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EMPLOYER BEHAVIOR IN THE FACE OF UNION ORGANIZING DRIVES

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Using data from a 1986 survey of employers and a 1982–83 survey of union organizers, the authors investigate the determinants and consequences of employer opposition to union organizing drives. They find that strong management opposition, as evidenced by, for example, the filing of formal charges of unfair labor practices against management, was most likely when the firm had relatively low wages, poor working conditions, and supervisory problems; when the likelihood of union victory was uncertain; and when the potential union compensation differential—and thus the potential effect on firm profits—was high. Opposition by supervisors was particularly effective in defeating union drives. The authors conclude that firms' responses to organizing drives were consistent with the motive of profit maximization, and that management opposition has been an important determinant of the decline of unionization.

IN the 1970s and 1980s management became increasingly hostile to trade unions. The goal of a union-free environment, once espoused only by fringes of the management community, spread until by 1983 45% of the firms in the BNA's Personnel Practices Forum declared that being nonunion was their major labor

relations goal (Kochan, McKersie, and Chalykoff 1986:487). Unfair labor practices committed by management skyrocketed despite a decline in NLRB representation elections, and approximately one-third of firms in which workers voted to unionize failed to sign a collective contract, effectively reversing the election results.¹

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Management opposition, of one form or another, has been found to be a key determinant of NLRB representation election outcomes (Dickens 1983; Freeman 1988), and many believe that increased opposition has been a major cause of the precipitous fall in private sector union density over the past two decades (Freeman and Medoff 1984, Chap. 15; Dickens and Leonard 1985; Farber 1987). Despite

¹ The unfair practices data are from the NLRB. The percentage of cases in which a contract was signed is from Cooke (1985), McDonald (1983), and Freeman and Kleiner (1986).

the important part management opposition has undoubtedly played in the de-unionization of the U.S. private sector, however, relatively little is known about what determines management behavior during an organizing drive. Does the extent of management opposition depend on the likely costs of unionism to the firm, as the profit-maximizing calculus would lead one to expect? Are higher wages and good working conditions—so-called positive industrial relations—substitutes or complements for hiring consultants, committing unfair practices, or otherwise campaigning intensely against unionization? Which management tactics have the greatest impact on representation election outcomes?

In this paper we use two data sets covering 1980s organizing drives to examine these questions. The first data set is based on a 1986 survey of 202 establishments that had representation elections in the Boston and Kansas City NLRB districts. The survey asked managers about the number of days consultants were hired to oppose unions in the election drive, perceived causes of the drive, wages and benefits paid to workers, and the impact of union victories on the careers of the managers. We supplement these survey data with information from the NLRB about unfair labor practices and representation election outcomes. The second data set was obtained for 1982–83 from an AFL-CIO survey of union organizers in 274 NLRB representation elections. The organizer survey contains data on benefits available at the firm, characteristics of workers, management anti-union tactics, organizers' perceptions of the issues that mattered most in the representation campaign, and organizers' perceptions of the role of supervisors in campaigning against unions.

Both surveys have weaknesses, in part because they lack information on some variables (the organizer survey contains no data on consultant days used, and the employer survey contains no data on supervisors' activity in the drive) and in part because they are obtained from participants with definite biases. We be-

lieve, however, that by examining the two surveys together we obtain a more complete and accurate picture of management opposition than could be obtained using each survey separately.

Theory of Management Opposition

How does management react to a union organizing drive at one of its plants? What influences management policies toward unionism once management knows it is headed for an NLRB representation election? We postulate that the reaction to an organizing drive depends on three factors: the expected effect of management opposition on the probability that the union will win the election; the costs of opposition; and the prospective loss of profits due to unionization, which itself depends on the union wage differential. Our model predicts a nonlinear relation between management opposition and the "innate" probability of a union win, with firms opposing unions more strongly when the election outcome is uncertain than when the union is especially likely either to win or to lose; and predicts that opposition will increase nonlinearly as the effect of unionism on the firm's labor compensation grows.

We assume at the outset that principal-agent issues between management and shareholders are of negligible importance and thus that management's actions are determined by perceptions of what unionization will do to profits. This is not an innocuous assumption. Union-induced changes in shareholder returns are unlikely to affect significantly the economic position of most managers, particularly the foreman and other lower-level supervisors whose behavior is critical to any management campaign to defeat unions. (Our evidence suggests that firms' managerial personnel policy substitutes for the incentive of ownership in motivating plant-level management to oppose unionization of work forces.) Conversely, lower-level management may devote resources to opposing unions when doing so is not in the shareholders' interest, sacrificing profits for control and greater flexibility at the workplace. Further, as union corporate

campaigns have shown, unions can pressure shareholders or management into neutrality in representation elections by imbedding the union drive into a broader problem of, for example, obtaining assets from a major financial institution (Pruitt, Wei, and White 1988).

