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The results showed that most major changes occurred in organizational structures and administration, undertaken primarily to increase efficiency and as a response to financial difficulties. In the private sector, the planning and design phases of change projects were dominated by top management, with very little involvement by non-managerial employees. Public sector employees played a larger role in the early phases of the projects, mostly through their elected representatives in legally prescribed forums. In both the private and public sector, there was more worker participation in the execution of change, both through elected representatives and more direct worker involvement of an ad hoc, firm-specific, nature.

Neither the extent nor form of participation contributed to the success of the change projects. Instead, the project outcomes were primarily a function of external pressures experienced by the organization, the importance of renewal for organizational survival, and the flexibility of management and labor to accommodate to change. Resistance to change did not decrease as a function of worker participation, but it was influenced by the degree of labor-management agreement in the firm.

Keywords

study, organizational change, projects, private, public, sector, firms, management, union, workforce, work, employee, participation, manager, Norway, labor

Comments

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**Organizational Renewal:
The Management of Large-Scale Organizational
Change in Norwegian Firms**

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This paper has not undergone formal review or approval of the faculty of the ILR School. It is intended to make results of Center research, conferences, and projects available to others interested in human resource management in preliminary form to encourage discussion and suggestions.

Abstract

A study of large organizational change projects was done in 228 private and public sector firms across Norway to examine the causes and consequences of renewal efforts and the strategies used by firm level management and union leaders to involve the workforce in the planning, design and execution of change. The research focus was on management's choice of different forms of worker participation and their effects on the project outcomes. Data came from structured interviews with the top manager and an elected employee representative in each firm.

The results showed that most major changes occurred in organizational structures and administration, undertaken primarily to increase efficiency and as a response to financial difficulties. In the private sector, the planning and design phases of change projects were dominated by top management, with very little involvement by non-managerial employees. Public sector employees played a larger role in the early phases of the projects, mostly through their elected representatives in legally prescribed forums. In both the private and public sector, there was more worker participation in the execution of change, both through elected representatives and more direct worker involvement of an *ad hoc*, firm-specific, nature.

Neither the extent nor form of participation contributed to the success of the change projects. Instead, the project outcomes were primarily a function of external pressures experienced by the organization, the importance of renewal for organizational survival, and the flexibility of management and labor to accommodate to change. Resistance to change did not decrease as a function of worker participation, but it was influenced by the degree of labor-management agreement in the firm.

Changes in world markets, technology and the structure of the economy have put severe pressures on both private and public enterprises to adapt to new business demands. At the firm level, responses have included changes in organizational structures, management philosophies and employment levels, the introduction of new technologies, work processes and work methods, and the movement into new markets and sources of capital.

Organizational renewal and change may be a business necessity, but it carries large costs, not the least in the form of employee resistance. Workers' resistance to change in the workplace is a well-documented phenomenon in the history of employment relations. It has ranged from open rebellion (e.g., Taylor, 1911) to subtle sabotage (e.g., Coch and French, 1948; Goodman, 1979), and has usually been based on workers' legitimate fears about job security, wage-cuts, and loss of power (e.g., Burawoy, 1979; Edwards, 1979; Barley, 1988).

To introduce and manage change successfully, employers have had to convince their employees to accept the changes, or at the very least, find ways to minimize or neutralize the resistance. This has been done by paying people for their cooperation through various incentive programs, such as gainsharing, profit sharing, employee stockownership (Hammer, 1988) or wage and fringe benefit improvements (Lawler, 1986), by persuading employees that their future employment and personal prosperity are contingent on compliance (Gerhart, 1987), or by involving workers in the decisions about the changes to provide them the opportunity to protect their group interests.

In a number of industrial communities, the third solution is not longer optional. Worker participation in managerial decision making has been defined by laws which either dictate that an employer negotiate changes in employment conditions with worker representatives through a collective bargaining process, or include worker representatives as regular members of the organization's decision making bodies (i.e., codetermination). An employer can obviously include workforce representatives in decision making at the policy or strategic management level without legislation, as the practice in a number of U.S. firms demonstrates (e.g., Kochan, Katz and McKersie, 1988; Hammer, Currall and Stern, 1991), but in countries with codetermination laws, it will be impossible for a law abiding employer to avoid including employees somewhere in the decision making process on organizational change (see, for example, Gustavsen and Hunnius, 1981; Streeck, 1984).

However, neither law nor practice can ensure that change is easier to accomplish with employee participation. While incorporating employee interests into the decision making should lessen resistance and perhaps even create commitment to the changes, the process of

decision making can be time consuming and inefficient depending on the amount and complexity of legislation, and the accommodation to worker interests may compromise the practical utility of the solution. When organizations must adapt quickly to external demands for change, codetermination laws, despite all good intentions, may be a serious obstacle to an effective response. It is therefore of considerable practical interest to study what happens in organizational renewal and change projects when employee participation is prescribed by law.

