

The Introduction of Works Councils in German Establishments – Rent Seeking or Rent Protection?

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Abstract: Some recent empirical studies seem to suggest that German works councils engage in rent seeking activities rather than in the creation of joint establishment surplus. However, those cross-sectional studies do not address the issue of causation. We address this issue by investigating the factors that influence the employees' decision to introduce a works council in their establishment. Councils are more likely to be adopted in establishments with a very poor earnings situation and poor employment growth. They are also more likely to be adopted in establishments where management does not pursue an expansive market strategy. Altogether, our results support the hypothesis that employees introduce works councils to protect the quasi-rents they have created by their efforts and human capital investments.

JEL Classification: J53, J32, D23.

Key Words: Works Council, Employment, Downsizing, Financial Distress, Market Strategy.

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1. Introduction

German works councils have attracted considerable attention as an alternative form of worker participation to promote industrial democracy and to improve both the quality of working life and economic performance. Yet, some recent empirical studies seem to suggest that works councils engage in rent seeking activities rather than in the creation of joint establishment surplus. Works councils appear to be associated with lower profitability (Addison *et al.* 2001), reduced employment growth (Addison and Teixeira 2006) and an increased probability of plant closing (Addison *et al.* 2004). However, those cross-sectional studies do not address the issue of causation. If the establishment faces a long-term shrinkage of its market or severe financial distress due to poor management, workers may have an increased interest in introducing a works council to protect the quasi-rents they have created by their efforts and human capital investments. In this case, the presence of a council is not the cause of low profits or reduced employment growth. It rather reflects the long-term crisis that has caused the actual economic situation of the establishment.

This point is related to research on unions and employment growth in Great Britain. While Blanchflower *et al.* (1991) found evidence for a negative association between unions and employment growth, Machin and Wadhwani (1991) showed that the association disappears once endogeneity of unionization has been accounted for. The results by Machin and Wadhwani support the hypothesis that workers in shrinking firms demand unions to reduce the risk of being sacked unfairly.

Our paper attempts to address the issue of causation by investigating the factors that influence the introduction of works councils in German establishments. The introduction of a council depends on the initiative of the establishment's workforce. Our specific focus is on the economic situation preceding the employees' decision to adopt a council. If works councils primarily play the role of a rent-seeking institution, they should be more likely to be created in prospering establishments with high rents the workers can appropriate through a

council. Yet, if councils rather help employees to protect their quasi-rents, they should be more likely to be created in establishments with financial distress where employees face the danger that managers will renege on implicit contracts with the workforce.

We use data on a sample of manufacturing establishments in Germany to examine the determinants of the introduction of works councils. The results show that works councils are more likely to be adopted in establishments with a very poor earnings situation and poor employment growth over the past year. Works councils are also more likely to be adopted in establishments where management does not pursue an expansive market strategy. These findings support the hypothesis that employees rather introduce works councils in a crisis situation to protect the quasi-rents they have created by their efforts and human capital investments.

While there is an increasing number of studies on German works councils, little attention has been paid to the determinants of their introduction. Two exceptions are the studies by Addison *et al.* (2003) and Dilger (2003). They do not find a significant association between the establishment's earnings situation and works council introduction. However, most of the estimated coefficients on the other variables used in those studies are also poorly determined. One reason might be that the studies take into account only very few explanatory variables. Variables for market strategy and preceding changes in employment are not included in the regressions. Moreover, the number of control variables is relatively small in those studies. Hence, their estimates are likely to suffer from an omitted variable bias.

In contrast, our study is based on a broader set of explanatory variables. Like the coefficients on our variables of primary interest, most of the estimated coefficients on the control variables are well determined. First, the structure of the workforce plays a role. The proportion of skilled blue-collar workers is a positive determinant of the adoption of a works council, while the shares of part-time workers and apprentices are negative determinants. Second the managerial environment plays a role. A council is more likely to be adopted if

management has a positive view toward employees' involvement in decision making. Third, technology and HRM practices exert an influence. A research-based strategy, profit sharing for employees and the use of group incentives are positively associated with the adoption of a council. Finally, general establishment characteristics such as the number of employees, branch plant status and the legal status of the establishment turn out to be determinants of works council introduction.