In its simplest form, our model contains three basic equations:

(1) *Probability of a union victory in the campaign:* $P(X, mO)$ with $P' = dP/dmO < 0$, with mO = management opposition and X = other factors that determine worker propensity to support a union, such as the composition of the work force and special conditions in the firm. We call the probability that the union will win the representation election absent any management opposition the "innate probability" of a union win and represent it as $P(X, O)$. Because P is bounded between 0 and 1, we postulate a logistic form, with $dP = -B(1 - P)(P)$ where B is the impact parameter of management opposition in the logistic equation.

(2) *Cost of management opposition:* $C(mO)$ with $C' > 0$, where examples of opposition are committing unfair labor practices, hiring specialized consultants to direct an anti-union campaign, and directing supervisors to try to convince workers to oppose the union.

(3) *Loss of profits due to unionization:* $L(dw)$, where dw is the likely wage (or cost) difference due to unionization of the firm. Price theoretic considerations imply that $L' < 0$ and $L'' < 0$. Moreover, because the standard "welfare triangle" loss due to monopoly wage gains depends on the square of the wage differential, the relation between the differential and loss of profits is likely to have a parabolic form (Freeman 1986).²

² Formally, the loss in profits to management from a given wage differential dw is $L dw + 1/2 (dw) (DL)$, where L is the final level of employment and DL is the change in employment due to the differential. Here, Ldw is the transfer of profits from the firm to workers absent any labor demand response; and $1/2 (dw)(DL)$ is the triangle loss in welfare (paid from profits) due to the demand response. If the elasticity of demand for labor is constant, h , the loss in profits is $L dw + 1/2 h (dw)^2$. This is a parabolic function in

We assume that the firm seeks to minimize the expected loss from unionization, subject to the cost and probability functions. The solution yields an inverted U-shaped relation between the extent of opposition and the innate probability of a union victory. One way to see the reason for the inverted U is to consider management's decision whether or not to oppose an organizing drive at all. If the firm does not oppose the drive it has an expected loss of $L(dw) P(X, O)$. If it opposes the drive and chooses the optimum level of opposition mO^* with cost C^* , it has an expected loss of $C^* + L(dw) P(X, mO^*)$ —which is the sum of the probability-weighted loss if it fails to defeat the organizing drive, $(L + C^*) P(X, mO^*)$, and the probability-weighted loss if it succeeds in defeating the drive, $[1 - P(X, mO^*)] C^*$. Given these costs, the firm will oppose the union drive if the expected savings from opposition exceed the cost of the management campaign:

$$(4) \quad -L(dw) [P(X, mO^*) - P(X, O)] > C^*$$

or, letting $P' = (B(1 - P)P)$ approximate the difference in probability, if $B(1 - P)P > C^*/L$.

Because the derivative of the logistic (or any similarly shaped probability function) varies with the level of probability, equation (4) implies a nonlinear relation between company opposition and the (innate) probability of a union victory: when P is large and the union nearly certain to win, the firm will forgo campaigning against the union; similarly, when P is small and the union nearly certain to lose, the firm will not spend many resources fighting the union. Only when there is serious doubt about the likely victor will management work hard to oppose the union.

Turning to the optimum level of management opposition, the interior solution requires that the firm equate the marginal

the union wage differential. More generally, the convexity of the profits function with respect to wages implies that the loss in profits grows nonlinearly as the wage differential grows.

benefit of opposition and the marginal cost of opposition:

$$(5) \quad P' L = B P(1 - P) L = C'$$

Again we get a nonlinear relation between the innate probability of a union win and management opposition. The closer P is to one-half, the greater is the marginal benefit from opposition, and thus the greater the likely opposition.

Solving the model for management opposition yields the basic equation of concern in this study—the dependence of opposition on the likely union wage gain and consequent losses in profits, the innate probability that the union will win, and the costs of opposition:

$$(6) \quad MO = F(P(X, O), C, DW),$$

where dF/dP rises and then falls with the level of P ; $dF/dC < 0$; and $dF/dDW > 0$ and rising because of the concavity of the profits function with respect to wages. As the explanatory variables in (6) are exogenous, the equation can be estimated by single-equation methods.

The endogeneity of management opposition creates problems, however, in estimating the other key relation in the model, the impact of opposition on outcomes (equation [1]). When the innate probability of a union win is high and poorly specified in our equation, we should observe little opposition, and might incorrectly infer that the lack of opposition caused the win. By the nonlinearity of the opposition equation, however, when the innate probability of a union win is low we should also observe little opposition, and might incorrectly infer that lack of opposition caused the loss. The net result of these effects is that single equation estimates of the effect of opposition on representation outcomes are likely to be biased toward zero. We deal with this problem by using instrumental variables to estimate equation (1), replacing the actual level of opposition by predicted levels from our management opposition equation. The key variables in this procedure are the postulated nonlinear relations between the propensity to unionize and the union wage premium and manage-

ment opposition; in our model these nonlinear terms do not enter the representation election equation.

Finally, note that our data are limited to organizing drives that proceed to an NLRB representation election. We do not deal with management opposition that deters unions from a drive or from carrying a drive to an election, nor do we deal with management recognition of a union without a representation election. The absence of information on these cases suggests that our estimates will understate the impact of management opposition on unionization in the economy as a whole.

