed. Thus, the traditional firm may have a welfare advantage for workers who are able to hold on to their job, but the coop may provide a higher level of overall social welfare because workers maintain a positive income due to employment stability.

2.4 Limitations and Challenges

As hinted at above, the study of the effects of democratic principles in the workplace presents several empirical challenges. First is the difficulty in measuring the individual contribution of a given worker to firm output from period to period an issue discussed in detail above. Furthermore, the well functioning of any workplace relies on the willingness of workers to engage in other activities that may not reflect their own private contribution to firm output, such as providing mentorship to new employees, helping other workers with their own work tasks, or providing important information and feedback to management. Not every human input can be evaluated, which can make it difficult to evaluate how incentive contracts effect individual output and effort across firms.

Second, although the 1/N problem focuses only on how the surplus is divided, there exist many other factors that further weakens the link between an individual's effort and the return to

the individual's effort. That is, there are other factors that will determine both the size of total output and thus an individual's share of the output aside from worker effort including: (1) the firm's production methods and access to capital technologies, (2) its investment strategy, (3) its market position, (4) consumer demand for the service or product, (5) the human capital hired into the firm, (6) the social capital that exists among labor and between labor and management, (7) the firm's access to government subsidies or protections, and (8) the market conditions facing the firm. This makes it difficult to empirically separate successful firms that happen to use group-incentive schemes from firms that are successful because they use group-incentive schemes.

Third, there are many firm-specific factors that could contribute to increases in worker motivation in firms that use group-level incentives that could be independent from the material incentives. For example, the literature suggests that firms that provide group financial incentives also tend to employ progressive management practices that encourage workers to become more involved in both firm-level and shopfloor decision-making and planning (e.g. Freeman and Dube, (2000); Conyon and Freeman (2004)). It has been argued that the combination of group incentives along with participatory management policies may help create a "cooperative culture" that supports mutual monitoring, information sharing, and commitment that all offset free-riding behavior (e.g. Kruse et al (2004)).

There does exist some new and innovative data that hold promise for current and future research, and with time we expect the panorama to improve significantly. Notable data include the Workplace Employment Relations Survey in the UK; NBER Shared Capitalism Data; a number of excellent data sources collected and managed by the National Center for Employee Ownership including sets on Majority and Minority Employee Owned Firms; and a number of employee surveys linked to employee owned firms. Further, the most recent rounds of the

General Social Survey have included a few questions about employee ownership, and the Democracy at Work Institute is currently advancing data collected by the US Federation of Worker Cooperatives that will support questions covering organizational longevity, productivity, individual job quality, and satisfaction. The maintenance of these types of data, in combination with excellent work from academics such as the panel set matching individuals to cooperatives compiled and used in Pencaval, Pistaferri, and Schivardi (2006), the comparative study evaluating the quality of home health care in for-profit, nonprofit, and cooperative firms (Berry 2011), or Erdal's (2001) survey of residents from neighboring towns in Italy, should begin to help answer some longstanding qualitative and quantitative questions.

In our estimation, however, the single biggest hurdle in the study of the effects of workplace democracy from an empirical standpoint remains overcoming the self-selection problem. We see an individual in a participatory firm either because the worker established the democratic firm, or because the worker chose to work in a democratic firm. In either case, the preferences of the workforce in a given firm towards democratic engagement are an omitted variable in any analysis of the effect of workplace democracy. Absent the ability to control for the underlying characteristics of the workforce, it is impossible to differentiate between workplace democracy having a positive effect because it is seen as a benefit to the average worker, or because it changes the composition of the workforce. This issue is critical to understanding whether democratic workplaces can work in general, or must be accompanied by recruitment and retention of a worker with a particular set of preferences. The only solution to this are empirical approaches that control for the effects of individual heterogeneity.

The best way, however, to overcome self-selection issues would be to randomly assign workers to real enterprises that vary only in firm organization. Because no such natural

experiments exist, an alternative could be randomized and controlled lab experiments, especially ones in which the external validity is emphasized by requiring real effort, which can prove a valuable resource, especially in situations where data is otherwise scarce (e.g., Falk and Fehr (2003) or Charness and Kuhn, (2011)). The use of controlled environments can improve our understanding of the behavioral responses to firm organization, and complements the contextually rich case studies traditionally used to study the effects of workplace democracy. Put succinctly, our reading of the literature on workplace democracy echoes Pencavel's (2013) assessment of the literature on worker cooperatives insofar that "repeated claims ... have not been thoroughly examined" and also that the experimental method offers "a propitious direction" of research that complements other forms of empirical work.

4. Conclusions and Future Directions

Despite the relatively long-lived and large literature on the effects of participatory workplaces, we believe this literature is still very much in its infancy, lacking solid answers to some of the most basic and fundamental questions. As we have suggested already, the literature provides only vague and/or suggestive answers for (1) why workplace participation should have any effect at all on firm productivity or worker well-being, (2) whether its effects are universally positive or require a particular set of circumstances, and (3) what types of workers are necessary for workplace democracy to function. The two tentative conclusions that can be drawn from the literature are, first, that it is reasonable to conclude workplace democracy can benefit a firm if the organization of production allows it and the firm either currently employs or can recruit the right workers. Second, financial participation does not appear to work well without participation

in decision-making and vice versa, though this pattern could be the result of self-selection into the firm.

Going forward, we advocate a triangulation method that combines the results of empirical exercises using existing large-scale survey data with case studies, experiments, and new data collection efforts. New data collection efforts are underway in the US and the UK, which will greatly improve panel analyses of participatory workplaces. Experiments provide a unique opportunity to avoid the selection problem entirely by randomly assigning regimes to subjects. Discussed above, there is considerable experimental research that can help indirectly guide theory, but there is limited direct experimental evidence on participation per se. In short, data limitations will likely always present difficulties for making causal inferences about the effect of workplace democracy because bias due to self-selection could be large. Identifying relationships that all point to the same conclusion from a variety of methodologies, at least some of which are not subject to selection issues, is the most convincing way forward.

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