The rest of the paper is organized as follows. The institutional framework is described in Section 2. In Section 3, we discuss the theoretical background. Section 4 describes the data and the variables. Section 5 presents the results while Section 6 concludes.

2. Institutional Framework

Compared to councils in most of the other West European countries, German works councils have acquired relatively extensive powers (see the contributions in Rogers and Streeck 1995). Their rights are defined in the Works Constitution Act (WCA), which was introduced in 1952 and amended in 1972, 1989, and 2001. The law states that councils shall be elected by the whole workforce of establishments with five or more employees. However, their creation depends on the initiative of the establishment's workforce. Hence, councils are not present in all eligible establishments.

To introduce the works council, a meeting of the workforce has to be initiated by at least three employees or by a union that has at least one member in the establishment. At this works meeting, the electoral board is determined by a majority vote of those who are present. If the works meeting fails to elect the electoral board or the meeting has been called for but not held, the labor court appoints a board upon petition. After being established, the electoral board calls the election, implements it and announces the results.

Works councils negotiate over a bundle of interrelated company policies. On some issues, they have the right to information and consultation, in others a veto power over

management initiatives, in still others the right to coequal participation in the design and implementation of policy. Their rights are strongest in social and personnel matters such as the introduction of new payment methods, the allocation of working hours and the introduction of technical devices designed to monitor employee performance.

Works councils are institutionalized bodies of worker representation that have functions that are distinct from those of unions. They do not have the right to strike. If council and management fail to reach an agreement, they may appeal to an internal arbitration board or to the labor court. Moreover, the WCA does not allow wage negotiations; the aim is to restrict distributional conflicts on the establishment level. Rather works councils are designed to increase joint establishment surplus. Council representatives are required by law to cooperate with management “in a spirit of mutual trust . . . for the good of the employees and of the establishment.”

3. Theoretical Background

3.1 Rent Creation and Rent Protection

The possibility of employer opportunism is one explanation as to why works councils may play the intended role in building cooperative and trustful industrial relations (Askildsen *et al.* 2006, Blair 1999, Dow 1987, Foss *et al.* 2006, Freeman and Lazear 1995, Smith 1991, 2006). Employees withhold effort and cooperation when an employer cannot credibly commit to take their interest into account. If information about productivity enhancing innovations is in the hands of workers, they may not wish to reveal it when they fear job loss due to technological change. Similarly, workers may not invest in their specific human capital when they fear that the employer will behave opportunistically by withholding promised wage increases or promotions. Another well-known example is the ratchet effect. Workers, receiving performance pay, may withhold effort when they anticipate that the employer will alter future payment terms in light of the workers' past performance. Providing works councils with

information and codetermination rights is one way to protect the interests of the workforce and to cooperatively realize mutual gains for the employees and the owners of the establishment.¹

Codetermination is not the only solution to the employer's commitment problem. Under some circumstances, repeated games and reputation concerns can induce an employer to behave honestly (Baker *et al.* 1994, Bull 1987, Kreps 1990). Therefore, self-enforcing contracts may stand as an alternative in order to engender the trust which is important for the workers' cooperation. However, the reputation mechanism is far from being perfect. In a world with incomplete information, unforeseen contingencies and bounded rationality, employer and employees may initially cooperate in a trustful manner, while the employer may at a later date be tempted to renege on the promises made to the employees. As long as employees trust their employer, they will provide effort and the willingness to invest in their specific human capital even if no works council is present. Yet, if circumstances change at a later date and employees fear that the employer will behave opportunistically, they may introduce a works council to protect their quasi-rents. The information rights of the works council make it more difficult for the employer to hide opportunistic actions. Moreover, opportunities for employer opportunism are limited by the codetermination rights of the council. Finally, a works council may facilitate communication and coordination among employees. To the extent coordinated actions of the workforce result in a more severe punishment of employer opportunism, the employer's incentive to renege on an implicit agreement is reduced (Hogan 2001).²