Survey Data on Management Opposition

The first data set that we use to assess management opposition to union organizing drives is based on interviews done in 1986 with firms in the Boston and Kansas City National Labor Relations Board districts that had elections during 1979 and the 1980s.³ We contacted 243 firms that had elections with over 20 employees in the potential bargaining unit and obtained on-site interviews with management in 202, for a response rate of 83.1 percent. One hundred of the 202 firms were in the Boston region and 102 were in the Kansas City region; 5% had elections in 1985, 31% in 1984, 12% in 1983, 10% in 1982, 16% in 1981, 16% in 1980, and 10% in 1979. The states covered by the two districts are generally reflective of the national labor relations environment,⁴ and the win rate of unions in our sample was similar to the national average: unions won 39% of the elections in our sample compared to 38% for all elections conducted in 1981 in firms with over 20 employees (Medoff 1984). In addition, the proportion of firms that lost elections and

³ The Boston district encompasses Connecticut, Maine, Massachusetts, New Hampshire, and Vermont; the Kansas City district encompasses all or part of Arkansas, Iowa, Kansas, Missouri, and Nebraska.

⁴ A composite ranking of private sector union density in the states in our sample was 29th out of 51 (D.C. included).

signed collective contracts was close to the national average: 64% of the elections won by unions in our sample produced signed collective contracts, compared with 63% in the nation (McDonald 1983).

Our second data set is based on an AFL-CIO Department of Organization and Field Services survey of the organizers involved in 274 NLRB election drives. The sample covers 15 AFL-CIO affiliates and consists almost entirely of units with at least 50 eligible voters. The sample is geographically dispersed, with observations from all regions of the country.

Both data sets suffer from problems of missing information for various observations. To maximize the usable samples, we assigned the mean value of a variable to missing independent variables, and added a dummy variable that took the value one for that observation and variable (Little and Rubin 1987). We report results for samples limited solely by missing observations on dependent variables or critical independent variables; our analysis of samples for which no independent variables were missing, however, yields comparable results.

Table 1 summarizes what the two surveys tell us about the methods management used to oppose union organizing drives from 1979 to early 1986. Panel A shows the frequency of use of consultants and of filed and upheld unfair labor practice charges in the employer survey. Panel B records similar information for the organizer survey and additional information on the specific tactics used by the companies to deter unionization. Because the organizer survey coding does not distinguish between a firm's use of lawyers and its use of consultants in its effort to defeat a union, the 70% consultants/lawyers figure reported in the survey overstates the use of consultants in running the company's anti-union drive. We believe the reported use of consultants by 41% of firms in the employer survey is more accurate, as it is based on the specific question: "Was an outside consultant, beyond normal legal assistance, hired to assist you during the organizing cam-

Table 1. Percentage of Firms Using Various Methods to Oppose Union Organizing Drives in the 1980s.

A. Employer Survey, 1986	
<i>Consultants Used (yes):</i>	41%
< month	13%
1 month or more	28%
<i>Unfair Labor Practices: Charges Filed</i>	24%
Guilty	15%
B. Organizer Survey, 1982-83	
<i>Consultants/Lawyers Used (yes):</i>	70%
<i>Unfair Labor Practices:</i>	
Filed	36%
Discharges or Discriminatory Layoffs	42%
<i>Tactics:</i>	
Company Leaflets	80%
≤ 4	33%
5 or more	47%
Company Letters	91%
≤ 4	41%
5 or more	50%
Captive Audience Speech	91%
≤ 4	62%
5 or more	29%
Supervisory Small Mtgs. per/employee	92%
≤ 4	46%
5-8	12%
9 or more	33%
Supervisor Intensity in Opposing Union ^a	
Low	14%
Moderate	34%
High	51%

Source: Employer Survey: NBER survey of 202 establishments that faced organizing drives between 1979 and 1986. Organizer Survey: AFL-CIO Department of Organization & Field Services, survey of 274 organizers in 1982-83 representation elections.

^a Asked of only half the organizers. The specific question was, "Describe on a 1 to 5 scale the frequency, intensity and sophistication of the supervisor's campaign, with 5 being very intense, etc."

paign?"⁵ The proportion of campaigns in which unions charged the firms with unfair labor practices was 24% in the employer survey and 36% in the organizer survey.⁶ Note, however, that organizers re-

⁵ The AFL-CIO questionnaire contained information that differentiates between lawyers and consultants, but that information was not coded and placed on the computer file that we were given by the AFL-CIO.

⁶ The AFL-CIO questionnaire contained one question on firings and a separate question on "other

Table 2. Employers' Perceptions of the Causes of Organizing Drives and Organizers' Perceptions of the Most Important Issues in Organizing Drives.

