

Forthcoming, *Industrial and Labor Relations Review*

LEARNING ABOUT DEMOCRACY AT WORK:  
CROSS-NATIONAL EVIDENCE ON INDIVIDUAL EMPLOYEE VOICE  
INFLUENCING POLITICAL PARTICIPATION IN CIVIL SOCIETY

John W. Budd  
Center for Human Resources and Labor Studies  
Carlson School of Management  
University of Minnesota  
Minneapolis, MN 55455 USA  
jbudd@umn.edu

J. Ryan Lamare  
School of Labor and Employment Relations  
University of Illinois at Urbana-Champaign  
504 E. Armory Ave.  
Champaign, IL 61820 USA  
rlamare@illinois.edu

Andrew R. Timming  
University of Western Australia Business School  
University of Western Australia  
35 Stirling Hwy  
Perth 6009 Australia  
andrew.timming@uwa.edu.au

November 16, 2017

Abstract

Using European Social Survey data, this paper analyzes the extent to which individual autonomy and participation in decision-making at the workplace is linked empirically to individual political behaviors in civil society. The results are consistent with the hypothesis of “positive outward democratic spillover” from the workplace to the political arena, pointing to the possibility of a learning effect. In contrast with much of the literature that is limited to small samples in a single country, we analyze over 14,000 workers across 27 countries. The results do not appear to be driven by specific countries, which suggests that this is a general phenomenon across a variety of institutional contexts, although some features of a country’s electoral system moderate some of the results.

Acknowledgements: We thank conference and workshop participants at the International Labor and Employment Relations Associations World Congress, the International CRIMT Conference, the International Labour Process Conference, and the University of Minnesota’s Applied Economics labor lunch for their helpful comments. We also thank Dr. David Erdal for useful discussions leading up to the paper.

Scholars have long attempted to assess the extent to which individual participation in political activities *outside* the workplace is shaped by employees' experiences *inside* the workplace, including involvement in labor union activities such as collective bargaining and grievance resolution, as well as non-union, individual decision-making in all workplaces. We focus on the latter. In particular, we assume that if individual-level participatory workplace practices lead to the development of political skills and attitudes, then the workplace may potentially serve as a breeding ground for pro-democratic attitudes and political behaviors (Pateman 1970). Political scientists, work psychologists, and employment relations researchers have used a variety of data and methods to explore this issue over the past several decades.

If a causal link can be established in which voice practices in the workplace positively influence participation in civil society, then this could be seen as a “positive outward democratic spillover.” Understanding this spillover can help inform public policy on employee participation (Budd and Zagelmeyer 2010) and contribute toward understanding the ways in which a society can encourage more active political participation among its citizenry. Indeed, the most optimistic of the existing scholarship implies that this spillover may hold the key to shaping democratic societies (Greenberg 1986). Moreover, evaluations of organizational management practices are typically directed inward, largely focusing on how they affect organizations and work-related outcomes for individuals; a clearer understanding of any “outward” links between workplace practices and political behaviors can help to inform a fuller assessment of the effects of human resources systems beyond the workplace.

Though the notion that workplace empowerment engenders political voice can have strong conceptual and normative appeal, limitations and gaps exist in much of the research into the issue thus far. From a methodological perspective, many studies of workplace and

political participation are narrow in scope and may lack generalizability, particularly outside the U.S. context. The majority of this research faces broad challenges on endogeneity grounds, including problems of selection biases, general omitted variable biases, and reverse causality. Several explorations into the issue are also significantly constrained by their use of very small samples (Jian and Jeffres 2008). Further, from a theoretical perspective, the current state of the field even lacks consensus on whether workplace empowerment is either good or bad for democracy, and some studies have gone so far as to suggest that there may be little to no link between workplace participation and political activity (Adman 2008). Relatedly, the majority of studies have paid little to no attention to measuring the extent to which different national institutional environments drive variations in the potential link between workplace democracy and political participation, with prior studies highlighting the need for more research that considers cross-national variation (Godard 2007). In sum, what might at first be seen as a relatively clear question of the extent to which voice on the job shapes voice in the political sphere has become increasingly clouded as scholars have raised a number of methodological and theoretical concerns.

Our study fills several of these gaps confronting those interested in the link between employee voice in the workplace and political participation in civil society. We draw on the European Social Survey to explore a sample of more than 14,000 workers surveyed across 27 European countries from 2010-2011. We include several measures of both employee voice and political behaviors. The cross-national aspects of the survey and its large size allow us to analyze key questions regarding the extent to which findings of a link between workplace voice and political engagement are driven by particular countries, which would imply that this relationship is conditional upon specific institutional contexts. We uniquely draw from the literature on comparative electoral systems to analyze the extent to which the workplace-political sphere nexus is moderated by different political systems. We also use instrumental

variables to address the endogeneity concerns that challenge prior studies. In so doing, we are able to contribute to both the political science and employment relations literatures simultaneously and in novel ways.

### **The Workplace Determinants of Political Participation in Civil Society: A Review of the Literature**

There has long been a concern with the connections between the workplace and the political arena. In the 1930s, for example, Senator Wagner partly justified the National Labor Relations Act promoting collective bargaining on the basis that “Fascism begins in industry, not in government. The seeds of communism are sown in industry, not in government. But let men know the dignity of freedom and self-expression in their daily lives, and they will never bow to tyranny in any quarter of their national life” (quoted in Keyserling 1960: 216). Much of the theorizing in this field can be traced back historically to the work of Adam Smith and Karl Marx, both of whom accentuated the idea that the organization of work affects fundamental changes in “people’s minds” (Marx 2007: 529). Smith (1827: 327) similarly argued that “the understandings of the greater part of men are necessarily formed by their ordinary employments.” In short, these classic texts point to the assumption that our social and political attitudes are determined in large part by our seminal experiences within the workplace. In the more recent academic literature, two theories have come to dominate the discourse regarding the effect of workplace democracy on individual political activities. In both approaches, the ties between happenings in the workplace and political behaviors are partly predicated on the notion that the two spheres are similar, such that attitudes and skills are transferable from one realm to the other (Almond and Verba 1963).

The first theory comes from Pateman (1970), who argued that employee participation (and autonomy in particular) carries into other contexts, especially with regards to political activities. The spillover effect of workplace participation, in her view, comes from such participation creating greater *feelings* of confidence and effectiveness, which in turn motivate

individuals to participate in political activities outside the employment sphere. This theory shares much in common with sociological approaches to identity formation and the development of the self. For example, Montgomery's (2000) concept of the "role-person merger," applied in this context, would argue that participatory workplaces create a self-concept that is pro-democracy at its core. The second theory, originating in Verba et al. (1995), grounds the spillover effect of workplace participation in the creation of *skills* that can be transferred to the political arena (e.g., letter writing, attending and chairing meetings, or giving speeches). The extent to which the differences between these two approaches are superficial or substantive is still debated in the literature, with some scholars suggesting that both approaches overlap considerably and that Verba et al.'s (1995) emphasis on skills is not dissimilar to Pateman's (1970) emphasis on certain types of employee involvement tools (Adman 2008).

Pateman's work, along with other similar studies conducted between the 1960s and 1990s (e.g., Dahl 1970; McMahon 1994) ushered in an era of nuanced empirical scholarship into workplace spillover effects. One of the first major quantitative inquiries into Pateman's (1970) theory came from Elden (1981), who explored the association between workplace autonomy and political participation at one non-union western U.S. plant. His study found that feelings of political efficacy, personal potency, and social participation were positively associated with job autonomy and beliefs regarding equity in decision-making at the plant. Small-scale tests of Pateman's hypothesis continued throughout the 1980s and into the early 1990s, and drew similar conclusions. For example, Peterson (1992) conducted a survey in Hornell, New York, and, using stepwise regressions, uncovered a link between workplace participation and both voting and protest activities. Burn and Konrad (1987) conducted a similar survey in California, and found that certain political engagement acts (voting, writing to a politician, campaigning, and protest activity) were associated with job autonomy.

Later, scholars suggested that Pateman's theory might be further distilled to consider different types of workplace participation. Sobel (1993) found that political participation is affected by variations in the formality of workplace participation (also see Mason 1982). Greenberg et al. (1996) determined that variations in enterprise-level characteristics moderate the linkages between employment and political participation. Arrighi and Maume (1994) argued that engagement in political activities was not related to routine choices regarding job autonomy, but was instead related to involvement in strategic firm policy decisions. More recently, Jian and Jeffres (2008) found evidence of "boundary spanning" whereby employee involvement and community work participation were associated with political efficacy and involvement.

Although informative, all of these results are limited with regards to their research design choices. Specific concerns that manifest in several of these studies include a lack of generalizability, coupled with very small sample sizes, as well as the potential for reverse causality and response bias, all of which are addressed in the present study. These studies also do little to overcome the limitations of their cross-sectional designs, and are highly U.S.-centric, another set of limitations that are carefully considered in the present study.

The Verba et al. (1995) approach, and its related articles (e.g., Brady et al. 1995), are advantaged by using a nationally representative sample of U.S. citizens, such as the Citizen Participation Study. This approach is also more viable with regard to sample size, with over 2,000 responses. Further, scholars using the Verba et al. (1995) method are more cognizant of the need to incorporate more robust methodologies into their cross-sectional studies (Brady et al. 1995). The Verba et al. (1995) model of learned skills engendering political participation has been refined within the U.S. context to consider differentiation by gender as well as possible selection effects (Schlozman et al. 1999; Schur 2003). Scholars have also attempted to explicitly model workplace experiences as functioning uniquely from Verba et al.'s (1995)

other experiential fora for developing political skills, such as church activities (Ayala 2000). Such studies bear a resemblance to Putnam's (2000) framework on social capital.

Additionally, researchers have uncovered a link between variation in union membership and political engagement—specifically, union members and activists are more likely to vote and participate in political and other non-workplace civic activities than non-union workers (Bok and Dunlop 1970; Bryson et al. 2013, 2014; Delaney et al. 1988; Freeman 2003; Radcliff 2001; Rosenfeld 2010, 2014; Schur 2003; Zullo 2012), and labor unions promote both political office-holding among members and worker-friendly legislative policies (Sojourner 2013).

Although these more recent studies have overcome many of the methodological and theoretical concerns confronting earlier work, limitations and gaps remain. First, a significant concern with most prior research into the issue is that the scope remains generally limited to a single country, often the United States. Second, aside from a few studies (e.g., Brady et al. 1995), most of this scholarship has not addressed problems related to endogeneity, such as selection bias, omitted variable bias, and reverse causality. For example, whether citizens who are already politically active pro-actively seek out the types of jobs that afford them a voice at work should be an important concern. Third, although there is a general consensus among most authors that employee participation is associated with political behaviors, the variables used to measure these forms of engagement are inconsistent and sometimes depend on whether the researcher intends to highlight autonomy, decision-making inputs, learned skills, or some combination of these workplace variables in conjunction with political participation.

Furthermore, only a handful of articles have broached this issue outside the U.S. context. Adman (2008) tested the two models within the Swedish context, using panel data. His research, which overcomes many of the problems inherent to cross-sectional approaches,

challenges the prior literature in that it finds few, if any, associations between workplace participation and political activities once panel conditions are applied. However, his work is limited in that it focuses only on Sweden, and uses a short panel (spanning just two rounds).

Godard (2007) compared the extent to which political activities like voting and donating to political or social causes were associated with variations in workplace characteristics (e.g., empowerment, satisfaction, 'high-performance' work systems) in Canada and England. He found several significant associations, though contrary to prior studies, both job satisfaction and unionization were negatively related to voting. He also uncovered a small amount of institutional difference between Canada and England. Recognizing the need for a more nuanced account of the role institutional differences play in shaping workplace and political engagement, Godard (2007: 784) concludes that researchers need to assess more comprehensively the influence of cross-national variation.

We found three studies analyzing workplace and political engagement across similar contexts to ours. Unlike the present study, which looks at individual employee voice, D'Art and Turner (2007) focus their research specifically on the relationship between union membership and political participation in 15 European countries using the 2002/2003 European Social Survey. Though they find some evidence of differentiation in both political activism and voting behavior depending on institutional context, they treat institutions as a control and focus on country effects only to the extent that they might moderate unionization outcomes. Similarly, Bryson et al. (2014) focus on union membership and voting across 29 countries using four waves of the European Social Survey, but do not consider cross-national variation beyond including country effects as a control.