The employer is more likely to break trust on behalf of short-term gains when the profits from future cooperation with the workforce appear to be small. This is the case for firms facing a long-term shrinkage of their markets or severe financial distress due to management failures. Bertrand (2004) provides empirical evidence that employers are more likely to renege on implicit contracts when they are under financial pressure. Hence, if works

councils help workers to protect their quasi-rents, they should be more likely to be introduced in establishments where workers anticipate a long-term crisis.³

3.2 Rent Seeking

Works councils may not only have an impact on the protection but also on the redistribution of firm-specific rents (Addison *et al.* 2001). Codetermination rights strengthen the workers' bargaining power in formal or informal negotiations. A council may use its codetermination rights on social or personnel matters to obtain employer concessions on issues where it has no legal powers. Even though wage negotiations between council and management are not authorized by law, the works council may have an influence on the wage level. If employer and works council fail to reach an agreement in informal wage negotiations, the council can threaten to be uncooperative in areas where its consent is necessary. Moreover, works councils may use their bargaining power to negotiate less productive work practices that require lower effort of the employees.

If codetermination is primarily characterized by rent-seeking behavior, works councils should be more likely to be created in prospering establishments. Prospering establishments have high rents that can be appropriated by the council for the employees. Higher rents allow the works council to demand higher wage increases. Furthermore, low effort is less likely to cause a financial crisis in prospering establishments.

4. Data and Variables

4.1 Data Set

The empirical investigation is based on the Hanover Panel, a four-wave panel with data from manufacturing establishments in the federal state of Lower Saxony (Gerlach *et al.* 2003). The population consists of all manufacturing establishments with five or more employees. The sample is stratified according to firm size and industry. The Hanover Panel was financed by the Volkswagen foundation. Interviews were conducted by Infratest Sozialforschung, a

professional survey and opinion research institute. The data were collected on the basis of a questionnaire in personal interviews with the owner, top manager or head of the personnel department. In the first wave of interviews (1994) 51 percent of the establishments in the sample agreed to participate. In spite of this non-response rate the difference between the planned and realized stratification is so small that the data are representative of the manufacturing establishments in Lower Saxony in 1994 and in the subsequent waves. The number of firms taking part in the panel study declined from 1025 (1994) to 849 (1995), 721 (1996) and 709 (1997).⁴

The questionnaire covered various aspects of establishment structure, establishment behavior and establishment performance with an emphasis on issues relating to personnel. A nucleus of themes was addressed annually. Different additional topics were sampled in consecutive waves. Information on the presence of a works council is available from the first wave (autumn 1994) and the third wave (autumn 1996).

4.2 Works Council Introduction

Changes in works council status are not very frequent. Considering all establishments that participated in the first and in the third wave, 56.2 percent had a council and 38.7 percent had no council in both years, 1994 and 1996. Hence, the share of establishments with a change in works council status was 5.1 percent. Our focus is on the introduction of works councils. Therefore, we restrict the empirical analysis to establishments that had no council in the year 1994. We define a dummy variable equal to 1 if a works council has been introduced during autumn 1994 and autumn 1996. The variable equals zero if no council has been introduced during those years. Table 1 shows the descriptive statistics.⁵ 7.4 percent of those having no council in 1994 introduced it in the period under consideration.

4.3 Variables for the Economic Situation of the Establishment

Several variables capture the previous economic situation of the establishment. A dummy

variable for a very poor earnings situation and a dummy variable for a poor earnings situation of the establishment are included in the regressions.⁶ Both variables refer to the year 1993. The previous growth rate of employment is also taken into account. The difference between the number of employees in autumn 1994 and at the end of 1993 is divided by the number of employees at the end of 1993. Moreover, a dummy variable for an expansive strategy is included. This variable is equal to one if the management plans to increase the market share of the firm. Firms that anticipate stagnating or shrinking sales opportunities are hardly able to pursue an expansive strategy.