In this article we examine the process involved in, and the results of, managing large scale organizational changes in Norway, which has an extensive set of laws dictating the participation of non-managerial employees in decision making in a large number of areas from the shop floor to the board room. We report the results of a study of public and private sector firms which have recently experienced large scale changes in organizational structures, technologies, markets, and/or employment levels in response to economic pressures to make them more effective and competitive. This is the most extensive period of change in Norwegian economic history since the early 1960s (Mjoeset, 1986).

The purpose of this research was to test whether a model of negotiation and accommodation, which has characterized Scandinavian employment relations since the early 1950s and is codified in a web of agreements between employers, trade unions and the state at the national level, works well on the firm level when organizations must change to meet the demands imposed by a more turbulent business environment. We also investigated how the change processes were managed by corporate and trade union leaders in their efforts to balance the market demands for speedy improvements in organizational effectiveness and firm level adaptability and Norway's industrial democracy legislation. In particular, we examined who lead, or managed, change projects, how the workforce was involved in the management of the projects, what the external and internal obstacles to effective change were, and what determined the outcomes of the projects. The unit of analysis was the firm.

In the following section we describe the "Scandinavian Model" of employment relations and the role which worker participation plays in it, the hypotheses about organizational change that follow from the model, and hypotheses about the factors that effect change processes and outcomes in general.

The Scandinavian Model

In Norway, Sweden and Denmark the relationship between employers and employees, or management and labor, is codified in industrial democracy laws and national collective bargaining agreements which define the roles each party should play in organizational

governance. At the national level, the model contains a state that favors legislation as a means for regulating the relationships between interest groups in society, a strong and centralized trade union movement, and tight coupling between the state and the centralized trade union. At the firm level, the model means high union density, a tradition of solving interest group disputes through negotiation, the use of worker participation and labor-management collaboration to solve practical problems, and stable, low conflict labor-management relations (IDE, 1980a; Bruun, 1990).

The government mandates and the practice of centralized collective bargaining have created organizational structures to support a representative, or indirect, model of participation, in which a few elected or appointed employees act as labor's voice on behalf of their constituents (see the Company Act, amended in 1973 and the Work Environment Act of 1977; described in Gustavsen and Hunnius, 1981.)

The Scandinavian model is anchored in the traditional definition of collective bargaining found in the core manufacturing industries, where the workforce is closely tied to the trade union movement and the practice of following formal agreements to the letter is strong. But the model has shown signs of disintegration, particularly in Sweden where the Swedish Employers Confederation and the central trade union are pulling in opposite directions with respect to centralization and decentralization of collective bargaining (Myrdal, 1991). In Norway, the model is still a reasonable characterization of employment relations, although the supremacy of formal participative structures over more informal, loosely defined mechanisms for direct involvement by larger groups of employees is no longer assured.

The erosion has resulted from several macro-level changes. Beginning in the early 1980s, trade union memberships declined in general and the Confederation of Trade Unions (LO) lost members to other national unions. The close ties between LO and the state, personified by the Social Democratic Party, began to loosen. In addition, there is a recognition that representative participation is not necessarily the most effective form of worker involvement, nor is it the form with which employees express the most satisfaction, because it excludes most of the workforce from the actual decision making processes (IDE, 1980b).

In Norway, an added incentive to move towards broad-based participation has also come from a program to encourage organizational development, jointly sponsored by the Confederation of Trade Unions (LO) and the Confederation of Business and Industry (NHO), which has made the receipt of development funds contingent on extensive worker involvement (The Social Partners' Joint Action Programme, 1993).

We will focus on three forms of worker participation in this study. Two are types of indirect participation incorporated in the Scandinavian model, and the third is the broad-based, direct participation which has no legal mandate, described above. The two components of the Scandinavian model are (1) the representative participation defined in the industrial democracy legislation and (2) the relationship between labor and management on the firm level, codified in the "web of rules" that has been established through years of collective bargaining and "past practice". We will explain how this relationship works as representative participation.

A collaborative labor-management relationship is a labor voice mechanism (Hirshman, 1978) that operates through regular informal (i.e., non-prescribed) contacts between management and labor representatives, and/or through written side-bar agreements (additions to the centrally negotiated union contract) reached at the firm level that bring the local union into the organizational decision making process as a regular partner. This inclusion of labor in firm level decision making is to a certain extent institutionalized in Norway, but not to a point where the local union's presence is equally strong or all-encompassing in all firms. We expect the quality of the labor-management relationship to be reflected in the organization's ability to manage large change processes.