Employer Survey, 1986		
	<i>Primary Cause</i>	<i>Either Primary or Secondary Cause</i>
<i>Economic</i>		
Wages & Benefits	17%	27%
Job Security	10%	15%
<i>"Voice"</i>		
Lack of Fairness	7%	13%
Dissatisfied Employee(s)	14%	18%
Lack of Communication about Company	12%	19%
<i>Union Pressure</i>		
Pressure from Other Unions in Establishment or Area	11%	18%
Union Organizer	7%	10%
Organizer Survey, 1982-83		
	<i>Most Important Issue</i>	
<i>Beneficial for Union Issue</i>		
Supervisory	52%	
Wages	27%	
Fringes	6%	
Safety	7%	
Discrimination	3%	
Pressure	5%	
<i>Beneficial for Management Issue</i>		
Strikes	36%	
Layoffs & Closing	16%	
Dues	15%	
Wages	2%	
Other	31%	

Source: See Table 1.

port many more discharges and discriminatory layoffs than indicated in filed charges. With respect to specific tactics, the organizers reported that most firms used a spectrum of tactics ranging from leaflets to captive audience speeches to small meetings between workers and supervisors. Of the organizers asked to evaluate the intensity of the supervisors' efforts to oppose unions, half rated it as high.⁷

Table 2 provides information on the issues that managers and the organizers saw as important in the organizing campaign.⁸

unfair labor practices" that were filed with the NLRB. Here, we assume firings were filed charges.

⁷ This question was added to the survey when half the responses had already been gathered. It asked organizers to rate intensity of opposition from 1 to 5. We treat 5 as high, 3-4 as moderate, and 1-2 as low.

⁸ The surveys asked for somewhat different

The figures reveal a striking difference between the perceptions of these groups. Managers recognized that unfairness to workers, inadequate communication with workers, and poor handling of employee dissatisfaction were important causes of union campaigns, but regarded purely economic issues—wages and benefits and job security—as the key factors. In addition, some managers saw the primary or secondary impetus for the union drive as coming from outside the work group, in the form of union organizers or pressures from other unions in the firm or in the local area trying to unionize their workers.

Organizers, in contrast, saw worker-

information. The employer survey asked for the causes of the election drive, whereas the organizer survey asked for the most important campaign issue.

management relations or “voice” issues as critical in organizing campaigns: they viewed supervision as the most important issue in the drive, with wages and fringes next in importance, and regarded the risk of strikes, layoffs, or plant closing and the onus of union dues as the most important issues that the company used to discourage employees from voting for the union. Furthermore, in responses not summarized in Table 2, organizers reported that 23% of the drives were initiated because the organizer or the international targeted the firm (comparable in magnitude to the percentage of firms citing union pressure as a primary cause) but that 57% began because workers in the firm called the union.⁹

Determinants of Opposition

The results of our analysis of the determinants of management opposition in the employer survey are given in Table 3. Here we measure opposition with three variables: 0-1 dummy variables for whether the firm was charged with committing an unfair labor practice in the election and for whether the NLRB upheld the charge, and a continuous variable for the number of days (including 0) that the firm used a management consultant. We used a logistic form to estimate the equations with the 0-1 dependent variables and used a Tobit analysis to estimate the equation for consultant days.

The key independent variable in the analysis is the likely loss of profits due to unionization, which we proxy by the difference between the log of the firm’s own compensation (obtained from our survey) and the log of hourly wages of unionized production or nonproduction workers in the one-digit industry in its Census Region (estimated from the Current Population Survey Tapes for 1984), adjusted for the impact of

unions on fringes.¹⁰ To test for the hypothesized positive relationship between differentials and managerial opposition, we enter this compensation differential in the equation for opposition linearly and as a squared term. Finally, we include controls for various other differences between firms, such as number of employees in the establishment, whether the unit consists of production or nonproduction workers, an index of personnel practices (defines as the sum of dummy variables for whether a firm had any of the five practices listed in the table note), whether the firm is in the Boston or Kansas City NLRB district, the firm’s one-digit SIC industry, and whether the firm deals with unions in other locations.¹¹ Because the employer survey lacks data that might be used to indicate the innate probability of a union victory, we are unable to

¹⁰ The question in our survey from which we obtained the wages and benefits the firm paid was, “What were the a) average wages per hour and b) total compensation (wages and fringes) of the workers in the unit which voted in the N.L.R.B. election 3 years prior to the election, 1 year prior to the election, 6 months prior to the election, 3 months prior to the election, at the time of the election, and 1 year after the election, and what are current wages?” Since managers obtained this information from firm records, we believe it is reasonably accurate. We compare it to wages of unionized production or nonproduction workers in the relevant one-digit industry in the Census region using the CPS tapes and unionized fringe benefit data from the BNA for 1984, as we believe that those wages provide managers with a plausible indication of how much unions might raise the wages in their firm. We estimated variants of the equations in Table 3 by entering separately the log of the firms’ compensation and the log of our estimated union wage and fringes in the area, and obtained results comparable to those in the table.

¹¹ Based on the occupational categories for persons in the bargaining unit, which were available to us in the NLRB records, we classified the workers as production or nonproduction workers. For industry categories, we used the one-digit SIC categories (for example, construction, manufacturing, business services). In order to obtain enough observations from the CPS for our regions, we had to use broad occupation and industry categories. Further, the use of a region variable serves as a control for the different regional attitudes and cultures that may affect employer behavior. Finally, our index of experience with unions had five potential choices: no experience, little experience, some experience, moderate experience, and considerable experience.