Perhaps the most comparable study to ours comes from Lopes et al. (2014), who examine the relationship between employee autonomy and political engagement across 15 European countries found in the European Working Conditions Survey. Lopes et al. find that



work method and schedule autonomy, as well as work criteria autonomy, are similarly associated with higher levels of political participation, and account for endogeneity by including instrumental variables. Our study expands upon Lopes et al. in three key respects. First, similar to D'Art and Turner (2007), Lopes et al. (2014) treat institutional differences largely as controls when assessing political participation, whereas we explicitly assess the extent to which cross-national differences affect the findings. Second, a significant distinction between our study and Lopes et al. comes from the choice of dependent variables. To measure political participation, Lopes et al. are limited in that they test only the degree to which a respondent participates in a voluntary/charitable activity or in a political/union activity, which are, by design, considered unidimensional constructs. In contrast, our approach examines ten distinct political activities, which constitute a majority of elements identified by Verba et al. (1995: 279) and others as “major dimensions” of political activity. These measures are more variegated indicators of political activity than those used by Lopes et al. (2014). Third, our study examines the question of whether the relationship between individual workplace participation and individual political behaviors is moderated by features of the electoral system. More specifically, unlike Lopes et al. (2014), we ask whether workplace democracy has a bigger impact on political behaviors depending on the type of democracy in which a worker resides.

In conclusion, the present study makes an original contribution to the extant literature by making advances in the areas of generalizability and causality. First, many earlier studies on the effects of workplace participation on political spillovers use small and non-generalizable samples. Moreover, the lion's share of research in this area is grounded in the U.S. context. It is important to ask whether the relationship between workplace democracy and political behavior found in the literature is generalizable outside of the United States. So we test the hypothesis that individual voice is related to political participation using over

14,000 workers across 27 countries. Second, this multi-country sample allows us to test the strength of this empirical relationship across different national contexts using consistent measures and sampling methods. Third, while Adman (2008) is an exception, there is a need to pay more attention to the robustness of the findings, and we analyze whether the evidence supports a *causal* relationship between workplace and political participation. Fourth, whereas related studies employ a limited set of dependent variables, all of our analyses are conducted on ten dimensions of political participation. Lastly, we incorporate measures of comparative electoral systems to analyze their importance in moderating the workplace-politic relationship.

### **European Social Survey Data and Measures**

We analyze data from the European Social Survey, Round 5 (hereafter ESS5), which is a cross-national survey of individuals aged 15 and over living in private households. The survey was funded by the European Commission and European Science Foundation, with additional support from the national research councils. ESS5 includes extensive information on indicators of social attitudes and behaviors. It was conducted in 2010-2011 across 27 European countries with an overall sample size in excess of 50,000 individuals, of which approximately 20,000 are workers.<sup>1</sup> Based on the “principle of equivalence” (Jowell 1998), ESS5 is nicely suited for cross-national, comparative studies (Jowell et al. 2007). The ESS5 research team employed rigorous and systematic methods to minimize nonresponse bias (Stoop et al. 2010), leading to an overall average response rate of 60.8 percent. The team also followed a translation strategy in order to minimize linguistic and semantic discrepancies (European Social Survey 2010). The sample “was selected by strict random probability

---

<sup>1</sup> The countries represented in ESS5 are Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Lithuania, the Netherlands, Norway, Poland, Portugal, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, and the United Kingdom.

sampling at every stage and the respondents [were] interviewed face-to-face” (European Social Survey 2009: 13).

### *Political Participation Variables*

ESS5 includes nine measures of individual political participation in which respondents were asked: (i) did you vote in last national legislative election, (ii) have you contacted a politician or government official, (iii) worked in a political party or action group, (iv) wore or displayed a campaign badge or sticker, (v) signed a petition, (vi) took part in a lawful public demonstration, (vii) boycotted certain products, as well as (viii) do you feel closer to a particular political party, and (ix) are you a member of a political party. Except for the first and last two items, the timeframe for these questions is within the previous 12 months of the survey. Because Pateman (1970) argues that workplace participation will increase one’s interest in politics, we also analyze a tenth question in which respondents were asked about their interest level in politics.

### *Individual Employee Participation Variable Construction*

There are also four measures of individual employee participation. Respondents were asked the extent to which they can: (i) decide how their own daily work is organized, (ii) influence policy decisions about the organization, (iii) choose or change their own pace of work, and (iv) decide the time they start and finish work. The first three are measured on an 11-point scale, with 0=no influence and 10=complete control. The fourth question is measured on a 4-point scale with 1=not at all true and 4=very true. We primarily want to analyze the impact of overall workplace participation so we use these measures to construct an overall summary score of individual workplace voice. To assess construct validity, we conducted factor analyses, none of which uncovered more than one factor—specifically, a single unidimensional factor was found to have an eigenvalue over 1 using principal factor, iterated principal factor, principal component, and maximum likelihood factor analysis, while

all other possible factors have eigenvalues far below this cutoff. These results support the unidimensionality of these four measures, and so to construct an overall summary score, we converted the 11-point scales to a 4-point scale to match the fourth question, recoded each variable to run from 0 to 3, and then aggregated the total. The overall summary score thus ranges from 0 to 12.

By construction, our focus on these measures of individual workplace participation limits our sample to ESS5 respondents whose main activity was working at the time of the survey. Moreover, because most of the political participation measures are for the previous 12 months, we further restrict the sample to those who are not self-employed and who have worked for their current employer for at least a year. Additional observations that lack complete information on the variables analyzed are also dropped, which leaves an analysis dataset with  $n=14,228$ . Sample statistics for the key dependent and independent variables are presented in Table 1. The average within-country sample size is 527, with a range from 219 for Cyprus to 1,004 for Germany.

[Table 1 about here]

Having survived a methodologically rigorous survey design process and in the light of hindsight gained from four previous rounds of European Social Surveys, the items in Table 1 are widely considered to be robust measures of the constructs they are meant to reflect. Each of the dependent variables throws light on a dimension of democratic political participation. Taken together, they provide a “big picture” overview of democratic engagement, broadly conceived. Concomitantly, each of the measures underlying the key independent variable is an indicator of employee participation in decision-making. On the whole, they reflect the varying degrees of employee involvement in, and influence over (Strauss 2006: 779), decision-making in the workplace. Recall from the literature review that scholarship generally emphasizes two channels through which workplace participation spills over into the

political arena—via the enhancement of skills and through creation of feelings of confidence and agency. Due to the constraints of using secondary data, we do not have direct measures of either the political efficacy or the skills that result from individual voice. So with respect to this particular nuance, our method is more of a reduced form approach.

### *Control Variables*

From the ESS5, we also selected a number of variables to include in the multivariate analyses to account for other influences on political participation. These variables include measures of union membership and workplace presence, measures of collective consultation and influence, a measure of the extent to which voice mechanisms were an important driver of self-selection into the worker's job, as well as age, gender, years of education, urban residence, children in the home, citizenship and ethnic minority status, whether the worker is a supervisor, the type of employer (e.g., government or private), employer size, and the worker's major occupation and major industry. We report sample statistics and full results for these variables in Appendix Table 1. We also include a correlation matrix for the key variables of interest in Appendix Table 2.

Our ability to control for whether voice mechanisms might influence job choice is particularly advantageous in our efforts to mitigate the endogeneity problems present in most similar studies of the drivers of political engagement. In ESS5, respondents were directly asked how important it would be, in choosing a job, that the job enabled the respondent to use his or her own initiative (scaled from 1-5, with 1 being not important at all and 5 being very important). We use this variable as one proxy for the possibility that workers who might value engagement (either at work or in society writ large) might self-select into jobs that promote voice. This assumes that respondents can separate out what they desire in a job and what their current job consists of. Later in this article, we also use instrumental variables to address endogeneity issues.

## **Baseline Results across 27 European Countries**

Table 2 summarizes the baseline results in which three probit models are estimated for each of the key ten dependent variable measures of political participation and engagement. Each cell in Table 2 reports the marginal effect and standard error for the individual voice score (the full results are reported in an online appendix). The marginal effects are calculated as the average of each observation's predicted probability change from a one-unit increase in the individual voice score, based on each observation's actual values for the variables included in that specification. Column 1 starts with probit models without any control variables, and all of the estimates are positive and statistically significant at a 1% level. But these models fail to control for other observable factors that might also shape political participation. In column 2, we report the results for the individual voice score variable when we add all of the control variables described above and listed in Appendix Table 1, except for country effects. As expected, when we control for observable demographic and job characteristics, the coefficient estimates in column 2 are appreciably smaller than in column 1, but all except participating in demonstrations are positive and statistically significant at a 1% level. We explicitly assess the importance of country effects by adding country fixed effects, which account for national-level differences in economic and political systems, culture, and other institutional features, in column 3. Some of the coefficients are smaller than in column 2, but the differences are not as great as when adding the demographic and job controls. In this baseline specification, the predicted effect of individual voice on political participation and engagement is positive and statistically significant at (at least) a 5% level. We also re-estimated the baseline results, omitting managers because they are likely to have a greater say in workplace decision-making. The pattern of results is largely unchanged, which suggests that managers are not driving the

results, and to avoid a loss of more 4,000 observations, managers were subsequently retained in the analyses.

[Table 2 about here]

The coefficients reported in Table 2 indicate the average predicted change of the probability of engaging in each of the political behaviors that is associated with a one-unit increase in the individual voice score. This can be difficult to interpret because the scores range from 0 to 12, and, as shown in Table 1, the average rates of participation vary widely across the different forms of participation. So column 1 in Table 3 reports the implied percentage change in the predicted rate of political activity if the individual voice score goes from its minimum of zero to its maximum of 12 based on the coefficients with full controls (column 3 in Table 2).<sup>2</sup> The thought experiment that underlies this calculation is estimating the predicted effect on political participation that would accompany switching an individual's workplace from no individual voice to the maximum amount. As an example, consider the first row in Table 3 (voted in the last national legislative election). When moving from a workplace with no individual voice to one with maximum voice, the predicted probability of voting increases by 4.3 percentage points. Relative to the predicted probability of voting when voice equals zero (0.772), this means that going from a workplace with no voice to one with maximum voice is predicted to increase voting by 5.6 percent. Because the base rate for voting is high, the effect of a large increase in the individual voice score is small; though to put this in context, door-to-door canvassing has been found to only increase the likelihood of voting by 2.5 percentage points in the United States, and perhaps by less than a percentage

---

<sup>2</sup> This change is calculated by (a) calculating the average predicted probability of the relevant political activity across all individuals using the actual values of each variable except restricting individual voice equal to 0, (b) repeating this calculation for individual voice equal to 12, and (c) calculating the percentage change represented by the percentage increase between the first and second predicted probabilities relative to the first probability as a starting point (that is,  $100 \cdot (b-a)/a$ ).

point in Europe (Bhatti et al., forthcoming). Note that the remaining effects are more sizable, ranging from an 11 percent increase in the probability of feeling closer to a particular party to a 129 percent increase in the probability of working in a political party or action group. As another thought experiment, consider instead increasing the individual voice score from zero to the mean level of voice (5.152). The implied percent changes are reported in column 2, and the effect sizes remain quite sizable (e.g., a 22 percent increase in the probability of signing a petition).

It should also be pointed out, as another thought experiment, that if we reverse-coded the individual voice variables, then all of the voice estimates would be significantly negative. In other words, dictatorial work—a lack of employee participation and voice—is strongly associated with reduced levels of political participation. This finding harkens back to the concerns of Adam Smith, Karl Marx, and others with mind-numbing and alienating work resulting from the division of labor and loss of employee autonomy, while also running parallel to research in social psychology on the spillover effects of the organization of work on parenting behaviors. For example, Greenberger et al. (1994) and Grimm-Thomas and Perry-Jenkins (1994) found that working in jobs that offer little discretion or control is associated with authoritarian parenting at home.

To benchmark the effect size of individual voice, we start by noting that it is fairly well accepted that unions have the strong potential to increase political participation among their members (Radcliff 2001; Rosenfeld 2010, 2014; Sojourner 2013). So we can compare the estimates for individual voice in Table 2 to the influence of union membership that is included, but not reported, as a control variable in columns 2-3. Columns 3 and 4 in Table 3 report the strongest results, which are for whether the respondent is currently a union member. To be comparable to the individual voice effect, column 3 converts the coefficients from the probit models reported in column 3 of Table 2 (so the full set of control variables,



including country effects, are included, too) into the implied percent change in the predicted probability of a particular form of political participation if a worker changes from not being a union member to being a union member. This is intended to be compared to column 1 of Table 3; as an alternative, column 4 presents the percent change resulting from going from 0 to the mean value of union membership, similar to the calculation presented in column 2 for individual voice. The union member variable is also positive and statistically significant in all of the models except interest in politics, whereas the presence of a union in the workplace (not reported in Table 3) is significantly related to political participation for five of the political participation dimensions. So, as one would expect based on previous research, trade unions are related to individual political engagement. But the key result is that in comparing columns 1 and 3 (analogously, columns 2 and 4) in Table 3, the effect of individual voice appears just as strong as the effect of union membership, except in the case of participating in demonstrations.<sup>3</sup>

[Table 3 about here]

Lastly, the previous literature hypothesizes that face-to-face participation and influence over organizational policies are more important for influencing political participation than are forms of individual voice relating to job autonomy and day-to-day work (Arrighi and Maume 1994; Greenberg et al. 1996). To explore this, we used the individual voice questions in the ESS5 to construct a job autonomy measure (using the questions on influencing daily work organization, one's own pace of work, and one's own starting and ending time) distinct from the measure of influence over organizational policy decision. For comparability, these two measures were converted to range from 0 to 3 following a procedure similar to that described above for constructing the overall voice score. In models with full

---

<sup>3</sup> We do not find any consistent pattern of interactions between individual voice and various collective voice mechanisms so the individual and collective voice relationships with political participation appear distinct (results available upon request).

controls as in the last column of Table 2, we find a statistically significant difference between the coefficients on these two measures for only one of the political participation measures (signed a petition). This lack of a significant difference in the effects of these two types of individual voice is similar to Adman's (2008) cross-sectional results. Owing to this lack of a consistent difference and the factor analysis results that support the unidimensionality of the voice measures, we focus on the singular voice score in the remaining analyses.<sup>4</sup>

### **Are the Results Driven by Reverse Causality or Endogeneity?**

Bryson et al. (2013) clearly lay out the multiple causal paths that might explain an empirical relationship between union membership and political behaviors. The same logic applies to the nexus between workplace voice and political participation in civil society. The theorizing in the literature in which individual voice mechanisms create skills and agency that spill over into the political arena implies a straightforward causal relationship from the workplace to civil society. But a reverse causality relationship is also possible, such that workers gain skills and agency through political participation, which then leads to a desire for greater autonomy and voice in the workplace. As a third possibility, workers might vary on their predisposition towards voice and agency, and workers with higher levels of this desire then might seek out workplaces with voice and simultaneously seek out opportunities for political engagement.