When it comes to the adoption of direct, broad-based forms of worker participation, we expect more variation across firms because the pressures for institutionalization are fewer and weaker. We do not expect that direct worker participation, where it is becoming the practice, will replace long established forms of representative participation. However, the direct involvement of workers in decision making on organizational change could diminish the role of representative participation where the former is perceived to have more functional utility (see, for example, Kochan, Katz and McKersie, 1988), so that the participative structures established by legislation are used as little as possible, and only to comply with the law. It is important to note, however, that while the distinction is blurring a bit in Norway between indirect, representative participation and direct employee involvement in decision making, the trade union still plays a prominent role in all forms of participation at the firm level. There is some tension in the trade union movement on this issue, but the power of the local union has not lessened noticeably (Bjoemstad, 1993).

In examining the extent and possible effects of worker participation in organizational change processes, we will differentiate between involvement and influence. Both can be thought of as the degree of control workers have over decision making, which ranges from none to self-management. Involvement ranges from workers making suggestions which

managers can accept or reject without giving reasons, to workers taking part in face to face discussions and debates with management either by being invited to do so or through their own initiation. When such discussion leads to the adoption of workers' proposals, the involvement results in influence. In codetermination, workers and managers make joint decisions, often by voting on formal motions (Bernstein, 1976; Dachler and Wilpert, 1978).

Hypotheses

If the Scandinavian model holds, that is, if there is labor-management collaboration on the local level to reflect the web of negotiated agreements and laws on the central, or national, level, then we would expect the following in organizational change or renewal projects:

Hypothesis 1. There will be widespread agreement between management and worker representatives on the role of worker, or workforce, representation in organizational change projects. The agreement will include both how workers should be involved in decisions about the design and execution of the projects and the extent of their involvement.

Hypothesis 2. Employees will be involved in decisions about the planning, design, and execution of change projects, either directly or by representation. The involvement will be more extensive in the execution phase than in the planning and design phases.

Hypothesis 3. The more extensive the worker involvement is in all phases of a change project, the less resistance there will be from employees to the changes and the better the results will be.

The following hypotheses describe factors that will influence different aspects of organizational change processes. The hypotheses are not anchored in the Scandinavian model per se, but are based on findings from earlier industrial democracy research (e.g., IDE, 1980b, 1993) and on our assumptions about the causes of, and facilitating conditions for, large-scale organizational change. They focus on how the firm's leadership manages change projects, and describe the effects of a management's philosophy about worker participation, managerial pressure to expedite changes, use of resources, availability of external support, and labor-management relationships.

Hypothesis 4. Worker involvement will be positively related to the following variables: management's philosophy about participation, the strength of the local union and a firm's prior experience with worker participation in change projects, and negatively related to management pressures to expedite change.

Hypothesis 5. Scope of change will be positively related to the pressure on the organization for change, the importance of the change for the organization, organizational flexibility, and external support for the change effort.

We do not state a directional hypothesis about possible effects of worker participation on the scope of change, because arguments can be made for both positive and negative effects, but we will examine the participation-scope of change relationship.

Hypothesis 6. The results of an organizational change project will be positively related to pressures on the firm for change, the importance of change, the scope of change, organizational flexibility, external support, and employee participation.

Hypothesis 7. Obstacles to change will be positively related to managerial control of change projects and processes and management pressure to expedite change, and negatively related to organizational flexibility, local union strength, use of external resources to manage the change process, management's philosophy about participation and labor-management agreement about conditions facing the firm.

METHOD

Samples and Procedure

The data for this research were collected in 228 private and public sector firms across Norway during the summer 1992 by the interview corps of the Central Bureau of Statistics, which had been hired to do the data collection. An original sample of 299 organizations had been selected for the study consisting of (a) all firms with more than 30 employees in the stratified random sample of Norwegian firms used by the Central Bureau of Statistics in its 1989-90 study of working conditions in Norway (Tore and Skollerud, 1990), and (b) 35 firms that had received development support from LO and NHO's Joint Action Programme. These were included to examine the effect of the Joint Programme condition of widespread worker participation in the change and development projects it supported. The Central Bureau of Statistics sample contained firms that had not had large scale changes, and these were excluded from the present study after an initial contact (62 organizations). An additional nine organizations were lost either because their management declined to participate due to time constraints or because of a poor fit between the firm's characteristics and the study's objectives.

Data came from four sources: (1) structured interviews with the chief operating officer or the general manager of the organization; (2) structured interviews with a representative of

the workforce, who was a local union officer in all but 21 firms; (3) a questionnaire completed by organizational staff about firm and workforce characteristics; and (4) the archives of the Central Bureau of Statistics.

Interviews with the top manager were completed in 225 organizations. In 210 of these firms, interviews were also completed with the workforce representatives. In three organizations, only the workforce representatives were available for the interviews. Demographic data on the firm and the workforce were provided by 194 firms. To supplement these data, information about firm size and industry codes were gathered from the Central Bureau of Statistics archives.