As discussed in our theoretical section, works councils can be seen either as a rent-seeking institution or as an institution that protects rents. These views make contrary predictions regarding the relationship between the establishment's economic situation and the introduction of a works council. The rent-seeking hypothesis implies a positive relationship between the establishment's economic performance and the adoption of a council whereas the rent protection hypothesis implies a negative relationship. Note that the variables for the earnings situation indicate financial distress while the variables for employment growth and market strategy indicate a prospering economic development. Hence, if works councils primarily play the role of a rent-seeking institution, the variables for the establishment's earnings situation should exert a negative influence on the introduction of a council whereas the variables for employment growth and market strategy should exert a positive influence. Yet, if works councils primarily help employees to protect their quasi-rents, the variables for the earnings situation should have a positive influence on the adoption of a council whereas the variables for employment growth and management strategy should have a negative influence.

4.4 Control Variables

Several variables control for the structure of the workforce to take into account that different

types of workers may differ in their taste for representation. The first set of variables includes the share of university graduates, the share of blue-collar workers and the share of skilled blue-collar workers. For two reasons, we anticipate that specifically the proportion of skilled blue-collar workers should have a positive influence on the adoption of a works council. First, qualified workers may be more interested in a council to protect the quasi-rents they have created by their human capital investments. Second, qualified blue-collar workers may be less individualistic than qualified white-collar workers who have a stronger focus on their personal career.

Furthermore, variables for the share of apprentices and for the share of part-time employees are included. Part-time employees miss more events in the workplace. Moreover, part-time jobs are often peripheral jobs (Heywood *et al.* 2006). Therefore, a works council may face difficulties in effectively representing part-time employees (Jirjahn and Smith 2006). This view is supported by Jirjahn and Tsertsvadze (2006). They find that the presence of a works council is associated with lower job satisfaction of part-time employees while it has no or even a positive influence on the job satisfaction of full-time employees. Hence, part-time employees should be less likely to introduce a council. The share of apprentices should also be negatively associated with the adoption of a works council. Apprentices may be more likely to fear informal sanctions by the employer as the successful completion of their training depends on the employer's cooperativeness.

The introduction of a council may also be influenced by human resource management practices. To examine the influence of direct employee involvement, we include a variable for direct participation of employees in investment decisions. The impact of direct employee involvement is ambiguous. On the one hand, direct forms of employee involvement may be substitutes for works councils. On the other hand, employee representation through works councils and direct employee involvement may complement each another. If employees reveal information about potentially productivity-enhancing innovations, a council may

ensure that this information is not used against the employees' interests.

Group based performance pay is widely considered as an important element of human resource management practices. We include variables for profit sharing and for the use of group piece rates. For two reasons, we anticipate that these payment schemes are positively associated with the introduction of a works council. First, employees receiving profit sharing or group piece rates may fear employer opportunism. They may fear that management does not pursue increased financial performance or that profit accounting is manipulated.⁷ Additionally, group piece rates can be subject to the ratchet effect or speed-up concerns more commonly associated with individual piece rates.⁸ Workers may introduce a council to reduce the danger of these types of employer opportunism. Second, group based performance pay is often thought to foster cooperation and cohesion among employees (FitzRoy and Kraft 1986). Such cooperation may be important for the introduction and functioning of a works council (Levine 1991).

Furthermore, we include variables for a state-of-the-art production technology and for a research-based market strategy. A research-based market strategy may involve an increased risk for the employees as product innovations often fail. Future reductions in employment or wages may be the consequence. Hence, employees have an increased interest in participating in decisions about such risky innovation strategies. Additionally, it can be argued that a research-based strategy requires intensive communication between employees and management to produce innovative ideas. Workers in research-intensive firms may introduce a council to ensure that their innovative ideas are not used against their interests.⁹

The legal form of the establishment may also have an influence on the risk taking behavior of management. Stiglitz and Weiss (1981) argue that the owners of the firm are more willing to support risky projects if they are protected by limited liability. Hence, workers should be more likely to adopt a council if owners are protected by limited liability. To take into account this aspect, dummy variables for a limited company and for a limited partnership

with a limited company as limited partner are included.