Do the results suggest that the estimated relationship is a causal one from the workplace to the political arena? First, our empirical results show a strong association between workplace voice and political participation after accounting for respondents' own assessment of whether they valued voice when choosing a job. Ideally, this can control for a predisposition towards voice. Yet even with this control, there remain alternative causal mechanisms that might indicate that our results do not necessarily reveal a causal relationship

---

<sup>4</sup> The results of these additional specifications are available on request.

from the workplace to the political sphere. It is therefore important to explicitly investigate the possibility of reverse causality or endogeneity. A standard approach in this type of situation is the use of instrumental variables (IV). To do this, we need instruments that are correlated with individual employee voice but not political participation. We use two variables from the European Social Survey dataset: 1) how easy or difficult is it for a worker's immediate boss to know how much effort they put into their work (0=extremely difficult to 10=extremely easy), and 2) how easy or difficult is it for a worker's employer to replace them if they left (0=extremely difficult to 10=extremely easy). We posit that these could be related to employee involvement and voice structures, but it is hard to see why they would affect the extent to which one participates in the political arena. Specifically, first, if effort is difficult to observe, the employee's job is likely complex, and this increased complexity should be associated with greater levels of autonomy and discretion. Second, if employees are easy to replace, then the organization may be more oriented toward a "take it or leave it" approach to their work, which would be associated with reduced autonomy and discretion. The first-stage regression results are reported in an online appendix. An F-test for the instruments in the first-stage regression yields an F-statistic of 85.704, which is well above the conventional threshold of 10 in the weak instruments test, so this evidence does not suggest that we have problems with weak instruments.

Because instrumental variables is a regression-based method, column 1 of Table 4 first reports the results of estimating the baseline models using ordinary least squares (OLS) instead of probit models. Only the estimated coefficient and standard error for the individual voice score are reported, but the models include a full set of controls including country effects as described earlier in the paper. As expected, these OLS estimates are very similar to those reported in Table 2. So next we estimated instrumental variables models using the difficulty of observing work effort and of being replaced as instruments, and column 2 in

Table 4 reports the coefficient and standard error for the individual voice score. For each of the ten measures of political participation, the instrumental variables estimate is larger than the OLS coefficient, which suggests that the OLS estimates are not an artifact of reverse causality or endogeneity. Although the IV estimate is not statistically significant in several cases, this reflects larger standard errors when estimated using instruments, which is typically the case with IV estimation; the lack of statistical significance does not stem from a smaller IV coefficient compared to the relevant OLS estimates.

Column 3 reports the p-values for the Hausman-Wu test of endogeneity, and column 4 reports the p-values from a Sargan overidentification test. For most of the measures of political participation, the Hausman-Wu test p-values are large, which again suggests that endogeneity is not a problem. The only small p-value is for contacted a politician or government official, and in this case the IV estimate is statistically significant. In two of the cases, however, the small p-values for the Sargan tests suggest that our instruments are not valid in those specifications. Turning to the interested in politics measure, the IV estimate of individual voice is positive and statistically significant, indicating that, after accounting for potential endogeneity, individual voice appears to positively influence a worker's level of political interest.

[Table 4 about here]

Our conclusion is that endogeneity issues do not seem to heavily affect our results, which is supported by similar studies of this type (see Lopes et al. 2014). The most conservative interpretation might be that there are some effects of endogeneity on attitudes and behaviors toward parties and politics more generally. But, for many of the staples of democratic participation (voting, contacting government officials, showing support for a candidate, signing a petition), accounting for reverse causality and endogeneity using instrumental variables still generates a positive and significant effect of individual employee

voice consistent with an apparent causal mechanism leading from the workplace to the political arena. It should be noted that, regardless of which way the causal arrow flows, the results still strongly suggest that workplace participation and political participation are mutually reinforcing. This finding is important in and of itself.

### **Are the Results Driven by Particular Countries?**

As noted above, most of the previous literature is limited to single-country studies, and the lion's share involves the United States. This begs the question as to whether a positive association between individual employee voice and political behavior is driven by particular institutional environments of specific countries. A real advantage of the ESS5 data we are using is the breadth of 27 countries represented, countries that include diverse political systems, varieties of capitalism, and other differences such as cultural norms. The broad geopolitical scope of the ESS dataset offers an opportunity to examine the extent to which our findings change as a result of variations in the characteristics embedded within respondents' national political economies.

The baseline results presented in Table 2 measure the average effect across the countries and political systems represented in the data. In this section, we want to answer the question of whether this average result is misleadingly driven by a small number of countries, or is it robust across a broader set. For starters, recall that our baseline results include a full set of fixed country effects. So the baseline results already account for national differences in electoral systems, varieties of capitalism, and cultural contexts. In the next section we will explore interaction effects to see if the strength of the influence of voice on political participation varies in different contexts. In this section we first address whether the relationship between workplace and political participation is apparent across a range of countries. If so, then we believe it is appropriate to infer that this phenomenon is not limited to a specific institutional context.

Unfortunately, while we have a robust sample size across 27 countries, the within-country sample sizes are too small for separate country-by-country statistical models. Alternatively, we allow for the individual voice effect to vary by country within a pooled model. Less than fifteen percent of the country interactions across the ten dependent variables are statistically different from zero. All of the others are insignificant, which is consistent with imprecise estimates due to small within-country sample sizes.

Additionally, we can ask how many countries have an estimated voice effect on political participation that is different from the average effect across the sample. To do this, we add an interaction effect between voice and each country one at a time—that is, for each dependent variable, one model includes only a Great Britain interaction, another includes only a Spain interaction, and so forth. A statistically significant interaction indicates a country-specific voice-political participation relationship that is different from the overall effect size. Of the 270 probit models (10 dependent variables and 27 countries), 12 percent have a statistically significant country interaction while only one specification has a main voice effect that is not positive and statistically significant at a five percent level.<sup>5</sup> Half of the significant interactions involve three of the 10 dependent variables: feeling close to a particular party, contacting a politician, and signing a petition. Twenty of the 27 countries have zero or one significant interactions across the 10 dependent variables; another four have two and the remaining three have four significant interactions.

Of the 32 significant interactions, 20 are positive indicating a voice-political participation relationship that is stronger than average. Among these, we could not discern any clear patterns, such as consistently high or low levels of voice or political participation,

---

<sup>5</sup> This one specification is when taking part in a demonstration is the dependent variable and Spain is the single country interaction. The estimated non-Spain average marginal effect is 0.0016 with a p-value of 0.061, compared to 0.0021 with a p-value of 0.012 in the baseline model without a country interaction.

or a similar country-type. Of the 12 negative interactions, only five are large enough to yield an overall country-specific relationship that is negative and statistically significant. That is, less than two percent of the country-political activity combinations have a statistically significant negative relationship, and these are evenly spread across five countries. Based on this, we are confident inferring that results in Table 2 are not being driven by a small number of countries. While there are small cases where the results are weakened, overall the relationship between workplace and political participation appears to hold across a wide variety of European countries with diverse institutional environments. This is an important result because it shows that the models are generally robust cross-nationally.

### **Does Individual Voice Lead to Greater Political Engagement in Certain Electoral Systems?**

The previous sections suggest that the main effects of individual voice on political engagement are robust to country controls, into which national-level economic, political, and cultural differences are subsumed. But what about the extent to which individual voice matters differently across different contexts? Two typologies of national contexts that could have been used to identify cross-country differences are Hall and Soskice's (2001) varieties of capitalism (VOC) framework and/or Hofstede's (2001) cultural dimensions framework. Given that the behaviors we are analyzing are political in nature (e.g., voting, working for campaigns), we believe that a more suitable framework for addressing national differences in this phenomenon is one that more squarely identifies distinctions in political systems, rather than in economic or cultural systems. With that said, we nevertheless interacted country levels of Hofstede's power distance with individual voice, and also interacted individual voice with two alternative VOC classifications, one based on geography and another based on Schneider and Paunescu's (2012) expansion. We find that the electoral systems measures,

described next, more effectively capture spillover variations than either of these approaches.<sup>6</sup> Given the muted empirical effects and the lack of any clear theoretical basis for preferring either VOC or culture as national political economy typologies, our focus in the remainder of this section is on comparative electoral systems.

To address the question of whether individual workplace voice makes a bigger difference in the likelihood of political participation in certain types of political systems, we need to identify measures that speak to how politics function differently across nations. Such differences emerge from the political science literature on comparative electoral systems. An electoral system determines “the means by which votes are translated into seats in the process of electing politicians into office” (Farrell 2001: 4). Note that, unlike the VOC literature that classifies countries into groupings of different types, the comparative electoral approach uses specific measures of electoral system differences.

Three central features tend to define much of the work differentiating one electoral system from another (Lijphart 1994; Karp and Banducci 2008). The first is a country’s level of disproportionality, which indicates the extent to which the number of votes a party receives in a given election translates into actual seats within the resulting legislature. Perfect proportionality means that each party’s share of legislative seats exactly equals its vote share, and disproportionality measures deviations from this baseline. A country with high disproportionality has a legislative body that is not very representative of the actual votes cast; this is expected to discourage minor parties from engaging with the political system, which reduces political efficacy among a population and may yield declining political participation (Almond and Verba 1963; Norris 2004; Karp and Banducci 2008).

---

<sup>6</sup> None of the ten power distance interactions is statistically significant at the 5% level. When using a geographical VOC classification, only 10% of the interactions are significant at the 5% level, and when using the modified Schneider and Paunescu (2012) classification, only 25% of the interactions are significant at the 5% level, with no clear patterns emerging across or within VOC classifications. These results are available upon request.



Consequently, the effect of individual voice on political engagement might be weaker when disproportionality is higher.

The second method scholars use to differentiate electoral systems is the level of multipartism, or the number of political parties within a country (Lijphart 1994; Karp and Banducci 2008). As the number of parties in a country grows, several effects can occur. The first is that greater numbers of parties can better mobilize individuals into political activities like voting, which would suggest positive effects on political activities emanating from multipartism (Ladner and Miller 1997; Karp and Banducci 2008). Additionally, as the number of parties within an electoral system grows, each party should, in theory, differentiate itself from the others and provide a wider variety of ideological choices for the electorate, which may boost engagement and political activities among the population (Katz 1980). Conversely, in countries where political elites determine governance structures, multipartism may hurt political efficacy as coalition governments become more likely (Karp and Banducci 2008). So spillovers from the workplace into the political arena are likely to be stronger when there are more parties.

A third dimension for comparing democratic electoral systems is the age of a country's democracy, which is typically measured as whether a political system pre-dates the break-up of the Soviet Union (Karp and Banducci 2007), and we also include a measure identifying countries that were, until the latter portion of the twentieth century, governed by fascist regimes (i.e., Spain, Portugal, and Greece). Scholars have found evidence that the institutionalization of parties is often weaker in new democracies, which may yield lower engagement and concerns over trust and legitimacy by the electorate (Letki 2004; Abbott and Sapsford 2006). There is reason, therefore, to expect that differences in spillover effects will emerge not only as a result of disproportionality and multipartism, but also in response to

whether a country is an old or new democracy. We explicitly posit that voice effects will be more muted in new democracies than in old democracies.