The sample contains a cross-section of firms from different geographical regions and industries, of different ownership forms and sizes. There were 141 firms from the private sector (62 percent of the sample) and 82 firms from the public sector. The majority of firms (126, or 55 percent) were located in the Southern, and most economically developed, part of Norway, while the middle, Western and Northern parts of the country were represented by 26 (11 percent), 43 (19 percent), and 32 (14 percent) firms, respectively.

The Central Bureau of Statistics' nine single-digit industry codes were used to categorize the firms. One organization came from the primary industries (farming and fishing), three were from the oil and montan industries, fifty-five were manufacturing firms, three were from the hydro-electric industry, fifteen came from construction, twenty were retail stores and restaurants, nineteen were in transportation, mail, and telecommunication, seventeen were banks and finance institutions, and eighty-eight firms were located in the civil service, government, and genera service industry (i.e., social and municipality services, health organizations, cleaning and renovation). Most of the public sector organizations in the sample were in the government (usually municipalities) and social services category, while the majority of private sector firms came from manufacturing, the retail trade and banking.

Organizational size ranged from 30 to 5,730; 36 percent of the sample were small firms (less than 51 employees), 40 percent were medium sized (51 to 200 employees), and 24 percent were large firms (over 200 employees). With respect to ownership form, one half of the sample firms were owned by stockholders, a small group of firms were producers' or retail cooperatives or were owned by private societies, and the rest (38 percent) were federal government, municipality, and county owned organizations.

The interviews focused on the firm's experiences with recent changes in the organization. Respondents were asked to refer to one organizational change effort or

experience and answer the questions based on that one experience. If the organization had plans for, or had been through, more than one major change in the last five years, respondents were asked to provide information about the latest experience.

Organizational change was defined for all respondents by the interviewer in the following way:

"With organizational change, we mean a planned change in the firm's strategy, structure, production, or relationship to its external environment in a way that affects the working conditions or conditions of employment for a considerable part of the workforce. An organizational change can, for example, have as a goal the redesign of the internal organizational structure, the use of new technology, the production of new goods or services, entry into new markets, a move to new facilities, changes in the quantity of production or services, labor cost cutting by downsizing, improvements in workforce quality through training or education, etc. With organizational change, we do not mean the normally continuous adjustments or upgrades made to equipment, the firm's relationships to its markets, etc., which have not been identified by the organization as a major change."

The sample firms differed on how far they had progressed in a change process at the time of data collection. Three firms had not yet completed the initial decision making stage, seven had made the decisions to go ahead with changes and moved to the planning stage, sixty-seven were in the third and last stage of execution, and the majority of firms (148) had completed the entire process. In all of the sample firms, respondents identified the change project as a major one. A total of 131 firms had been involved in more than one major change during the last five years.

Measures

The variables measured in the study were those identified in the hypotheses and others used to provide information about the construct validity of the central indicators. All the interview questions were in Norwegian. This section contains the complete English translation of the measures used. The original instruments are available from the authors.

The two sets of respondents were given identical questions about the change process and employees' involvement in it. The manager sample was also given a series of questions about the nature and the scope of the change and the reasons why the organization went through it.

The organizational characteristics used as control variables in the study were size, industry, technology, and economy sector. All but technology were defined in the previous section.

Technology was measured by a set of five questions in the company characteristics survey which asked about the extent to which the production, or labor process, was (1) governed by process technology, (2) assembly line production, (3) large volume, long run batch production, (4) short run, restricted scope batch production, and (5) custom-order production. Four-point, verbally anchored scales were used for each item, and response alternatives ranged from "To a large extent" (4) to "Not at all" (1).

An additional technology question focused on production output, whether the firm was engaged in the production of goods only, whether the firm produced a mixture of goods and services, or whether the products were services only.

Triple-digit industry codes were available from the Central Bureau of Statistics archives and used to categorize firms as private or public sector organizations.

Type and scope of change were measured with two sets of questions. The first asked the respondent to rank-order four general areas based on how much these were the focus of the change. The areas were the organizational structure, technology/production, the firm's market, and the labor force. The second set contained thirteen items covering the areas in more detail. For each item respondents indicated the extent to which it had been relevant (that is, the object of change), using a three-point, bipolar, verbally anchored scale, ranging from "Not relevant" (1) to "Highly relevant" (3). These were summed to form a total scope of change score.

Time required for the change project was defined as the number of months used in (a) the initiative/decision phase, (b) the planning phase, and (c) the execution phase.