⁹ In the employer survey the relevant question referred to unionized workers in the plant or at the job site who were pressuring unorganized workers to join or form a bargaining unit; in the organizer survey the question referred to a paid official from a local or national union who targeted and attempted to organize the establishment.

Table 3. Determinants of Management Opposition to Union Organizing Drives:
1986 Employer Survey.
(Standard Errors in Parentheses)

<i>Explanatory Variables and Summary Statistics^a</i>	<i>Charge of Unfair Practice</i>		<i>Guilty of Unfair Practice</i>		<i>Consultant Days Used</i>
Union Compensation Difference	2.26 (1.16)	-1.53 (2.26)	2.51 (1.30)	-2.77 (2.57)	3.24 (11.53)
Union Compensation Difference Squared	—	5.04 (3.67)	—	8.02 (4.12)	—
Sample Size	188	188	184	184	184
Technique	Logistic	Logistic	Logistic	Logistic	Tobit
-2 Log Likelihood	193.0	191.8	146.8	144.0	236.0

^a The other controls used in this study were number of employees in election unit; whether unit is production/nonproduction workers, K.C./Boston, mfg./other; dummies for missing independent variables and whether firm has organized units elsewhere; and an index of personnel practice (how many of the following practices the firm uses: formal written grievance procedure, formal written seniority system for promotions, formal written sick leave policy, written posting of training opportunities, and formal written policy for layoff and recalls).

examine the impact of that variable in the analysis.

The estimates in Table 3 show that our model does a good job of explaining unfair labor practices but fails to explain the use of management consultants. Columns 1 and 3 show that the potential union wage differential has the expected positive impact on the probability that a firm will be charged with or be found guilty of an unfair labor practice.¹² In columns 2 and 4 the differential is estimated to have a nonlinear parabolic form, with the square of the differential having a positive substantial impact on the chances of committing an unfair practice whereas the linear differential has a negative impact. The insignificant coefficient on the union differential in the equation for consultant days in column 5 shows, by contrast, that our model does not explain the use of consultants. The implication is that higher wages substitute for the commission of unfair labor practices but not for consultant days used.

The evidence on the determinants of management opposition in the organizer survey in Table 4 provides stronger

support for our model. Here we measure management opposition with charges of unfair labor practices,¹³ as in Table 3, and with a 0-1 dummy variable for whether supervisors campaigned against the union (which was unavailable in our data set for employers). We do not look at the lawyers/consultants measure in the organizer survey, since (as discussed above) it does not measure the use of consultants in the election drive. With respect to independent variables, the organizer survey lacks information on wages paid but includes questions about fringe benefits, from which we have created an index of the fringe benefits provided by the firm (the number of fringes as reported in the list given in the table note). Since unions have a sizable impact on the provision of fringes (Freeman 1981), this variable provides another indicator of the likely impact of unionization on costs: firms with few fringes are likely to see sizable increases in their fringe benefit costs if they become organized. We also include an index of good work conditions and supervisory practices (obtained as *minus* the sum of organizers' ratings of conditions/practices on a 1-5 scale, with the highest ratings

¹² This finding is not inconsistent with Kleiner's (1984) results showing that current profitability is unrelated to committing an unfair practice. In the model we investigate, it is the potential effect of unions on future profits that is the key determinant of unfair practices, not current profitability.

¹³ When we experimented with a variable for whether or not a firm fired or discriminatorily laid off workers in place of the unfair labor charge variable, we obtained results similar to those in the table.

Table 4. Determinants of Management Opposition to Union Representation Drives:
1982–83 Organizer Survey.
(Logistic Equation Estimates with Standard Errors in Parentheses)

<i>Explanatory Variables and Summary Statistics^a</i>	<i>Charged with Unfair Labor Practices (1)</i>	<i>Supervisors Campaigned Against Union (2)</i>
Index of Benefits	–0.220 (0.100)	0.410 (0.170)
Index of Good Work Conditions and Supervisory Practices	–0.140 (0.040)	–0.140 (0.050)
>70% of Workers Signed Authorization Cards	–0.810 (0.450)	–1.510 (0.650)
<40% of Workers Signed Authorization Cards	0.640 (0.470)	–0.870 (0.730)
Union Propensity Index	0.370 (0.240)	–0.280 (0.500)
(Union Propensity Index) ²	–0.009 (.005)	0.010 (.010)
Sample Size	232	245
–2 Log Likelihood	264.4	102.2

^a The other controls used in this study were industry; region; age, gender, and race; “wage deficiency”; and previous experience with unions.

Index of Benefits sums 0–1 variables for medical insurance, dental insurance, sick pay, pension, grievance procedure, arbitration, employee handbook, open door policy, and quality of work life.

Index of Good Work Conditions and Supervisory Practices sums answers to: Is supervision unpredictable, inconsistent or autocratic? Is the work of a routine nature where employees receive little recognition from supervisors or little personal job satisfaction? Are employees stuck in “dead-end” jobs with little chance for promotion? Have there been major accidents in the plant, or are there serious threats to the health and safety of workers? Are severe pressures, including mandatory overtime, placed on employees to maintain or increase production? Is there evidence of discrimination or favoritism of any kind? Do the employees feel that the company has little personal concern for them? The variables are coded from 1 to 5, with 5 being the worst conditions (those best for the union organizing drive). We multiply the sum by minus one for ease of exposition.