We use standard measures to create variables for each country's disproportionality, multipartism, and old or new democracy status. Our measure of disproportionality comes from Gallagher's (1991) disproportionality index. This index records the difference between vote share and number of seats for each party, sums the squares of the differences divided by two, and takes the square root of the resulting value. Though many measures have been proposed (Karpov 2008), the Gallagher index is widely used and generally viewed as the most useful measure of disproportionality (Lijphart 1994). For each country, we take the disproportionality index result for the closest available year preceding our survey data (i.e., prior to 2011). Our measure of multipartism consists of the effective number of parties at the electoral level in a given country over the same time period as above, using a formula originally derived by Laakso and Taagepera (1979).<sup>7</sup> Lastly, we group countries into old and new democracies, where new democracies in the European context correlate either with former fascist or former Soviet Bloc states that embraced democracy in the last quarter of the 20<sup>th</sup> century. This is again a common approach to identifying old versus new democracies within the political science literature, particularly with regard to former Soviet countries (Mainwaring 1999; Karp and Banducci 2007).

We find that two of the three measures of comparative electoral systems significantly moderate voice effects across several of the participation measures (see Table 5). Although we find no moderation by disproportionality, the results indicate that voice effects on political participation generally become more muted as the number of parties within an electoral

---

<sup>7</sup> The disproportionality index and effective number of parties data for each country is available at the following website: [http://www.tcd.ie/Political\\_Science/staff/michael\\_gallagher/ElSystems/Docts/ElectionIndices.pdf](http://www.tcd.ie/Political_Science/staff/michael_gallagher/ElSystems/Docts/ElectionIndices.pdf) (last accessed June 15, 2017).

system grows. This holds true with regard to actions like contacting politicians, wearing badges, signing petitions, and boycotting certain products. Table 5 provides the coefficients and standard errors for the interaction terms, which allow us to determine whether the interactions as a whole are statistically significant, while Figure 1 graphs the marginal effects for the statistically significant interactions found within Table 5 as voice moves from 0 to 12 across three- and seven-party systems. These marginal effects correspond to about one standard deviation above and below the mean number of parties in our sample. Where fewer parties are present within a country, high levels of workplace voice facilitate greater likelihoods of each of these behaviors than do lower levels of voice. However, as more parties are present within a country's political system, the different effects of voice on participation diminish. The only exception to this trend comes from considering interest in politics, wherein larger numbers of parties, combined with higher levels of voice, correspond with increased political interest. The rationale underlying this interaction is unclear and deserves further scrutiny. Perhaps the political complexity associated with a greater number of parties creates more conflict and gridlock, thus resulting in diminished perceptions of the efficacy of government, or perhaps citizens feel their interests are adequately represented with more numerous, focused parties compared to situations with fewer parties.<sup>8</sup>

[Table 5 about here]

We also find that four of our results are moderated according to whether the country is considered an old or new democracy. Figure 2 graphs the marginal effects for the statistically significant interactions found within Table 5 across old and new democracies as voice moves from 0 to 12. We find mixed evidence that the effects of voice on a number of political activities are stronger within old democracies and are weaker in new democracies.

---

<sup>8</sup> For space considerations, this result is not shown graphically within Figure 1 but is available upon request.

Acts such as wearing badges, signing petitions, and being closer to a particular party are more likely to occur when employees receive higher levels of voice and also belong to old democracies as opposed to new (at least post-Soviet) democracies. Yet working in a political party is more positively affected by higher workplace voice levels within both post-Soviet and post-fascist new democracies, as is signing petitions if the new democracy was formed within a previously fascist country. The rationale underlying these interactions is unclear. One possibility is that new democracies lack sufficiently robust institutions, norms, and agentic feelings that inspire and facilitate individual participation. Further research on these findings is indicated.

[Figures 1 and 2 about here]

### **Conclusions**

For decades, scholars and others have argued that the workplace, when structured appropriately, can serve as a training ground for democratic attitudes and behaviors by fostering a sense of agency as well as transferable skills. In other words, there are reasons to expect that what happens at work, does not stay at work. This can be seen in a positive frame—greater workplace involvement is likely to be associated with greater political engagement—or in a negative frame—dictatorial and authoritarian workplace practices are likely to be related to reduced political participation in the democratic arena. But while there has been empirical research testing these relationships, there are still several gaps in this literature.

Using a sample of over 14,000 European workers, we find that employees with greater levels of individual autonomy and voice at work are indeed significantly more likely to engage in a broad array of pro-democratic behaviors. This relationship appears just as strong as the commonly accepted relationship between trade unions and political participation, and appears to be a distinct relationship apart from this collective voice sphere.

Moreover, we find these results in arguably the broadest and most robust analyses of diverse countries to date. We further show that the results do not appear to be driven by a small number of specific countries, and are moderated by some aspects of a country's electoral system, namely the number of parties within the system and whether the country represents an old or a new democracy. As such, the relationship between workplace democracy and political democracy is one that both holds across diverse countries, and hence across diverse institutional environments, but is also shaped in part by certain institutional considerations. This is a unique result that moves the literature on the political spillovers of organizational democracy forward in an important way.

Our analyses recognize that democratic engagement in civil society might precede workplace democracy both temporally and causally. We account for respondent self-identification that voice is important in job selection, and we also use instrumental variables estimation to rigorously investigate the possibility of reverse causality and endogeneity. The results suggest that endogeneity is not a major issue, implying the existence of a "positive outward democratic spillover." This, in turn, implies that the importance of organizational practices extends beyond the workplace, and public policy interventions might be warranted to prevent dictatorial work regimes that dampen political engagement. And even if there are sources of endogeneity that we failed to account for, our findings are still important. If causality runs from the political arena to the workplace, then a participatory workplace should be seen as an important outlet for individuals valuing political involvement. In particular, workplace participation can prevent individuals from getting frustrated or losing their deliberative skills, thus reducing the likelihood that they withdraw from the political arena. So regardless of which way the causal arrow points, the workplace-political engagement nexus is an important one that deserves greater attention.

While the present study makes novel empirical and methodological contributions to the extant literature, it also reveals the need for a more comprehensive development of the theoretical linkages between the fields of political science and work and employment relations. Most previous attempts to theoretically link these two fields of study have met at the crossroads of political economy (e.g., Hall and Soskice 2001). However, it seems clear from the present study that the organization of work has potentially serious non-economic implications beyond the workplace. The results of this research should provide value for scholars seeking to advance the understanding of the inter-relationship between organizations and society. More specifically, the present study can serve as a stepping stone towards an integrated theory on how the organization of work can structure the behavior of individuals in civil society. We encourage theoretical development along these lines.

There are also empirical and methodological directions for future research stemming from this paper. Most obviously, while we have responded to Godard's (2007) call for more analyses of cross-national variations, our study is limited to greater Europe. Whether or not these results would hold in non-Western societies, especially ones that are characterized by authoritarian governments, is a question that deserves further scholarly attention. We would like to end this paper with a call for even more methodological pluralism than we have shown here. The key question at the heart of the present study and its predecessors is whether or not one can "learn" about democracy through the workplace and then carry those skills and attitudes outward into the political spaces of society. Further insights into causal directions and specific channels could be obtained with complementary qualitative fieldwork. Thus, in spite of all the research on this topic, there is still more to learn.

## References

- Abbott, Pamela, and Roger Sapsford. 2006. "Trust, Confidence and Social Environment in Post-Communist Societies." *Communist and Post-Communist Studies* 39(1): 59-71.
- Adman, Per. 2008. "Does Workplace Experience Enhance Political Participation? A Critical Test of a Venerable Hypothesis." *Political Behavior* 30(1): 115-138.
- Almond, Gabriel, and Sidney Verba. 1963. *The Civic Culture: Political Attitudes and Democracy in Five Nations*. Princeton: Princeton University Press.
- Arrighi, Barbara A., and David J. Maume. 1994. "Workplace Control and Political Participation." *Sociological Forces* 27(2): 147-159.
- Ayala, Louis J. 2000. "Trained for Democracy: The Differing Effects of Voluntary and Involuntary Organizations on Political Participation." *Political Research Quarterly* 53(1): 99-115.
- Bhatti, Yosef, Jens Olav Dahlgaard, Jonas Hedegaard Hansen, and Kasper M. Hansen. forthcoming. "Is Door-to-Door Canvassing Effective in Europe? Evidence from a Meta-study across Six European Countries." *British Journal of Political Science*.
- Bok, Derek C., and John T. Dunlop. 1970. *Labor and the American Community*. New York: Simon and Schuster.
- Brady, Henry E., Sidney Verba, and Kay Lehman Schlozman. 1995. "Beyond SES: A Resource Model of Political Participation." *American Political Science Review* 89(2): 271-294.
- Bryson, Alex, Rafael Gomez, Tobias Kretschmer, and Paul Willman. 2013. "Workplace Voice and Civic Engagement: What Theory and Data Tell Us About Unions and their Relationship to the Democratic Process." *Osgoode Hall Law Journal* 50(4): 965-998.
- Bryson, Alex, Rafael Gomez, Tobias Kretschmer, and Paul Willman. 2014. "What Accounts for the Union Member Advantage in Voter Turnout? Evidence from the European Union, 2002-2008." *Relations industrielles/Industrial Relations* 69(4): 732-765.
- Budd, John W., and Stefan Zagelmeyer. 2010. "Public Policy and Employee Participation." In *The Oxford Handbook of Participation in Organizations* (edited by A. Wilkinson, P.J. Gollan, M. Marchington and D. Lewin). Oxford: Oxford University Press.
- Burn, Shawn M., and Alison M. Konrad. 1987. "Political Participation: A Matter of Community, Stress, Job Autonomy, and Contact by Political Organizations." *Political Psychology* 8(1): 125-138.
- Dahl, Robert A. 1970. *After the Revolution? Authority in a Good Society*. New Haven: Yale University Press.

- D'Art, Daryl, and Tom Turner. 2007. "Trade Unions and Political Participation in the European Union: Still Providing a Democratic Dividend?" *British Journal of Industrial Relations* 45(1): 103-126.
- Delaney, John, Marick F. Masters, and Susan Schowchau. 1988. "Unionism and Voter Turnout." *Journal of Labor Research* 9(3): 221-236.
- Elden, J. Maxwell. 1981. "Political Efficacy at Work: The Connection between More Autonomous Forms of Workplace Organization and a More Participatory Politics." *American Political Science Review* 75(1): 43-58.
- European Social Survey. 2009. *Round 5 Specification for Participating Countries*. London: Centre for Comparative Social Surveys, City University London.
- European Social Survey. 2010. *ESS Round 5 Translation Guidelines*. Mannheim: European Social Survey GESIS.
- Farrell, David M. 2001. *Electoral Systems: A Comparative Introduction*. Basingstoke: Palgrave.
- Freeman, Richard. 2003. "What Do Unions Do...to Voting?" *National Bureau of Economic Research, Working Paper* 9992.
- Gallagher, Michael. 1991. "Proportionality, Disproportionality and Electoral Systems." *Electoral Studies* 10(1): 33-51.
- Godard, John. 2007. "Is Good Work Good for Democracy? Work, Change at Work and Political Participation in Canada and England." *British Journal of Industrial Relations* 45(4): 760-790.
- Greenberg, Edward S. 1986. *Workplace Democracy: The Political Effects of Participation*. Ithaca: Cornell University Press.
- Greenberg, Edward S., Leon Grunberg, and Kelley Daniel. 1996. "Industrial Work and Political Participation: Beyond 'Simple Spillover.'" *Political Research Quarterly* 49(2): 287-304.
- Greenberger, Ellen; O'Neil, Robin, and Stacy K. Nagel. 1994. "Linking Workplace and Homeplace: Relations between the Nature of Adults' Work and their Parenting Behaviors." *Developmental Psychology* 30(6): 990-1002.
- Grimm-Thomas, Karen, and Maureen Perry-Jenkins. 1994. "All in a Day's Work: Job Experiences, Self-Esteem, and Fathering in Working-Class Families." *Family Relations* 43(2): 174-181.
- Hall, Peter A., and David Soskice, eds. 2001. *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford: Oxford University Press.
- Hofstede, Geert. 2001. *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations Across Nations*, 2nd edition. Thousand Oaks CA: Sage.