Pressures on the firm was defined as the sum of the reasons why the change process was started. Respondents were given a list of nine reasons and asked to check those that applied to their organization. These were: financial problems, need to improve efficiency, new products/tasks/areas of service, demands from customers or clients, demands from state authorities, merger, new markets or customer groups, loss of important customer or client groups, and increased competition. A second indicator of pressure for change was one item which asked how important the change is (or was) for the organization, measured with a five-point, bipolar, verbally anchored scale with response alternatives ranging from "Unessential" (1) to "Absolutely decisive" (5).

The measures described below were also used in the sample of employee representatives.

Responsibility for initiating the change was measured by asking the respondent which group or organizational structure took the initiative in starting the change, among the following: the firm's owner(s), political boards (i.e., the municipality board), the board of directors, top management, middle management, consultancy firm, other external consultants, union or employee representatives, and other employees. These were grouped into four categories: owners and boards, management, external consultants, and workers, and given scores from 4 to 1, indicating top versus bottom decision making.

Decision to start the change was measured by asking respondents to indicate the group or structure in which the decision to begin the change process was made, using the same alternatives and scoring procedure as above.

Representative participation informal structures was assessed in the company survey, which asked the respondent to indicate how many, and which, formal organizational structures or governing bodies had workforce representation. Respondents checked boxes next to each of seven possibilities, including the board of directors, the workers' council, quality of worklife committee, labor-management committee, and their public sector counterparts.

Worker involvement was a two-item, four-point scale with which the respondent indicated who had participated in the planning and the execution of the change. Response alternatives were: management (1), management and outside experts (2), management and employee representatives (3), and management and a broad selection of the workforce (4). The reliability estimate was .69.

Two additional participation indicators were also used. The first asked (a) whether the change effort was managed by top management as part of regular management duties, or whether it was managed by a special task force, or project, leader, and (b) whether other *ad hoc* groups had been established to manage the change, such as work groups, or user groups. By combining the responses to a and b, a four-point scale of *direct participation* was created in the following way: management directed the change alone (1), management directed the change, but with assistance from special groups (2), the project was led by a task force or a special project leader (3), to which were added *ad hoc* work groups with broad employee membership (4). A second question asked what *percent of the workforce* were included in the special groups formed to manage the change.

Worker influence over the planning and execution of the change was measured with a four-item, bipolar, verbally anchored scale, which asked how much influence workforce representatives had on (a) the planning and (b) the execution of the change, and how much influence other employees had. Response alternatives ranged from "No influence" (1) to "Determining influence" (4). Scale reliability estimate was .68.

Information given to workers was a ten-item, three-point scale which asked how many of the employees had been informed about the change in the following manner: an information meeting, the minutes of a meeting, in writing from management, in person from an elected worker representative, from colleagues, through established codetermination structures, by participation in project work, through a company newspaper. Response alternatives ranged from Some (1) to Most (3).

There were three indicators of the Scandinavian Model of labor relations, one measuring labor-management agreement, one measuring the strength of the local union's position in the day-to-day decisions made in the firm, and the last measuring the extent of informal contact between management and worker representatives.

Labor-management agreement was a four-item, three-point scale, which asked the respondent to state how much top managers and elected worker representatives in the firm usually agreed on issues related to working conditions, wages and benefits, management style and company governance, layoffs and firings, and the conditions facing the organization. Response alternatives ranged from "No agreement" (1) to "Substantial agreement" (3). Scale reliability was .65.

Local union strength was defined by the sum of the number of formal local side-bar agreements (beyond the centrally negotiated Basic Agreement and legal mandates) that existed between labor and management in the organization, across thirteen issues: wages and other compensation, labor productivity, layoffs, firings, hiring, staffing, equal opportunity, training, working hours and shifts, introduction of new technology, quality of work-life, pensions, and organizational development.

The third measure was a one-item scale asking how often there was informal contact between management and worker representatives. Response alternatives were: daily (4), weekly (3), monthly (2), and almost never (1).

External economic and professional support to manage the change was measured by asking respondents whether the firm had received any support from external development programs sponsored by the government, research institutes, or trade union and employers'

confederations, and if so, what kind of support (economic support, direct consultancy services, or conference participation assistance) it had gotten. Any support at all was scored as 1, no support was scored as 0.

Ideas for managing change processes. Respondents were asked where the firm had gathered information and ideas about how to handle the change process. They were presented with twelve possible sources, and responses were summed to produce an "ideas"-score. These sources were: own prior experiences, other managers or labor representatives in their industrial branches or fields, own professional association, trade union branch council or employers' confederation, professional association or union magazines, other trade journals or magazines, outside researchers or consultants, research reports, newspaper articles, books, other literature, and various organizational development programs.

We also gathered information about internal organizational factors that could facilitate or hinder a change effort. These included organizational climate, leadership style, and various forces that block progress.