Legally, the introduction of a council depends on the employees' decision. However, management may influence this decision. This is captured by a dummy variable for a positive management attitude toward employee involvement in decision making. A positive management attitude may not only have an impact on the functioning but also on the introduction of a works council (Jirjahn and Smith 2006). If management thinks that the presence of a council contributes to trustful and cooperative employer-employee relations, it will encourage employees to adopt a council. Sharing decision-making power has a commitment value, ensuring that managers cannot unilaterally overrule employees' interests. Yet, if management does not value employee involvement, it will try to ensure effort by intensively monitoring employees and sharply limiting their scope for decision making instead of building cooperation and loyalty. In this situation, an authoritarian employer will try to suppress works councils by exerting informal pressure on any employee who shows interest in this institution.¹⁰

We further include a dummy variable for the coverage by a collective bargaining agreement. Collective bargaining agreements are usually negotiated between unions and employers' associations on a broad industrial level. Firms are typically covered by a collective bargaining agreement if they are members of an employers' association. The relationship between collective bargaining coverage and the adoption of works councils is ambiguous. On the one hand, the coverage by a collective bargaining agreement can be seen as an indication of the influence of unions in an establishment. Wever (1994) argues that works councils need support by unions to be able to strategically shape local outcomes. This suggests a positive link between collective bargaining coverage and works council introduction. On the other hand, case study evidence shows that the relationships between councils and unions are not always without conflicts (Müller-Jentsch 1995). Moreover, a theoretical analysis by Hübler and Jirjahn (2003) suggests that collective bargaining coverage

may discourage workers from adopting a council. The reason behind this result is that the coverage limits the scope for establishment-level bargaining. Therefore, workers may be less likely to be interested in works councils.

Finally, we consider variables for general establishment characteristics. Firms size should have a positive influence on the propensity to adopt a council. The number of employees in the establishments suggests a more complex and hierarchical organization. Councils may mitigate transaction costs in larger establishments, where the need for communication may be higher. Moreover, the legal rights of councils are stronger in larger firms. Employees have less incentive to initiate councils when their resulting rights are more limited. Establishment age may also be linked with council introduction. In younger establishments that are at the beginning of their life cycle, there might be less potential for severe conflicts between management and employees (Jirjahn and Smith 2006). We capture age with a dummy variable for establishments founded before 1960. Furthermore, dummy variables for branch plant status and for the industry affiliation of the establishment are included.

5. Empirical Results

Table 2 presents the results. The determinants of works council introduction were estimated with the probit procedure. Marginal effects are evaluated at the mean value of the dependent variable. Many of the control variables take statistically significant coefficients of the expected sign. The coefficients on the variables identifying the structure of the workforce generally conform to expectations. The share of skilled blue-collar workers is a positive determinant of works council introduction while the shares of apprentices and part-time employees are negative determinant. Human resource management practices play a role, too. Profit sharing for employees and the use of group piece rates have a positive influence. However, direct employee involvement is no statistically significant determinant.

Furthermore, a research-based market strategy, limited liability of the owners, a positive management attitude, establishment size, age and branch plant status are positively associated with the introduction of works councils. The coverage by a collective bargaining agreement has no significant influence.

Most importantly, the coefficients on the variables reflecting the economic situation of the establishment reveal a clear pattern. Works councils are more likely to be adopted in establishments with poor performance. If the establishment's earnings situation is very poor, employees are 17.4 percentage points more likely to introduce a works council. If management does not pursue an expansive market strategy, the workforce is 14.3 percentage points more likely to adopt a council. Moreover, employment reductions increase the probability of council adoption. An employment reduction of 10 percent is associated with a 4.9 percentage point higher probability that a council is introduced.