- Jian, Gouwei, and Leo Jeffres. 2008. "Spanning the Boundaries of Work: Workplace Participation, Political Efficacy, and Political Involvement." *Communication Studies* 59(1): 35-50.
- Jowell, Roger. 1998. "How Comparative is Comparative Research?" *American Behavioral Scientist*, 42(2): 168-177.
- Jowell, Roger, Caroline Roberts, Rory Fitzgerald, and Gillian Eva, eds. 2007. *Measuring Attitudes Cross-Nationally: Lessons from the European Social Survey*. London: Sage.
- Karp, Jeffrey A. and Susan A. Banducci. 2007. "Party Mobilization and Political Participation in New and Old Democracies." *Party Politics* 13(2): 217-234.
- Karp, Jeffrey A. and Susan A. Banducci. 2008. "Political Efficacy and Participation in Twenty Seven Democracies: How Electoral Systems Shape Political Behavior." *British Journal of Political Science* 38(2): 311-334.
- Karpov, Alexander. 2008. "Mathematical Modeling of Voting Systems and Elections: Theory and Applications." *Mathematical and Computer Modelling* 48(9-10): 1421-1438.
- Katz, Richard S. 1980. *A Theory of Parties and Electoral Systems*. Baltimore: Johns Hopkins University Press.
- Keyserling, Leon H. (1960) "The Wagner Act: Its Origin and Current Significance." *George Washington Law Review* 29(1): 199-233.
- Laakso, Markku, and Rein Taagepera. 1979. "'Effective' Number of Parties: A Measure with Application to Western Europe." *Comparative Political Studies* 12(1): 3-27.
- Letki, Natalia. 2004. "Socialization for Participation? Trust, Membership, and Democratization in East-Central Europe." *Political Research Quarterly* 57(4): 665-679.
- Lijphart, Arend. 1994. *Electoral Systems and Party Systems: A Study of Twenty-Seven Democracies, 1945-1990*. Oxford: Oxford University Press.
- Lopes, Helena, Sergio Lagoa, and Teresa Calapez. 2014. "Declining Autonomy at Work in the EU and its Effect on Civic Behavior." *Economic and Industrial Democracy* 35(2): 341-366.
- Mainwaring, Scott. 1999. *Rethinking Party Systems in the Third Wave of Democratization: The Case of Brazil*. Stanford, CA: Stanford University Press.
- Marx, Karl. 2007. *Capital: A Critique of Political Economy, Volume 1 – Part 1*. New York: Cosimo Classics.
- Mason, Ronald M. 1982. *Participatory and Workplace Democracy: A Theoretical Development in Critique of Liberalism*. Carbondale, IL: Southern Illinois University Press.

- McMahon, Christopher. 1994. *Authority and Democracy: A General Theory of Government and Management*. Princeton, NJ: Princeton University Press.
- Montgomery, James D. 2000. "The Self as a Fuzzy Set of Roles, Role Theory as a Fuzzy System." *Sociological Methodology* 30(1): 261-314.
- Norris, Pippa. 2004. *Electoral Engineering: Voting Rules and Political Behavior*. Cambridge: Cambridge University Press.
- Pateman, Carole. 1970. *Participation and Democratic Theory*. Cambridge, UK: Cambridge University Press.
- Peterson, Steven A. 1992. "Workplace Politicization and its Political Spillovers: A Research Note." *Economic and Industrial Democracy* 13(4): 511-524.
- Putnam, Robert D. 2000. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster.
- Radcliff, Benjamin. 2001. "Organized Labor and Electoral Participation in American National Elections." *Journal of Labor Research* 22: 405-414.
- Rosenfeld, Jake. 2010. "Economic Determinants of Voting in an Era of Union Decline." *Social Science Quarterly* 91(2): 379-395.
- Rosenfeld, Jake. 2014. *What Unions No Longer Do*. Cambridge, MA: Harvard University Press.
- Schlozman, Kay Lehman, Nancy Burns, and Sidney Verba. 1999. "What Happened at Work Today? A Multistage Model of Gender, Employment, and Political Participation." *The Journal of Politics* 61(1): 29-53.
- Schneider, Martin R., and Mihai Paunescu. 2012. "Changing Varieties of Capitalism and Revealed Comparative Advantages from 1990 to 2005: A Test of the Hall and Soskice Claims." *Socio-Economic Review* 10(4): 731-753.
- Schur, Lisa. 2003. "Employment and the Creation of an Active Citizenry." *British Journal of Industrial Relations* 41(4): 751-771.
- Smith, Adam. 1827. *An Inquiry into the Nature and Causes of the Wealth of Nations*. Edinburgh: Edinburgh University Press.
- Sobel, Richard. 1993. "From Occupational Involvement to Political Participation: An Exploratory Analysis." *Political Behavior* 15(4): 339-353.
- Sojourner, Aaron. 2013. "Do Unions Promote Members' Electoral Office Holding? Evidence from Correlates of State Legislatures' Occupational Shares." *Industrial and Labor Relations Review* 66(2): 467-486.

- Stoop, Ineke, Jaak Billiet, Achim Koch, and Rory Fitzgerald. 2010. *Improving Survey Response: Lessons Learned from the European Social Survey*. Chichester: Wiley.
- Strauss, George. 2006. "Worker Participation—Some Under-Considered Issues," *Industrial Relations*, 45(4): 778-803.
- Verba, Sidney, Kay Lehman Schlozman, and Henry E. Brady. 1995. *Voice and Equality: Civic Voluntarism in American Politics*. Cambridge, MA: Harvard University Press.
- Zullo, Roland. "Organized Labor's Civic Niche." *Nonprofit and Voluntary Sector Quarterly* 42(4): 781-802.

Table 1: Key Variable Definitions and Descriptive Statistics

Variable (ESS question number)	Scale	Mean	Std Dev
<u>Dependent Variables (measures of political participation)</u>			
Voted in last national legislative election (B11)	0=no, 1=yes	0.787	0.409
Contacted politician or government official (B13)	0=no, 1=yes within last 12 months	0.156	0.363
Worked in a political party or action group (B14)	0=no, 1=yes within last 12 months	0.041	0.199
Wore or displayed a campaign badge/sticker (B16)	0=no, 1=yes within last 12 months	0.080	0.272
Signed a petition (B17)	0=no, 1=yes within last 12 months	0.241	0.427
Took part in a lawful public demonstration (B18)	0=no, 1=yes within last 12 months yes	0.071	0.257
Boycotted certain products (B19)	0=no, 1=yes within last 12 months	0.170	0.375
Feel closer to a particular political party (B20a)	0=no, 1=yes	0.476	0.499
A member of a political party (B21)	0=no, 1=yes	0.044	0.206
Very or quite interested in politics (B1)	0=no, 1=yes	0.476	0.499
<u>Key Measures of Individual Employee Voice</u>			
Decide how own daily work is organized (F27)	0=no influence to 10=complete control	6.215	3.265
Influence policy decisions about organization (F28)	0=no influence to 10=complete control	3.862	3.226
Choose or change own pace of work (F28a)	0=no influence to 10=complete control	5.715	3.348
Decide the time they start and finish work (G31)	1=not at all true; 2=a little true; 3=quite true; 4=very true	1.809	1.042
Individual voice score (sum of four questions above, with 11-point scales first converted to 4)	0=min to 12=max	5.152	3.221

Source: European Social Survey, Round 5 (2010/11), sample of individuals whose main activity in the last 7 days was working, and worked for employer  $\geq 1$  year [n=14,228].

*Table 2: Probit Results of the  
Effect of Individual Workplace Voice on Political Participation*

	Individual Voice Score Results <sup>a</sup>		
	No Controls	Controls Except Country Effects	Full Controls with Country Effects
	(1)	(2)	(3)
Voted in last national legislative election	0.016** (0.001)	0.005** (0.001)	0.004** (0.001)
Contacted politician or government official	0.018** (0.001)	0.008** (0.001)	0.008** (0.001)
Worked in a political party or action group	0.005** (0.001)	0.003** (0.001)	0.003** (0.001)
Wore or displayed a campaign badge /sticker	0.010** (0.001)	0.006** (0.001)	0.003** (0.001)
Signed a petition	0.021** (0.001)	0.012** (0.001)	0.007** (0.001)
Took part in a lawful public demonstration	0.004** (0.001)	0.001 (0.001)	0.002* (0.001)
Boycotted certain products	0.018** (0.001)	0.010** (0.001)	0.004** (0.001)
Feel closer to a particular political party	0.023** (0.001)	0.011** (0.002)	0.004* (0.002)
Member of a political party	0.005** (0.001)	0.002** (0.001)	0.002** (0.001)
Very or quite interested in politics	0.032** (0.001)	0.012** (0.002)	0.006** (0.002)

Source: European Social Survey, Round 5 (2010/11), sample of individuals whose main activity in the last 7 days was working, and worked for employer  $\geq 1$  year [n=14,228]

Notes: <sup>a</sup> Columns 1-3 report the marginal effect and standard error for the individual voice score from a probit model for each dependent variable. The control variables are those listed in Appendix Table 1 plus country, industry, and occupational effects. Models are estimated using ESS5 design weights.

Statistically significant at the \* 0.05 or \*\* 0.01 level.

*Table 3: Comparing the Effect of Individual and Collective Workplace Voice on Political Participation<sup>a</sup>*

Dependent Variable	Percent Change in DV Predicted Probability in Response to Changes in the Individual Voice Score		Percent Change in DV Predicted Probability in Response to Changes in Individual Union Membership	
	0 to 12 (1)	0 to mean (2)	0 to 1 (3)	0 to mean (4)
Voted in last national legislative election	5.6%	2.5%	4.7%	3.2%
Contacted politician or government official	84.2%	40.0%	22.2%	14.3%
Worked in a political party or action group	129.6%	59.0%	78.8%	47.5%
Wore or displayed a campaign badge/sticker	70.0%	34.2%	47.0%	29.3%
Signed a petition	44.3%	22.4%	31.3%	19.8%
Took part in a lawful public demonstration	43.3%	22.9%	85.7%	50.7%
Boycotted certain products	37.5%	19.3%	14.4%	9.6%
Feel closer to a particular political party	11.0%	6.1%	6.2%	4.2%
Member of a political party	84.9%	41.9%	62.2%	39.5%
Very or quite interested in politics	17.0%	9.1%	3.6%	2.3%

Source: European Social Survey, Round 5 (2010/11), sample of individuals whose main activity in the last 7 days was working, and worked for employer  $\geq$  1 year [n=14,228].

Notes: <sup>a</sup> Columns 1 and 2 are calculated from the marginal effects reported in column 3 of Table 2. Columns 3 and 4 are calculated from unreported marginal effects for the individual union membership variable that is included in the probit models that yield the results reported in column 3 of Table 2.

*Table 4: Instrumental Variables Estimates of the Effect of Individual Workplace Voice on Political Participation<sup>a</sup>*

Dependent Variable	OLS (1)	IV (2)	Hausman- Wu test p-value (3)	Sargan overid test p-value (4)
Voted in last national legislative election	0.004* (0.001)	0.020 (0.011)	0.706	0.209
Contacted politician or government official	0.007* (0.001)	0.022* (0.010)	0.044	0.243
Worked in a political party or action group	0.003* (0.001)	0.004 (0.006)	0.662	0.709
Wore or displayed a campaign badge/sticker	0.003* (0.001)	0.014 (0.008)	0.376	0.575
Signed a petition	0.006* (0.001)	0.017 (0.012)	0.570	0.224
Took part in a lawful public demonstration	0.002* (0.001)	0.011 (0.007)	0.293	0.169
Boycotted certain products	0.003* (0.001)	0.017 (0.010)	0.306	0.001
Feel closer to a particular political party	0.004* (0.002)	0.015 (0.014)	0.371	0.002
Member of a political party	0.002* (0.001)	0.002 (0.006)	0.677	0.148
Very or quite interested in politics	0.006* (0.002)	0.030* (0.013)	0.257	0.168

Source: European Social Survey, Round 5 (2010/11), sample of individuals whose main activity in the last 7 days was working, and worked for employer  $\geq$  1 year (n=14,228).

Notes: <sup>a</sup> Column 1 reports the OLS coefficient and standard error for the individual voice score. Column 2 reports the IV estimates using difficulty of observing work effort and of being replaced as instruments. The control variables are those listed in Appendix Table 1 plus country, industry, and occupational effects. Models are estimated using ESS5 design weights. Columns 3 and 4 report the p-values for the Hausman-Wu test of endogeneity and the Sargan overidentification test. These are calculated from unweighted instrumental variables regressions using the same specifications.

Statistically significant at the \* 0.05 level.