Index of Union Propensity sums answers to: Was the workplace subjected to substantial anti-union propaganda or attitude surveys (or both) before the organizing campaign started? Does the company have a pre-employment screening process to weed out potential union sympathizers? Do a substantial number of employees belong to civil rights groups, tenant associations, social advocacy groups, or church organizations that are active in community affairs? Do organizers have access to employees, either on or off the job? Are labor unions generally well accepted within the community? Have there been any recent shutdowns of large union plants or establishments in the community? Have there been bitter, highly publicized strikes in the community in the past few years? Is employee turnover relatively low?

The variables in the union propensity indices are scaled from 1 to 5, as described in the text, with 5 being the best from the union’s perspective.

indicating worse conditions, using the specific questions given in the table note). We view both the fringe and conditions/practices variables as indicators of “positive industrial relations” practices.

Finally, the organizer survey contains two variables that are potentially good measures of the innate propensity of workplaces to vote for the union: the percentage of workers signing authorization cards, and an index of “union propensity” created from questions regarding the attitudes of workers and commu-

nity toward unionism and of employer anti-union activity prior to the election, as listed in the table note.

In Table 4 we test for the hypothesized nonlinear impact of the innate probability of a union victory on management opposition in two ways. To test for nonlinearity in the effect of the percentage of workers signing authorization cards on management opposition, we created two dummy variables to reflect the extremes of the distribution: “percent cards > 70%” takes the value 1 in cases where more than 70%

signed cards, and “percent cards < 40%” takes the value 1 in cases where fewer than 40% signed cards. The hypothesized nonlinearity should produce negative coefficients on both dummy variables, distinguishing the extremes from cases in which 40–70% of the workers signed cards. To test for nonlinearity in the effect of our union propensity index, we enter the variable and the square of the variable. Here the hypothesized nonlinearity should yield a negative squared term and positive linear term.

Three findings are evident in the table. First, consistent with our model, firms with fewer fringe benefits and with poor work conditions and supervisory practices are more likely to commit unfair practices than those with more fringes and better conditions and practices. Second, poor work conditions and supervisory practices have a similar impact on supervisors’ campaigning against the union: the worse those conditions, the more likely the firm will get supervisors to campaign against the union. On the other hand, good benefit packages also increase the probability that supervisors campaign against the union, perhaps because the company’s provision of good benefits gives supervisors a strong argument against the union.

Third, there is some evidence of the predicted U-shaped relation between our indicators of the innate probability to unionize and management opposition. In column 1 the nonlinearity shows up in the squared union propensity index, which takes a parabolic form so that a greater union propensity has first an increasing then a decreasing effect on management opposition. The estimated coefficients for the percentage who sign cards, by contrast, show a monotonic negative impact of card-signing on unfair practices. This result provides evidence that management campaigns less virulently when a union has strong support but not that it also campaigns less when a union has weak support. Perhaps management is sufficiently risk-averse that it spends resources even when it seems likely to defeat the union with only limited opposition.

Nonlinearity shows up in a different way in the column 2 calculations for the

determinants of whether or not supervisors campaign against the union. Here, the percentage who sign cards has the predicted nonlinear effect, with both high and low percentages reducing the probability that a company will direct supervisors to campaign against the union. Supervisors campaigned against the union in 86% of companies in which more than 70% of the workers signed cards, in 95% of companies in which 40–70% signed, and in 84% of companies in which fewer than 40% signed. By contrast, the union propensity index has no such nonlinear effect. Our finding that different indicators evince nonlinear patterns in the different equations suggests that the nonlinear implication of our model should be viewed with caution. A strong result, however, is that firms with work forces having the greatest innate probability to vote union devote fewer resources to opposing unionization than other firms.

Determinants of Representation Election Outcomes

Because management opposition is endogenous in our model, it is inappropriate to use ordinary least squares to estimate how such opposition affects the probability that a union wins a representation election. The error term in an equation for a union victory (our C1) is likely to be correlated with management opposition, biasing the coefficient on opposition. To deal with this problem, we use a limited information instrumental variables analysis. Specifically, we estimate a linear approximation to the election outcome equation and replace the endogenous opposition variables by their estimated values from our model:

$$(7) \quad W = a + bX + c\text{Pr}(\text{OPP}) + U,$$

where $W = 1$ if the union wins the election and 0 if it loses; X stands for control variables; and $\text{Pr}(\text{OPP})$ is the predicted probability of opposition obtained from the relevant logistic equation for opposition. The instrumental variables procedure should make $\text{Pr}(\text{OPP})$ uncorrelated with the error term U .

In this analysis we use a linear probability approximation to estimate the win equation because linearity allows us to apply readily the instrumental variables technique, whereas there is no easy way to apply the technique when the outcome function is nonlinear.¹⁴ Since the mean win rate for unions is about 0.5 in both our data sets, the linear approximation should be a good one.