6. Concluding Remarks

While the introduction of a council appears to be a relatively rare event, it helps to address the issue of causation. Our results clearly show that councils are more likely to be adopted in establishments with financial distress or declining employment. This supports the hypothesis that employees introduce works councils to protect the quasi-rents they have created by their efforts and human capital investments. The results do not support the view that employees primarily introduce councils to appropriate rents from the owners of the establishment. Hence, our analysis casts doubt on cross-sectional studies finding that works councils are associated with lower profitability and reduced employment growth. Our findings indicate that the presence of a works council is not the cause of poor establishment performance. It rather reflects the crisis that has caused the actual economic situation of the establishment. Revisiting those cross-sectional studies by taking into account that the presence of a council may be endogenous stands as important future research.

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Table 1: Variable Definitions and Descriptive Statistics ($N = 270$)

| <i>Variable</i> | <i>Description (mean, standard deviation)</i> |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Introduction of a works council | Dummy variable equal to 1 if the establishment has no works council in the autumn 1994 and experienced the introduction of the entity sometime within the next two years (.074, .262). |
| Expansive strategy | Dummy variable equal to 1 if management reports in autumn 1994 that it plans to increase the market share of the firm (.519, .501) |
| Very poor earnings situation | Dummy variable equal to 1 if management reports that the establishment's earnings situation in 1993 was very poor (.048, .214) |
| Poor earnings situation | Dummy variable equal to 1 if management reports that the establishment's earnings situation in 1993 was poor (.085, .280) |
| Employment growth rate | (Number of employees in autumn 1994 minus number of employees at the end of 1993) divided by number of employees at the end of 1993 (.026, .142) |
| Part-time workers | Part-time employees in autumn 1994 as a proportion of total employees (.115, .156). |
| Blue-collar workers | Blue-collar workers in autumn 1994 as a proportion of total employees (.601, .202). |
| Skilled blue-collar workers | Skilled blue-collar workers in autumn 1994 as a proportion of total employees (.428, .279). |
| University graduates | University and college graduates in autumn 1994 as a proportion of total employees (.025, .046). |
| Apprentices | Apprentices in autumn 1994 as a proportion of total employees (.050, .078). |
| Positive management attitude | Dummy variable equal to 1 if management has in autumn 1994 a positive view toward employee involvement in decision making (.752, .433). |
| Technology | Dummy variable equal to 1 if the production technology is of the most recent vintage in autumn 1994 (.374, .485). |
| Research | Dummy variable equal to 1 if management reports in autumn 1994 that strengthening research and development is at the heart of the establishment's strategy (.152, .360). |
| Profit sharing | Dummy variable equal to 1 if the establishment has in autumn 1994 a profit sharing plan for its employees (.141, .348). |
| Group piece rates | Dummy variable equal to 1 if the establishment uses in autumn 1994 piece rates in its production departments based on group performance (.019, .135). |
| Participation in investment decisions | Dummy variable equal to 1 if the management reports in autumn 1994 that employees, who will work directly with the investment (e.g. the machine), participate in decisions about large production investments (.637, .482). |
| Collective agreement | Dummy variable equal to 1 if the establishment is in autumn 1994 covered by a collective bargaining agreement (.433, .496). |
| Establishment size | Number of employees in autumn 1994 (40.76, 46.62). |
| Establishment age | Dummy variable equal to 1 if the establishment was founded before 1960 (.533, .500). |
| Branch plant | Dummy variable equal to 1 if the establishment is in autumn 1994 a branch plant (.044, .206). |
| Limited company | Dummy variable equal to 1 if the establishment is in autumn 1994 a Private Limited Company (.500, .501). |
| Limited partnership | Dummy variable equal to 1 if the establishment is in autumn 1994 a Limited Partnership with Limited Company as Limited Partner (.230, .421). |
| Industry dummies | Dummy variables for 9 broad industrial groups in the manufacturing sector. |