Table 5: Moderating Effects of Comparative Electoral Systems Measure on Voice Outcomes<sup>a</sup>

	Voted	Contacted Politician	Worked in Party	Wore Badge	Signed Petition	Public Demonst.	Boycotted Products	Close to Party	Member of a Party	Interested in Politics
Voice Index	0.019 (0.021)	0.079** (0.021)	-0.029 (0.033)	0.122** (0.027)	0.086** (0.020)	0.052 <sup>+</sup> (0.031)	0.075** (0.019)	0.029 (0.018)	0.039 (0.029)	-0.011 (0.019)
Disproportionality	-0.022** (0.007)	0.007 (0.008)	-0.013 (0.012)	0.006 (0.010)	0.027** (0.007)	0.042** (0.011)	0.009 (0.008)	-0.025** (0.006)	-0.005 (0.012)	-0.028** (0.007)
Number of Parties	-0.012 (0.017)	0.042* (0.019)	-0.030 (0.034)	0.046* (0.023)	0.096** (0.017)	0.070* (0.028)	0.010 (0.018)	-0.028 <sup>+</sup> (0.016)	0.030 (0.028)	-0.068** (0.017)
New Dem. (Post-Fascist)	0.044 (0.091)	-0.095 (0.112)	-0.029 (0.157)	0.053 (0.127)	-0.339** (0.097)	0.554** (0.114)	-0.397** (0.103)	-0.223** (0.084)	-0.111 (0.163)	-0.408** (0.085)
New Dem. (Post-Soviet)	-0.265** (0.060)	-0.031 (0.070)	-0.081 (0.107)	-0.143 (0.089)	-0.334** (0.062)	-0.308** (0.095)	-0.678** (0.071)	-0.093 <sup>+</sup> (0.053)	-0.002 (0.098)	-0.223** (0.055)
Voice * Disproportionality	-0.001 (0.001)	-0.001 (0.001)	0.001 (0.002)	-0.001 (0.002)	0.000 (0.001)	0.001 (0.001)	-0.001 (0.001)	0.000 (0.001)	-0.003 (0.002)	0.001 (0.001)
Voice * Number of Parties	-0.001 (0.003)	-0.008* (0.003)	0.007 (0.005)	-0.014** (0.004)	-0.009** (0.003)	-0.007 (0.004)	-0.009** (0.003)	-0.001 (0.003)	-0.002 (0.004)	0.006* (0.002)
Voice * New Dem. (Post-Fascist)	0.014 (0.017)	0.009 (0.018)	0.073** (0.023)	-0.009 (0.020)	0.037* (0.016)	0.009 (0.019)	-0.002 (0.018)	0.000 (0.015)	0.020 (0.025)	-0.007 (0.015)
Voice * New Dem. (Post-Soviet)	0.007 (0.010)	-0.004 (0.011)	0.044** (0.016)	-0.025 <sup>+</sup> (0.014)	-0.030** (0.010)	-0.003 (0.015)	0.001 (0.011)	-0.015 <sup>+</sup> (0.009)	0.019 (0.015)	-0.010 (0.009)
Full Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes



Source: European Social Survey, Round 5 (2010/11), sample of individuals whose main activity in the last 7 days was working, and worked for employer  $\geq 1$  year (n=14,228).

Notes: <sup>a</sup> Each column reports unstandardized coefficients and standard errors from probit models for each dependent variable. The control variables are those listed in Appendix Table 1 plus country, industry, and occupational effects. Models are estimated using ESS5 design weights. Statistically significant at the <sup>+</sup>.10 \* 0.05 or \*\* 0.01 level.

Figure 1: Statistically Significant Moderating Effects of Multipartism on Voice Outcomes

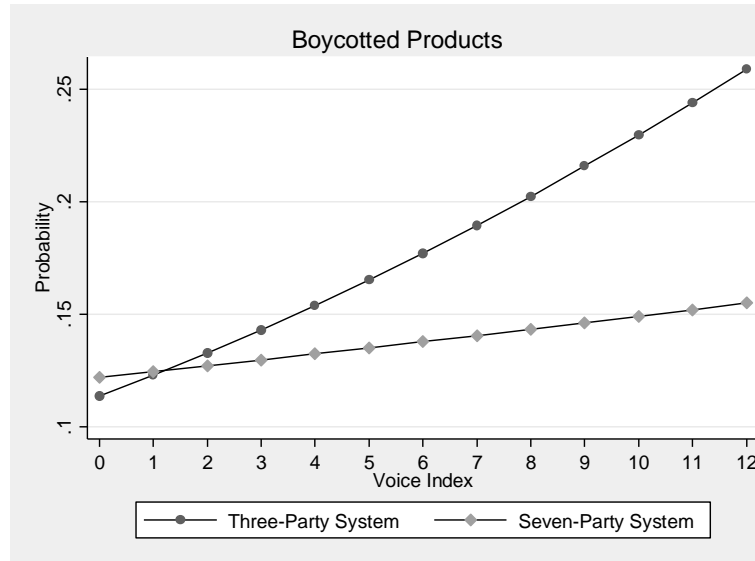
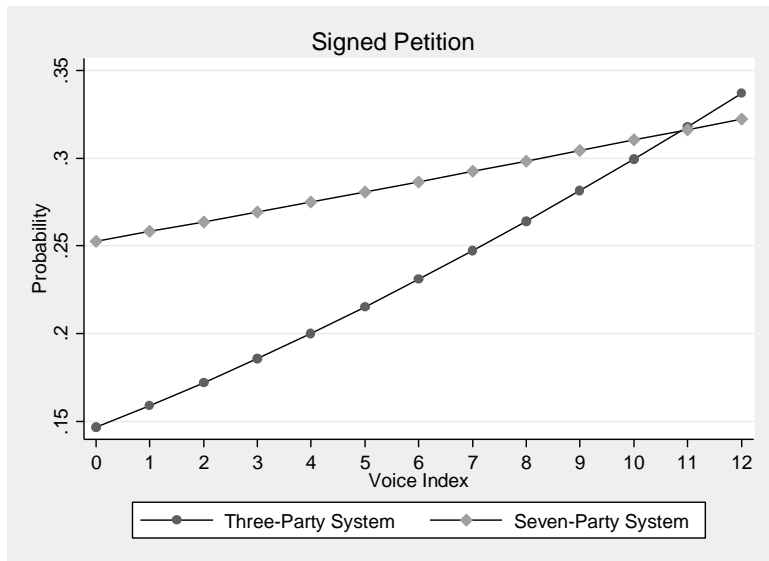
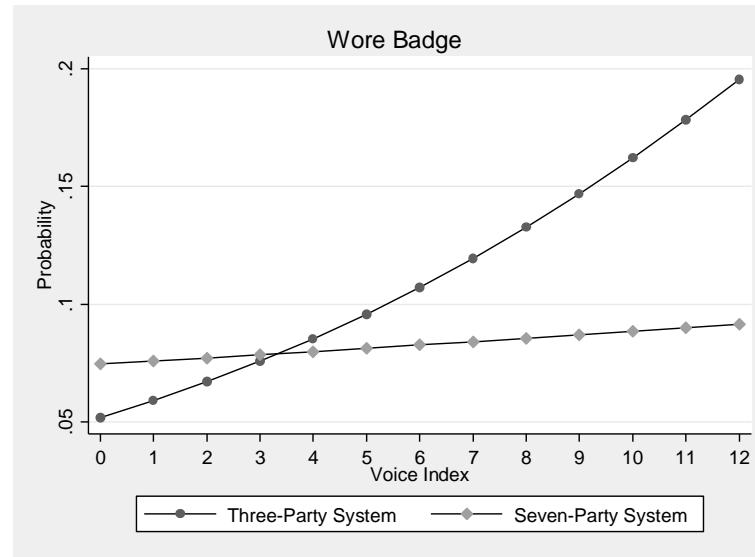
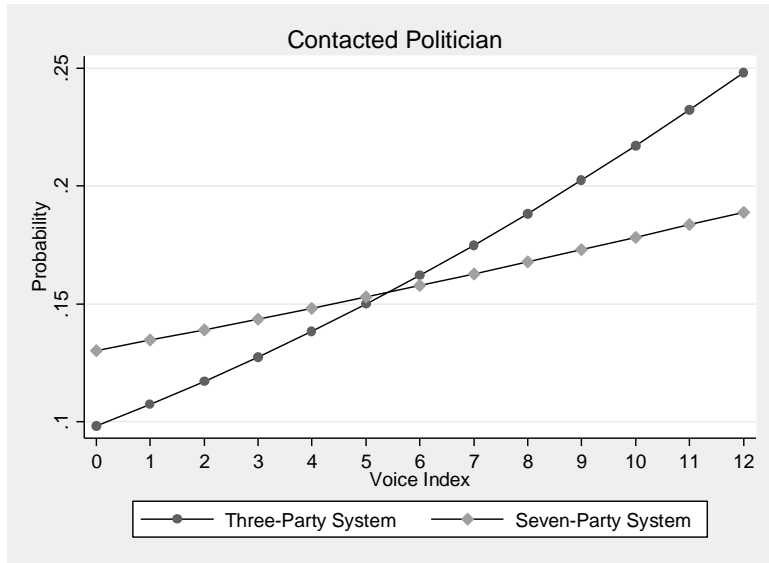
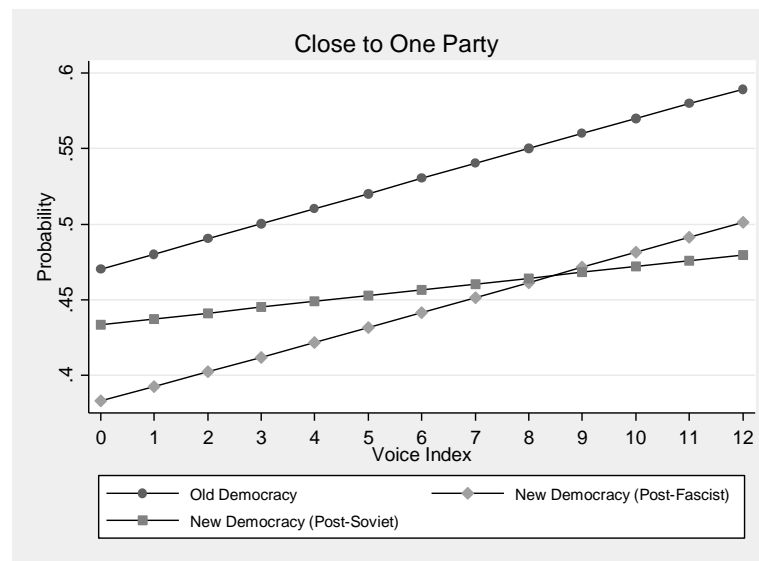
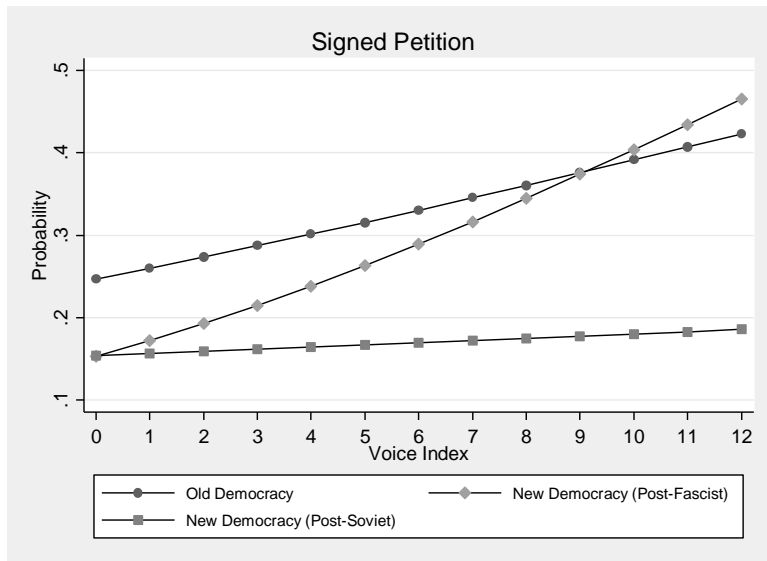
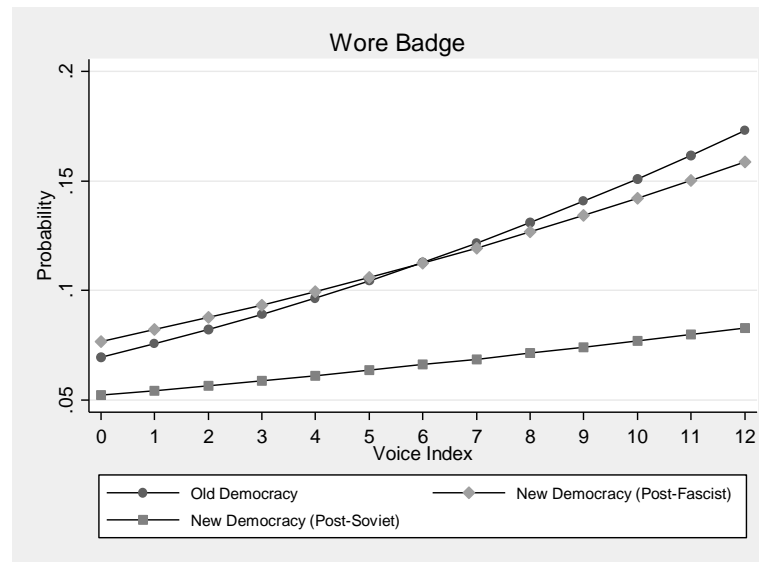
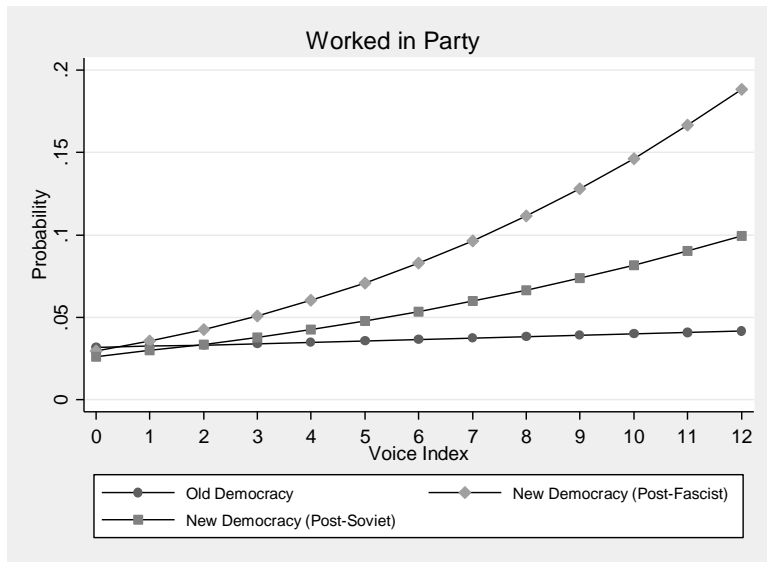