Table 5 presents the results of our linear probability analysis of the determinants of a union victory. Columns 1 and 3 record the coefficients and standard errors for ordinary least squares estimates of the linear probability equation in our two data sets. We present the least squares estimates as a description of the relation among the variables in the data set and as a measuring rod for assessing what the instrumental variables do to the estimates. Columns 2, 4, and 5 give our instrumental variable estimates.

Since for the employer survey our model worked reasonably well in explaining unfair practices but failed to explain consultant days used, in column 2 we replace the variable for being found guilty of an unfair practice by its predicted value (from the model estimated in column 4 of Table 3) but leave the consultant days used variable as is. Both column 1 and column 2 show that consultant days used had a significant negative impact on the probability of a union win (see Lawler 1984 for a similar result); and both show that the compensation difference has a positive effect but with a sizable standard error. In the ordinary least squares equation of column 1 the estimated effect of unfair practice charges on a union win is positive with a standard error of approxi-

mately the same size. In the instrumental variable estimate of column 2 the estimated effect remains positive with a larger standard error.

Three factors stand out in the ordinary least squares estimates of the probability of a union victory in our analysis of the organizer survey in column 3. First is the massive statistically significant adverse effect of supervisory opposition on the probability of a union win: in our analysis *supervisory opposition is the most important management action to deter unionization*. Second is the sizable impact of the percentage of workers who sign cards on the probability of a union win, and the positive but more modest impact of the index of union propensity, supporting our use of these variables as indicators of the innate probability of a union win. Third is the positive coefficient on unfair practices, counter to our model and to rational behavior. (Why should management commit unfair practices if doing so increases the union's chance of winning?)

In the instrumental variable estimates in column 4 we replace the estimated probability of the employer committing an unfair practice with the predicted value of that probability from the model in column 1 of Table 4 and replace the 0-1 dummy variable for supervisors campaigning against the union with its predicted value from column 2 of Table 4. The results are striking: the coefficient on unfair practices changes from positive to negative while the coefficient on the effect of supervisors' campaigning against the union increases.¹⁵ Apparently, the endogeneity of management opposition greatly biased the estimated ordinary least squares estimates of

¹⁴ This model gives the correct conditional mean estimates as long as $E(OPP \mid \text{exogenous variables}) = Pr(OPP)$, where $E(OPP \mid \text{exogenous variables})$ is the expected value of opposition conditional on the exogenous variables; that is, the conditional mean estimates are correct if we have correctly modeled the form of the opposition equation. We prefer this methodology to the maximum likelihood bivariate logistic approach used by Lawler (1984) because it does not require correct specification of an entire system of equations.

¹⁵ Even fairly weak results for the impact of unfair practices on election outcomes are not at variance with time series or industry/state calculations that find that the proportion of workers organized through NLRB elections is greatly reduced by the frequency of unfair practices, since the pattern found in those studies largely reflects variation in the number of NLRB elections rather than in win rates. In any case, unfair practices in aggregate studies should be viewed largely as an *indicator* of management opposition that has its primary effect on the number of organizing campaigns.

Table 5. Determinants of Union Victory in NLRB Representation Elections:
Linear Probability Model.
(Standard Errors in Parentheses)

<i>Estimating Techniques and Summary Statistics</i>	<i>1986 Employer Survey</i>		<i>1982–83 Organizer Survey</i>		
	<i>OLS</i>	<i>Instrumental Variables</i>	<i>OLS</i>	<i>Instrumental Variables</i>	<i>Instrumental Variables</i>
Union Compensation Difference	0.270 (0.210)	0.22 (0.240)			
Consultant Days Used	-0.007 (0.003)	-0.007 (0.003)			
Unfair Practices ^{a, b}	0.12 (0.10)	0.30 (0.36)	0.090 (0.070)	-0.620 (0.400)	-0.530 (0.380)
Supervisors' Campaign Against Unions ^b			-0.370 (0.120)	-0.780 (0.420)	-1.050 (0.410)
Intensity of Supervisors' Campaign ^c			-	-	-0.160 (0.040)
% of Workers Signing Authorization Cards			0.830 (0.200)	0.540 (0.240)	0.570 (0.230)
Index of Union Propensity			0.012 (0.007)	0.007 (0.007)	0.002 (0.007)
Other Controls	A	A	B	B	B
N	184.000	184.000	232.000	232.000	232.000
R ²	0.11	0.10	0.180	0.180	0.250

Note. A: See Table 3 controls. B: See Table 4 controls.

^a In columns 1–2, “guilty of unfair labor practices”; in columns 3–5, “charged with unfair labor practices.” (The organizer survey provides no data on whether the charges were upheld.) The instrumental variable estimate in column 2 is obtained by replacing the unfair practice variable by its predicted value from the logistic equation in column 4 of Table 3. The instrumental variable estimates in columns 4–5 are obtained by replacing the unfair practice variable by its predicted value from the logistic equation in column 1 of Table 3.

^b The instrumental variable estimates in columns 4–5 are obtained by replacing whether supervisors campaigned against the union with the predicted value from the logistic equation in column 2 of Table 3.