Organizational flexibility was measured with three items from an organizational climate scale developed by Tronsmo (1986). Respondents were asked how much they agreed or disagreed with the following statements: "If an opportunity opens up for the firm, we can turn around in a second if necessary," "The ability to adapt and change is one of the most important characteristics of an employee in this organization, " "Neither the workers nor the managers here are tied to old traditions and ways of working." Four-point, verbally anchored scales were used, with response alternatives ranging from "Completely disagree" (1) to "Completely agree" (4). The reliability estimate for the three items when combined was .60.

Beliefs about the role of worker participation in the management of change (labeled participation philosophy) was measured with three items, from which the respondents were told to select the one they agreed with the most. The items concerned whether management should control the change effort alone, or whether employees should participate through elected representatives or directly, for example as members of special working groups. Items were scaled from 1 (management controlled) to 3 (direct worker participation).

Justification of the change process was measured with two indicators, one oriented towards management concerns, the other oriented towards workforce concerns. Respondents were given eleven possible reasons why an organization might choose a way to handle large scale change and asked to check the ones that applied in their case. Three of these were summed to yield a management oriented justification score: to ensure a quick change, ensure

a professional execution, and ensure control over the change process. Three reasons were summed to yield a workforce oriented justification score: (a) to ensure employees' cooperation, (b) to build on in many different experiences, and to satisfy the union's demand.

Obstacles to change was measured with an eighth-item scale, which asked respondents to state the extent to which eight factors or conditions had made the change process more difficult. These were: employees' level of commitment and motivation, managers' level of commitment and motivation, the information available to employees, the firm's ability to solve problems, lack of participation from the workforce, time pressure, and fundamental disagreements over the change. The scale response alternatives ranged from "Not at all" (1) to "To a large extent" (4), and the reliability estimate was .87.

The result of the change effort was defined as the number of outcomes attained by the firm through the change process. The respondents could check each of ten outcomes: no noticeable results, increased earnings, reduced costs, new markets, new products, new tasks, new responsibilities, a more effective internal organizational structure, better contacts with customers/business associates, and an improved work environment.

Two affective responses to the change were also measured.

Satisfaction with the change process itself was a two-item, four-point scale, which asked respondents how satisfied they were with the way the change had been carried out and how satisfied they believed most of the employees were with the way the change was handled. Response anchors ranged from "Very dissatisfied" (1) to "Very satisfied" (4). The reliability estimate was .87.

Satisfaction with the results of the change was a two-item, four-point scale, which asked respondents if the results of the change were what they wanted, and to what extent they believed that the results of the change were what most of the employees wanted. Response anchors ranged from "Not at all" (1) to "A large extent" (4). The reliability estimate was .86.

RESULTS

We will first present descriptive information about the characteristics of the change projects found in the sample firms, including the different types of changes made in the renewal process. This will be followed by data on the internal and external demands and constraints faced by the firms, and information on how the change projects were managed. We will then turn to the tests of the hypotheses.

Change Project Characteristics

Change domains. We had defined four broad domains where change would be likely: organizational administration and structure, technology and production processes, markets, and personnel and human resources (staffing, training, etc.), and had asked the managers to identify which of these had been affected in their firm. Most of the changes overall had occurred in administration and structures, which was the actual change target in 56 percent of the sample firms. However, the renewal had had an impact on this area in 91 percent of our firms. This finding corresponds with data reported on organizational changes in other countries as well (e.g., Daniel, 1987; Hogarth, 1993). Changes in personnel and human resources had occurred in 87 percent of the firms, and were the most prominent form of change in one third of the sample. Technology and production processes had been affected in about one half of the sample, as had markets, but these areas were the main targets of the change projects in only sixteen and eleven percent of the firms, respectively.

There were more administration and structure changes in the public than in the private sector firms (65 versus 48 percent), while more of the technology and market changes took place in the private sector (21 and 13 percent versus 11 and 8 percent, respectively).

Importance of change. The change effort was considered to be absolutely essential for 87 of the firms (39 percent of the sample), and viewed as very important for another 105 firms (47 percent). The more important the renewal was, the more extensive were the changes made, particularly in the area of production process efficiency and quality ($r = .37, p < .001$). The changes were seen as significantly more important for private than public sector organizations (mean = 4.31 versus mean = 4.05, $t = 2.53, p < .05$).

Time frames. Most of the firms (88 percent) had spent from 6 to 12 months on the decision to start the projects and about the same amount of time on the planning phase, while the actual execution required from 12 to 18 months. Both the decision and planning phases required less time in private sector firms than in public sector organizations (means were 7.5 versus 12.2 months for decision making ($t = -2.30, p < .05$) and 7 versus 11.5 months for planning ($t = -2.60, p < .01$), but there were no significant differences between the two sectors with respect to execution time.