Figure 2: Statistically Significant Moderating Effects of Old vs. New Democracies on Voice Outcomes



*Appendix Table 1: Control Variable Definitions and Descriptive Statistics*

Variable (ESS question number)	Scale	Mean	Std Dev
Current member of a trade union (F39)	0=no, 1=yes	0.322	0.467
Previous but not current member of a trade union (F39)	0=no, 1=yes	0.160	0.367
Union/union members in the workplace (G44)	0=no, 1=yes	0.783	0.412
Regular meetings b/w employer and employee reps (G42)	0=no, 1=yes	0.575	0.494
Influence of discussions on working conditions (G43)	1=no or not much to 4=a great deal	1.766	0.880
Influence of trade unions on working conditions (G44)	1=no or not much to 4=a great deal	1.608	0.792
Importance in choosing job: job enabled own initiative (G65)	1=not important or not at all important	0.090	0.286
Importance in choosing job: job enabled own initiative (G65)	2=neither important nor unimportant	0.122	0.328
Importance in choosing job: job enabled own initiative (G65)	3=important	0.540	0.498
Importance in choosing job: job enabled own initiative (G65)	4=very important	0.249	0.432
Citizen of country (C26)	0=no, 1=yes	0.982	0.134
Belong to minority ethnic group in country (C32)	0=no, 1=yes	0.046	0.210
Female gender (F2)	0=no, 1=yes	0.509	0.499
Children living in the home (F12)	0=no, 1=yes	0.526	0.499
Urban residence (F14)	0=no, 1=yes	0.236	0.425
Suburban residence (F14)	0=no, 1=yes	0.121	0.326
Town or small city residence (F14)	0=no, 1=yes	0.309	0.462
Age of respondent (Calculated)	min=16; max=70	42.737	11.228
Years of full-time education completed (F16)	min=0; max=30	13.800	3.546
Responsible for supervising other employees (F25)	0=no, 1=yes	0.303	0.460
Central or local government employer (F32)	0=no, 1=yes	0.127	0.333
Other public sector employer (F32)	0=no, 1=yes	0.172	0.377
State-owned enterprise employer	0=no, 1=yes	0.079	0.270

(F32)			
Private employer (F32)	0=no, 1=yes	0.599	0.490
Establishment size under 10 (F24)	0=no, 1=yes	0.220	0.414
Establishment size 10 to 24 (F24)	0=no, 1=yes	0.196	0.398
Establishment size 25 to 99 (F24)	0=no, 1=yes	0.268	0.443
Establishment size 100 to 499 (F24)	0=no, 1=yes	0.179	0.383
Establishment size 500 or more (F24)	0=no, 1=yes	0.137	0.343
Level of disproportionality	min=0.73; max=15.1	5.893	4.045
Number of parties	min=2.82; max=10.04	5.148	1.692
New democracy (post-fascist)	0=no, 1=yes	0.103	0.304
New democracy (post-Soviet)	0=no, 1=yes	0.357	0.479
How easy for boss to know how much effort put into work	1=extremely difficult to 10=extremely easy	7.167	2.369
How easy to replace you if you left	1=extremely difficult to 10=extremely easy	5.886	2.705

---

Source: European Social Survey, Round 5 (2010/11), sample of individuals whose main activity in the last 7 days was working, and worked for employer  $\geq 1$  year (n=14,228). For information on industry, occupation, and country indicators, refer to the online appendix.

Appendix Table 2: Correlation Matrix for Key Variables

	Voted	Contacted Politician	Worked in Party	Wore Badge	Signed Petition	Public Demo	Boycotted Products	Close to 1 Party	Member of a Party	Interested in Politics	Voice Index
Voted	1	---	---	---	---	---	---	---	---	---	---
Contacted Politician	0.120	1	---	---	---	---	---	---	---	---	---
Worked in Party	0.075	0.287	1	---	---	---	---	---	---	---	---
Wore Badge	0.083	0.207	0.272	1	---	---	---	---	---	---	---
Signed Petition	0.112	0.215	0.139	0.264	1	---	---	---	---	---	---
Public Demonstration	0.071	0.145	0.193	0.278	0.275	1	---	---	---	---	---
Boycotted Products	0.092	0.165	0.083	0.186	0.311	0.201	1	---	---	---	---
Close to One Party	0.279	0.141	0.149	0.137	0.141	0.092	0.133	1	---	---	---
Member of a Party	0.086	0.198	0.516	0.185	0.082	0.091	0.034	0.179	1	---	---
Interested in Politics	0.225	0.178	0.142	0.117	0.165	0.103	0.172	0.278	0.128	1	---
Voice Index	0.119	0.161	0.085	0.114	0.161	0.048	0.146	0.150	0.070	0.204	1

Source: European Social Survey, Round 5 (2010/11), sample of individuals whose main activity in the last 7 days was working, and worked for employer  $\geq 1$  year [n=14,228].

LEARNING ABOUT DEMOCRACY AT WORK:  
CROSS-NATIONAL EVIDENCE ON INDIVIDUAL EMPLOYEE VOICE  
INFLUENCING POLITICAL PARTICIPATION IN CIVIL SOCIETY

**ONLINE APPENDIX**

John W. Budd  
jbudd@umn.edu

J. Ryan Lamare  
rlamare@illinois.edu

Andrew R. Timming  
andrew.timming@uwa.edu.au

June 2017

*Appendix Table 1: Control Variable Definitions and Descriptive Statistics*

Variable (ESS question number)	Scale	Mean	Std Dev
Current member of a trade union (F39)	0=no, 1=yes	0.322	0.467
Previous but not current member of a trade union (F39)	0=no, 1=yes	0.160	0.367
Union/union members in the workplace (G44)	0=no, 1=yes	0.783	0.412
Regular meetings b/w employer and employee reps (G42)	0=no, 1=yes	0.575	0.494
Influence of discussions on working conditions (G43)	1=no or not much to 4=a great deal	1.766	0.880
Influence of trade unions on working conditions (G44)	1=no or not much to 4=a great deal	1.608	0.792
Importance in choosing job: job enabled own initiative (G65)	1=not important or not at all important	0.090	0.286
Importance in choosing job: job enabled own initiative (G65)	2=neither important nor unimportant	0.122	0.328
Importance in choosing job: job enabled own initiative (G65)	3=important	0.540	0.498
Importance in choosing job: job enabled own initiative (G65)	4=very important	0.249	0.432
Citizen of country (C26)	0=no, 1=yes	0.982	0.134
Belong to minority ethnic group in country (C32)	0=no, 1=yes	0.046	0.210
Female gender (F2)	0=no, 1=yes	0.509	0.499
Children living in the home (F12)	0=no, 1=yes	0.526	0.499
Urban residence (F14)	0=no, 1=yes	0.236	0.425
Suburban residence (F14)	0=no, 1=yes	0.121	0.326
Town or small city residence (F14)	0=no, 1=yes	0.309	0.462
Age of respondent (Calculated)	min=16; max=70	42.737	11.228
Years of full-time education completed (F16)	min=0; max=30	13.800	3.546
Responsible for supervising other employees (F25)	0=no, 1=yes	0.303	0.460
Central or local government employer (F32)	0=no, 1=yes	0.127	0.333
Other public sector employer (F32)	0=no, 1=yes	0.172	0.377
State-owned enterprise employer	0=no, 1=yes	0.079	0.270



(F32)				
Private employer (F32)	0=no, 1=yes		0.599	0.490
Establishment size under 10 (F24)	0=no, 1=yes		0.220	0.414
Establishment size 10 to 24 (F24)	0=no, 1=yes		0.196	0.398
Establishment size 25 to 99 (F24)	0=no, 1=yes		0.268	0.443
Establishment size 100 to 499 (F24)	0=no, 1=yes		0.179	0.383
Establishment size 500 or more (F24)	0=no, 1=yes		0.137	0.343
Level of disproportionality	min=0.73; max=15.1		5.893	4.045
Number of parties	min=2.82; max=10.04		5.148	1.692
Old democracy	0=no, 1=yes		0.540	0.498
New democracy (post-fascist)	0=no, 1=yes		0.103	0.304
New democracy (post-Soviet)	0=no, 1=yes		0.357	0.479
How easy for boss to know how much effort put into work	1=extremely difficult to 10=extremely easy		7.167	2.369
How easy to replace you if you left	1=extremely difficult to 10=extremely easy		5.886	2.705
Major occupation: legislators, senior officials, mgrs (F33-F34a)	0=no, 1=yes		0.076	0.265
Major occupation: professionals (F33-F34a)	0=no, 1=yes		0.201	0.401
Major occupation: technicians & assoc professionals (F33-F34a)	0=no, 1=yes		0.184	0.387
Major occupation: clerks (F33-F34a)	0=no, 1=yes		0.109	0.312
Major occupation: service & shop & market sales (F33-F34a)	0=no, 1=yes		0.146	0.353
Major occupation: skilled agriculture and fish (F33-F34a)	0=no, 1=yes		0.007	0.086
Major occupation: craft and related trade (F33-F34a)	0=no, 1=yes		0.111	0.314
Major occupation: plant and machine operators (F33-F34a)	0=no, 1=yes		0.085	0.279
Major occupation: elementary occupations (F33-F34a)	0=no, 1=yes		0.078	0.268
Major industry: agriculture, forestry, fishing (F31)	0=no, 1=yes		0.018	0.131
Major industry: mining and quarrying (F31)	0=no, 1=yes		0.007	0.086
Major industry: manufacturing (F31)	0=no, 1=yes		0.166	0.372

Major industry: electricity, gas, steam, a/c supply (F31)	0=no, 1=yes	0.011	0.105
Major industry: water supply; waste management (F31)	0=no, 1=yes	0.008	0.087
Major industry: construction (F31)	0=no, 1=yes	0.061	0.239
Major industry: wholesale/retail trade (F31)	0=no, 1=yes	0.113	0.317
Major industry: transportation and storage (F31)	0=no, 1=yes	0.064	0.246
Major industry: accommodation and food service (F31)	0=no, 1=yes	0.032	0.177
Major industry: information and communication (F31)	0=no, 1=yes	0.034	0.182
Major industry: financial and insurance (F31)	0=no, 1=yes	0.035	0.183
Major industry: real estate activities (F31)	0=no, 1=yes	0.007	0.081
Major industry: professional, scientific, technical (F31)	0=no, 1=yes	0.052	0.223
Major industry: administrative and support service (F31)	0=no, 1=yes	0.044	0.204
Major industry: public admin, defence, social security (F31)	0=no, 1=yes	0.072	0.259
Major industry: education (F31)	0=no, 1=yes	0.112	0.315
Major industry: human health and social work (F31)	0=no, 1=yes	0.119	0.324
Major industry: arts, entertainment, recreation (F31)	0=no, 1=yes	0.018	0.132
Major industry: activities of households (F31)	0=no, 1=yes	0.005	0.146
Major industry: extraterritorial organizations (F31)	0=no, 1=yes	0.001	0.012
Country: United Kingdom	0=no, 1=yes	0.054	0.226
Country: Ireland	0=no, 1=yes	0.041	0.198
Country: Belgium	0=no, 1=yes	0.043	0.202
Country: Netherlands	0=no, 1=yes	0.043	0.202
Country: Switzerland	0=no, 1=yes	0.033	0.177
Country: Germany	0=no, 1=yes	0.071	0.256
Country: Denmark	0=no, 1=yes	0.042	0.201
Country: Norway	0=no, 1=yes	0.049	0.217
Country: Sweden	0=no, 1=yes	0.039	0.194

Country: France	0=no, 1=yes	0.041	0.199
Country: Spain	0=no, 1=yes	0.036	0.186
Country: Portugal	0=no, 1=yes	0.033	0.179
Country: Greece	0=no, 1=yes	0.034	0.182
Country: Cyprus	0=no, 1=yes	0.015	0.123
Country: Israel	0=no, 1=yes	0.028	0.164
Country: Czech Republic	0=no, 1=yes	0.052	0.222
Country: Slovakia	0=no, 1=yes	0.030	0.171
Country: Hungary	0=no, 1=yes	0.032	0.175
Country: Croatia	0=no, 1=yes	0.021	0.143
Country: Slovenia	0=no, 1=yes	0.025	0.156
Country: Bulgaria	0=no, 1=yes	0.037	0.189
Country: Ukraine	0=no, 1=yes	0.020	0.139
Country: Russia	0=no, 1=yes	0.048	0.214
Country: Poland	0=no, 1=yes	0.031	0.174
Country: Lithuania	0=no, 1=yes	0.018	0.133
Country: Estonia	0=no, 1=yes	0.042	0.201
Country: Finland	0=no, 1=yes	0.042	0.202

---

Source: European Social Survey, Round 5 (2010/11), sample of individuals whose main activity in the last 7 days was working, and worked for employer  $\geq 1$  year (n=14,228).