^c See note *a* to Table 1.

the effect of this opposition on election outcomes in this data set.

Finally, in column 5 we add a variable for which the organizer survey has information in only about half of the cases—an index of the intensity of supervisory opposition, scaled from 1 to 5. (The survey question we used to derive this index is described at the bottom of Table 1.) With the mean entered for missing values and a dummy variable to flag those cases, the intensity of supervisors' opposition turns out to be a major determinant of outcomes, reinforcing our conclusion that supervisors are critical in management campaigns against unions.

Effect of Organizing Drives on Management Careers

Because most union studies are con-

cerned with what unions do for their members, they rarely investigate how organizing drives affect management. (See, however, Clark 1980 for intriguing evidence on a small sample of firms.) An analysis of management opposition to organizing drives cannot, however, neglect this issue. From the perspective of our model it is important to delineate the incentives managers, as opposed to stockholders, have to oppose unionism. Accordingly, in our employers survey we asked management whether plant managers were promoted, fired, sent for retraining, or reassigned in the wake of the NLRB representation campaign. In the larger project of which this study is a part, we asked firms to identify their closest competitors (see Freeman and Kleiner 1990) and we asked management in 33 of those firms (none of whom faced an organizing

drive during the 1979–86 period) about career outcomes for their managers.

Table 6 tabulates the pattern of management career outcomes by the organizing status of the firm. Line 1 shows the distribution of changes in manager status for 202 establishments in our sample in which elections took place. Lines 2 through 4 give the distributions for varying outcomes of the organizing drive: a union win and a contract; a union win and no contract; and a union loss in the election. Line 5 gives the distribution for the “control” subsample of nonunion establishments that did not face an organizing drive, and line 6 shows the distribution for the matched pairs of these establishments.

The results show that an organizing drive and a union victory have a definite impact on the careers of managers. Eight percent of managers in the sample of establishments with organizing drives were

fired, and 10% in the subsample who lost the election to the union and ended up with a collective bargaining contract were fired, compared to 2% in our control sample. At the other end of the spectrum, just 3% of managers in the sample facing an organizing drive and none in the sample who ended up with a union contract were promoted, compared to 21% of managers in our control group.

These findings (consistent with Clark’s earlier results) have two implications for understanding the management response to organizing drives. They suggest that managers have a strong incentive to engage in labor relations practices that deter union organizing activity and, faced with a drive, to fight fiercely to defeat the union. They also suggest that a union organizing drive signals stockholders and top management that the plant management is poor and should be replaced.

Table 6. Percentage of Firms Changing Manager Status, by Organizing Drive, 1986 Employer Survey.

Description of Establishments	No Change	Manager Promoted	Manager Sent for Retraining	Manager Reassigned to Another Location	Manager Fired	Other	No Answer
(1) All establishments with organizing drives (Percent) N=202	76	3	1	3	8	8	1
(2) Establishments where the union won and a contract was reached (Percent) N=50	82	0	2	2	10	4	2
(3) Establishments where the union won the election, but no contract was reached (Percent) N=28	61	7	0	4	7	18	4
(4) Establishments where the union lost the election (Percent) N=124	77	3	0	3	7	8	1
(5) Sub-sample of firms without union and no election N=33 ^a	41	21	3	4	2	9	—
(6) Paired Sub-sample of firms [with those in (5)] with organizing drives N=33	70	0	0	3	15	6	6.1

Percentages sum to less than 100 due to rounding.

^a These values are the means of the percentages of the change in manager status over the same time period as firms experiencing an organizing drive.

Conclusions

In this study we have examined the determinants and consequences of employer opposition to union organizing drives. Our results reveal some substitution between “positive industrial relations”—as indicated by wages, benefits, and work conditions—and more adversarial management tactics toward unions. Firms that had higher wages and better work conditions and supervisory practices and more benefits were less likely to commit unfair labor practices than firms with lower wages and less favorable conditions. In our organizer survey data set, we found that in firms with poor work conditions and supervisory problems, supervisors were especially likely to campaign against the union; that firms with a large percentage of workers signing authorization cards were less likely to commit unfair practices; and that the most effective “hardnosed” company tactic was to have supervisors campaign intensely against the union. In our employer survey data set we found that companies that brought in consultants were more likely to defeat unions than other firms, and that managers whose establishments faced or

lost organizing drives were more likely than other managers to suffer setbacks to their careers (firing, reassignment, retraining, or failure to be promoted).

We found some support for the nonlinearities predicted by our model. First, in our employer survey, the potential union compensation differential had a parabolic-shaped effect on management opposition as proxied by unfair labor practices. Second, in our organizers’ survey, management opposition tended to be stronger when the likelihood of a union victory was in serious doubt than when it was either very high or very low. In that data set, instrumental variable estimates that take account of the endogeneity of management opposition yielded more sensible estimates of the impact of committing unfair practices on the union’s likelihood of winning than did single equations estimates.

We interpret our results as consistent with the hypothesis that firms behave in a profit-maximizing manner in opposing an organizing drive. We also find that management opposition, reflected particularly in the actions of supervisors, is a key component in union inability to organize workers in the United States.

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