Table 2: Determinants of Works Council Introduction

| <i>Explanatory Variable</i> | $\hat{\beta}$ | $ t_{\hat{\beta}} $ |
|---------------------------------------|------------------|---------------------|
| Expansive strategy | -1.023 [-.1434] | 2.25** |
| Very poor earnings situation | 1.241 [.1740] | 2.33** |
| Poor earnings situation | -.2288 [-.0321] | .40 |
| Employment growth rate | -3.519 [-.4934] | 3.34*** |
| Part-time workers | -3.444 [-.4829] | 1.89* |
| Blue-collar workers | -.1726 [-.0242] | .18 |
| Skilled blue-collar workers | 2.896 [.4061] | 3.85*** |
| University graduates | 1.436 [.2014] | .38 |
| Apprentices | -22.04 [-3.091] | 3.00*** |
| Positive management attitude | .7590 [.1064] | 2.09** |
| Technology | -.2608 [-.0366] | .63 |
| Research | .8695 [.1219] | 2.19** |
| Profit sharing | 1.293 [.1814] | 2.54** |
| Group piece rates | 1.343 [.1884] | 2.12** |
| Participation in investment decisions | -.2365 [-.0332] | .64 |
| Collective agreement | -.4815 [-.0675] | 1.36 |
| Establishment size | .0298 [.0042] | 2.41** |
| Establishment size squared | -.0001 [-.00002] | 1.85* |
| Establishment age | 1.166 [.1636] | 3.29*** |
| Branch plant | 1.578 [.2213] | 2.61*** |
| Limited company | .8113 [.1138] | 1.88* |
| Limited partnership | -.4618 [-.0648] | 1.07 |
| Constant | -6.096 | 5.22*** |
| Industry dummies | Included | |
| McFadden R ² | .4844 | |
| Number of observations | 270 | |

Method: Probit-ML. * Statistically significant at the .10 level; ** at the .05 level; *** at the .01 level. T-statistics are based on robust standard errors. Marginal effects calculated at the mean of the dependent variable are in square brackets.

Endnotes

¹ However, policy intervention may be necessary to realize these mutual gains. Levine (1995) discusses several potential market failures in the provision of workplace democracy.

² See also Masten (2006) for a general discussion of coordination and self-enforcement.

³ This point is related to FitzRoy and Kraft's (1987) management incompetence hypothesis. They argue that councils are particularly important for the performance of firms if there are inefficiencies due to poor management.

⁴ Since the survey is based on the voluntary participation of establishments, the decline in sample size is not unusual. For the establishments not participating in the subsequent waves one main reason was that time limitations hindered participation.

⁵ Descriptive statistics and the multivariate analysis are not weighted. The sampling weights available in the data set only correct for stratification by establishment size. Thus, using the weights in multivariate regressions will probably result in biased estimates. A more appropriate method is to control for the two stratification characteristics firm size and industry (Winship and Radbill 1994). To relate descriptive statistics to regression results, they are also not weighted.

⁶ The variables are perceptual measures of establishment performance that are reported by the establishment's top management. Addison *et al.* (2001), who found a negative cross-sectional association between works council presence and the establishment's earnings situation, also used a perceptual measure. Hence, our results can be closely contrasted with their results. The use of such perceptual measures has been validated by several studies. Those studies provide evidence that perceptual measures correlate positively with objective measures of firm performance (Dess and Robinson 1984, Venkatraman and Ramanujam 1987, Wall *et al.* 2004).

⁷ Evidence from the US movie industry indeed suggests such distrust can be justified (Chetham *et al.* 1996). If actors' pay is based on the net profits of a film, the movie company can reduce cost by "creative accounting".

⁸ A theoretical analysis by Meyer (1995) shows that the ratchet effect may be even more severe if workers receive a group piece rate.

⁹ Smith (1994) provides evidence that employee involvement particularly fosters improved product quality and incremental innovations.

¹⁰ This case of council suppression is analogous to that of union suppression documented by Kochan and Katz (1988) for the US.