Appendix Table 2: Correlation Matrix for Key Variables

	Voted	Contacted Politician	Worked in Party	Wore Badge	Signed Petition	Public Demo	Boycotted Products	Close to 1 Party	Member of a Party	Interested in Politics	Voice Index
Voted	1	---	---	---	---	---	---	---	---	---	---
Contacted Politician	0.120	1	---	---	---	---	---	---	---	---	---
Worked in Party	0.075	0.287	1	---	---	---	---	---	---	---	---
Wore Badge	0.083	0.207	0.272	1	---	---	---	---	---	---	---
Signed Petition	0.112	0.215	0.139	0.264	1	---	---	---	---	---	---
Public Demonstration	0.071	0.145	0.193	0.278	0.275	1	---	---	---	---	---
Boycotted Products	0.092	0.165	0.083	0.186	0.311	0.201	1	---	---	---	---
Close to One Party	0.279	0.141	0.149	0.137	0.141	0.092	0.133	1	---	---	---
Member of a Party	0.086	0.198	0.516	0.185	0.082	0.091	0.034	0.179	1	---	---
Interested in Politics	0.225	0.178	0.142	0.117	0.165	0.103	0.172	0.278	0.128	1	---
Voice Index	0.119	0.161	0.085	0.114	0.161	0.048	0.146	0.150	0.070	0.204	1

Source: European Social Survey, Round 5 (2010/11), sample of individuals whose main activity in the last 7 days was working, and worked for employer  $\geq 1$  year [n=14,228].

Appendix Table 3: Full Probit Regression Results<sup>a</sup>

	Voted	Contacted Politician	Worked in Party	Wore Badge	Signed Petition	Public Demon- stration	Boycotted Products	Close to One Party	Member of a Party	Interested in Politics
Individual voice score	0.014** (0.005)	0.036** (0.006)	0.036** (0.009)	0.026** (0.007)	0.027** (0.005)	0.018* (0.007)	0.021** (0.005)	0.011* (0.005)	0.027** (0.008)	0.018** (0.005)
Current member of a trade union	0.149** (0.042)	0.145** (0.041)	0.310** (0.057)	0.226** (0.048)	0.242** (0.037)	0.378** (0.050)	0.106* (0.042)	0.078* (0.034)	0.256** (0.057)	0.050 (0.035)
Previous but not current member of a trade union	0.072 (0.043)	0.047 (0.045)	0.186** (0.065)	0.046 (0.059)	0.202** (0.043)	0.142* (0.063)	0.123** (0.046)	0.046 (0.037)	0.166** (0.063)	0.042 (0.038)
Union/union members in the workplace	0.066 (0.037)	0.128** (0.044)	0.098 (0.069)	0.178** (0.061)	0.161** (0.042)	0.055 (0.063)	0.221** (0.047)	0.077* (0.035)	0.042 (0.065)	0.063 (0.036)
Regular meetings b/w employer and employee reps	0.029 (0.045)	0.010 (0.046)	0.002 (0.067)	0.047 (0.056)	0.037 (0.042)	0.090 (0.060)	0.052 (0.045)	0.063 (0.038)	-0.023 (0.064)	-0.033 (0.039)
Influence of discussions on working conditions	0.060* (0.026)	0.018 (0.025)	0.021 (0.035)	0.045 (0.029)	0.004 (0.023)	-0.029 (0.033)	-0.025 (0.025)	0.016 (0.021)	-0.007 (0.035)	0.023 (0.022)
Influence of trade unions on working conditions	-0.013 (0.021)	-0.002 (0.022)	-0.012 (0.032)	0.031 (0.025)	0.008 (0.020)	0.059* (0.027)	-0.025 (0.022)	0.005 (0.018)	-0.024 (0.031)	-0.012 (0.019)
Importance on initiative in choosing job: not impt	0.014 (0.058)	-0.242** (0.068)	-0.252* (0.108)	-0.159 (0.086)	-0.116 (0.061)	-0.190* (0.089)	-0.212** (0.071)	-0.152** (0.052)	-0.199* (0.098)	-0.205** (0.054)
Importance on initiative in choosing job: neither impt nor unimpt	0.017 (0.051)	-0.252** (0.058)	-0.269** (0.086)	-0.187** (0.071)	-0.154** (0.053)	-0.151* (0.073)	-0.152** (0.078)	-0.150** (0.045)	-0.154 (0.084)	-0.208 (0.046)
Importance on initiative in choosing job: important	0.044 (0.035)	-0.144** (0.037)	-0.169** (0.050)	-0.089* (0.041)	-0.028 (0.032)	-0.096* (0.045)	-0.078* (0.034)	-0.025 (0.029)	-0.110* (0.049)	-0.124** (0.030)
Citizen of country	1.656** (0.113)	0.446** (0.131)	0.262 (0.197)	0.588** (0.189)	0.449** (0.125)	0.147 (0.187)	0.067 (0.124)	0.429** (0.095)	0.324 (0.194)	0.081 (0.094)

Belong to minority ethnic

group	-0.031 (0.068)	0.240** (0.072)	0.245* (0.098)	0.246** (0.091)	-0.035 (0.072)	0.239** (0.087)	0.166* (0.082)	0.118 (0.061)	0.189* (0.095)	0.073 (0.063)
Female gender	-0.020 (0.033)	-0.179** (0.033)	-0.294** (0.051)	0.021 (0.043)	0.031 (0.031)	-0.190** (0.043)	-0.011 (0.034)	-0.154** (0.028)	-0.308** (0.049)	-0.396** (0.029)
Children living at home	0.067* (0.028)	0.051 (0.029)	-0.025 (0.043)	-0.057 (0.036)	0.039 (0.027)	-0.058 (0.038)	-0.015 (0.029)	0.002 (0.024)	-0.022 (0.042)	0.050* (0.025)
Urban residence	-0.090* (0.041)	-0.329** (0.044)	-0.196** (0.064)	0.027 (0.054)	0.106** (0.039)	0.194** (0.054)	0.133** (0.043)	0.055 (0.035)	-0.273** (0.062)	0.068 (0.036)
Suburban residence	-0.045 (0.049)	-0.251** (0.049)	-0.156* (0.073)	0.046 (0.056)	0.187** (0.044)	0.142* (0.062)	0.142** (0.049)	0.028 (0.041)	-0.197** (0.071)	0.091* (0.042)
Town or small city residence	-0.053 (0.035)	-0.113** (0.036)	-0.068 (0.055)	-0.023 (0.045)	0.024 (0.033)	0.125* (0.050)	0.014 (0.037)	0.009 (0.030)	-0.141** (0.054)	0.073* (0.031)
Age of respondent	0.019** (0.001)	0.009** (0.001)	0.004* (0.002)	-0.001 (0.002)	-0.002 (0.001)	-0.003 (0.002)	0.004** (0.001)	0.013** (0.001)	0.010** (0.002)	0.019** (0.001)
Years of full-time education completed	0.034** (0.005)	0.032** (0.005)	0.020* (0.008)	0.017** (0.006)	0.030** (0.005)	0.027** (0.007)	0.045** (0.005)	0.022** (0.004)	0.016* (0.008)	0.048** (0.005)
Responsible for supervising other employees	-0.013 (0.036)	0.123** (0.034)	0.088 (0.051)	0.100* (0.042)	0.074* (0.032)	0.056 (0.044)	0.090** (0.034)	0.035 (0.029)	0.096 (0.050)	0.097** (0.030)
Central or local government employer	0.083 (0.108)	0.032 (0.100)	-0.125 (0.142)	-0.257* (0.120)	-0.041 (0.099)	-0.050 (0.141)	-0.101 (0.104)	-0.130 (0.089)	-0.126 (0.138)	0.006 (0.088)
Other public sector employer	0.030 (0.105)	-0.116 (0.099)	-0.114 (0.138)	-0.178 (0.117)	-0.024 (0.098)	0.008 (0.138)	-0.079 (0.102)	-0.134 (0.087)	-0.184 (0.136)	0.060 (0.087)
State-owned enterprise employer	-0.020 (0.108)	-0.107 (0.107)	-0.119 (0.143)	-0.096 (0.125)	-0.061 (0.103)	-0.048 (0.146)	-0.127 (0.111)	-0.163 (0.091)	-0.132 (0.141)	-0.083 (0.090)
Private employer	-0.060 (0.096)	-0.163 (0.092)	-0.279* (0.130)	-0.197 (0.108)	-0.046 (0.091)	-0.085 (0.129)	-0.160 (0.096)	-0.113 (0.081)	-0.198 (0.129)	-0.055 (0.080)
Establishment size under 10	-0.016 (0.042)	-0.066 (0.046)	0.040 (0.069)	0.006 (0.057)	-0.065 (0.043)	0.105 (0.063)	-0.038 (0.047)	-0.044 (0.038)	-0.010 (0.067)	0.058 (0.039)

Establishment size 10 to 24	0.011 (0.041)	-0.050 (0.044)	-0.046 (0.066)	-0.091 (0.054)	-0.080* (0.041)	0.070 (0.060)	-0.042 (0.045)	-0.001 (0.036)	-0.011 (0.064)	0.057 (0.037)
Establishment size 25 to 99	0.014 (0.048)	-0.044 (0.049)	-0.117 (0.075)	-0.027 (0.061)	-0.030 (0.046)	0.013 (0.066)	-0.061 (0.051)	-0.042 (0.041)	-0.048 (0.072)	0.091* (0.043)
Establishment size 100 to 499	0.007 (0.054)	-0.113* (0.055)	-0.120 (0.086)	-0.049 (0.068)	-0.068 (0.051)	0.109 (0.070)	-0.087 (0.056)	-0.003 (0.046)	-0.059 (0.082)	0.103* (0.048)
Major occupation effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Major industry effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: European Social Survey, Round 5 (2010/11), sample of individuals whose main activity in the last 7 days was working, and worked for employer  $\geq 1$  year (n=14,228).

Notes: <sup>a</sup> Each column reports average marginal effects and standard errors from probit models for each dependent variable. Statistically significant at the \* 0.05 or \*\* 0.01 level.

*Appendix Table 4: First-Stage Instrumental Variable Regression Results*

	Index of Individual Voice
How difficult/easy for immediate boss to know how much effort put into work	0.028** (0.011)
How difficult/easy for employer to replace you if you left	-0.124** (0.010)
Current member of a trade union	-0.314** (0.067)
Previous but not current member of a trade union	0.014 (0.073)
Union/union members in the workplace	0.055 (0.071)
Regular meetings occur between employer and employee representatives	-0.180* (0.076)
Influence of discussions on working conditions	0.459** (0.043)
Influence of trade unions on working conditions	0.062 (0.035)
Importance on initiative in choosing job: no or not much	-1.008** (0.102)
Importance on initiative in choosing job: not important or unimportant	-1.063** (0.090)
Importance on initiative in choosing job: important	-0.551** (0.059)
Citizen of country	0.313 (0.164)
Belong to minority ethnic group	-0.653** (0.119)
Female	-0.217* (0.054)
Children living at home	0.172** (0.047)



Urban residence	0.058 (0.069)
Suburban residence	-0.019 (0.080)
Town or small city residence	-0.028 (0.058)
Age of respondent	0.017** (0.002)
Years of full-time education completed	0.061** (0.009)
Responsible for supervising other employees	1.282** (0.058)
Central or local government employer	-0.386* (0.179)
Other public sector employer	-0.379* (0.178)
State-owned enterprise employer	-0.403* (0.184)
Private employer	-0.040 (0.163)
Establishment size under 10	0.745** (0.092)
Establishment size 10 to 24	0.270** (0.087)
Establishment size 25 to 99	0.137 (0.080)
Establishment size 100 to 499	0.112 (0.083)
Occupation, industry, and country effects	Yes

---

Source: European Social Survey, Round 5 (2010/11), sample of individuals whose main activity in the last 7 days was working, and worked for employer  $\geq 1$  year (n=14,228). Statistically significant at the \* 0.05 or \*\* 0.01 level.