Reasons. The primary reason for initiating change was the need to become more efficient, which was reported in 76 percent of the sample firms. This was followed by firms experiencing financial difficulties (40 percent) and increased market competition (39 percent).

Public sector organizations were also responding to demands for change from state and municipal governments (60 percent).

In over half of the firms (130), management reported that the main goals of the renewal project were met. The worker representatives had a less favorable view of the goal-results congruence, however, as only 68 reported it to be very close, while another 64 believed the goals were reached to certain extent. For less than 20 percent of the sample firms, it was too early to make an accurate assessment of final outcomes.

A substantial part of the workforce in almost all of the firms (mean = 52 percent) had experienced significant changes in their work situation as a result of the renewal. The most important effects were in the nature of work, or work tasks, and in temporary or permanent layoffs. Secondary effects of a more positive nature, such as new opportunities for professional development and new social work environments, were reported in 20 percent of the sample.

Support for renewal. Only 25 firms in the sample had received some outside support for organizational development from the central trade union and the employers confederation sponsored "Social Partners' Joint Action Programme." With respect to sources of ideas and information about ways to manage the change process, over 90 percent of the companies had relied on their own prior experiences. Sixty-five percent of the managers had used contacts with the management of others firms in their industry branches while 49 percent of the worker representatives had sought out their counterparts in other firms or union locals. Forty-seven percent of the firms used outside consultants.

Intercorrelations. The intercorrelations of the variables used to test our hypotheses are shown in Tables 1 and 2, for the manager and worker representative samples, respectively. Not included in the tables are firm characteristics used as control variables, such as firm size, public versus private sector organization and technology. Table 1 contains three variables about the change itself which were only asked of the managers. These were the scope of the change experienced in the firm, the pressure on the firm to make changes, measured as the number of reasons why the firm began the renewal project, and the importance of the change project to the firm.

The correlations are in general modest, with the exception of variables that we would expect to be strongly related, such as the evaluations of the change process and its results. The correlations between clusters of variables are higher among the worker representatives than the managers.

Because the focus of this study was the management of organizational change within an industrial democracy context, we used several indicators of employee involvement and influence. The intercorrelations of the different measures are shown in Table 3. There is not a high degree of congruence between them. For example, management's philosophy about broad-based worker involvement (participation philosophy) was positively, but not strongly, correlated with the workforce oriented justification for the change process ($r = .24, p < .001$). Similarly, the use of special project teams to plan and execute the change projects correlated $.44$ ($p < .0001$) with the percentage of the workforce involved in such project groups.

Table 1: Intercorrelation Matrix of Organizational Change and Worker Participation Indicators, Manager Sample (n=187-225)

	Scope of Change	Pressure	Importance	Obstacles	Results	Satisfaction with Process	Satisfaction with Results	Climate	Ideas	External Support	Union Strength	Union-management Agreement	Participation Philosophy	Worker Involvement	Project and work Groups	Worker Influence	Management-oriented Justification
Scope of Change	--	.31	.33	.32	.26	-.13	-.07	.10	.24	.14	.11	.04	.00	.10	.17	.25	.12
Pressure		--	.21	.15	.31	-.02	.02	.01	.28	-.09	-.01	-.02	.08	.16	.15	.14	.17
Importance			--	.06	.28	.08	.25	.04	-.04	.10	.13	-.01	-.01	.08	.15	.11	.19
Obstacles				--	.00	-.52	-.38	-.23	.23	-.01	.03	-.15	.04	.14	.01	.19	.04
Results					--	.19	.24	.17	.17	.01	.18	.01	-.03	.03	.12	.13	.29
Satisfaction with Process						--	.57	.24	.10	.00	.14	.19	-.06	-.07	.09	.01	.12
Satisfaction with Results							--	.10	.05	.02	.13	.22	-.02	.08	.00	.12	.16
Climate								--	-.18	-.02	-.02	.09	.05	-.04	.06	-.09	.03
Ideas									--	.02	.06	.01	.17	.17	.12	.34	-.04
External Support										--	.02	.04	-.03	.20	.19	.05	-.06
Union Strength											--	.03	.03	-.05	.02	.20	.23
Union-Management Agreement												--	.03	-.03	.05	.16	.05
Participation Philosophy													--	.18	.12	.21	.07
Worker Involvement														--	.16	.40	.12
Project and Work Groups															--	.19	.01
Worker Influence																--	-.11
Management-Oriented Justification																	--

Note: $r > .18$, significant at .01 level

Table 2: Intercorrelation Matrix of Organizational Change and Worker Participation Indicators, Manager Sample (n=180-205)

	Obstacles	Satisfaction Results with Process	Satisfaction with Results	Climate	Ideas	External Support	Union Strength	Union- Management Agreement	Participation Philosophy	Worker Involvement	Project and Work Groups	Worker Influence	Management Oriented Justification	
Obstacles	--	-.18	-.56	-.48	-.37	.24	-.07	.12	-.30	-.11	-.09	.06	-.04	-.20
Results		--	.38	.48	.14	.29	.14	.10	.16	.02	.14	.13	.16	.32
Satisfaction with Process			--	.70	.30	.02	.15	-.01	.39	.05	.26	.18	.31	.22
Satisfaction with Results				--	.24	.06	.17	.01	.40	.04	.17	.15	.25	.19
Climate					--	-.09	.11	.02	.14	-.03	.05	.13	.02	.15
Ideas						--	.09	.01	.02	.12	.11	.21	.18	.08
External Support							--	-.11	-.05	.07	.09	.05	.14	.03
Union Strength								--	-.07	.00	.10	.04	-.03	.15
Union-Management Agreement									--	-.04	.13	.07	.21	.12
Participation Philosophy										--	.17	.21	.23	-.01
Worker Involvement											--	.30	.53	-.06
Project and Work Groups												--	.32	.04
Worker Influence													--	.12
Management-Oriented Justification														--

Note: $r > .18$, significant at .01 level

Table 3: Intercorrelation of Worker Participation and Influence Variables, Managers, and Worker Representatives^a (n=180-225)

	Participation Philosophy	Worker Participation	% Workforce Involvement	Project and Work Groups	Workforce Oriented Justification	Management Oriented Justification	Worker Influence	Management Influence
Participation Philosophy	---	.18 (.17)	.12 (.21)	.08 (.22)	.24 (.14)	-.07 (-.01)	.21 (.23)	-.06 (-.02)
Worker Involvement		---	.16 (.30)	.13 (.29)	.15 (.27)	-.11 (-.06)	.40 (.53)	-.13 (-.08)
% Workforce Involvement			---	.44 (.32)	.15 (.28)	.00 (.05)	.18 (.32)	.03 (-.04)
Project and Work Groups				---	.15 (.25)	.02 (.12)	.15 (.33)	.01 (.04)
Workforce-Oriented Justification					---	.07 (.18)	.28 (.34)	-.13 (.10)
Management-Oriented Justification						---	-.10 (.12)	.02 (.03)
Worker Influence							---	.40 (.26)
Management Influence								---

^a Correlations for the worker representatives are in parentheses.

Note: $r > .18$, significant at .01 level.

Table 3 also contains the vector of correlations between the worker involvement indicators and worker influence over the planning and execution of change. The hypothesis, which was not formally stated because it is so obvious, is that degree of involvement in decision making will be positively related to influence. This is supported in the data from both the managers and the worker representatives. The strongest correlations were found between the general measure of worker involvement and influence ($r = .40$, $p < .0001$, manager sample, and $r = .53$, $p < .0001$, worker representatives sample). The correlation between worker influence and the percentage of the work force participating directly, the use of special project teams, the amount of information given to employees, and workforce oriented justification for the change process ranged from .32 to .36.

Hypothesis Tests

The hypotheses tested in this study concerned both the nature of labor-management collaboration at the firm level following from the Scandinavian model, and causes and effects of organizational change projects in this labor-management environment. Hypothesis 1 stated that if the Scandinavian model operates on the firm level, managers and worker representatives will agree on the roles which workers and their representatives should play in the renewal process, including their involvement in, and influence over, decisions about planning and executing change. The hypothesis was tested with a series of t-tests between the manager and worker representative respondents, and an analysis of the agreement between manager and worker representative pairs from each organization on the roles of different organizational actors in the change projects.

Comparison of mean scores were made for all the variables in the study. Due to the possibility of Type I errors in sets of multiple comparison, significance levels were set conservatively, and differences are indicated only if they are at or below the .001 level of confidence (Bonferroni correction, see Ryan, 1959; Darlington, 1990). There was considerable agreement in the aggregate between management and employee representative respondents. For ten of fifteen comparisons there were no significant differences between the manager and worker representative samples. Similar mean scores were obtained for the various worker participation indicators as well as for the number of obstacles placed in the way of change, organizational flexibility, and local union strength.

However, there were significant differences between managers' and worker representatives' satisfaction with the way the change projects were carried out and with the results of the changes, with the managers reporting more satisfaction with both processes and

outcomes. The two sets of respondents also differed in their description of the extent to which labor and management agreed on conditions of employment, management style and a perspective on the firm's total situation, with the managers seeing more agreement between labor and management than did the employee representatives. Managers also attributed more influence over the change to workers than did the worker representatives, and saw the management-oriented justification for the change process as less than did the worker representatives. These data are shown in Table 4.

Table 4: Differences Between Managers and Worker Representatives on Ratings of Organizational and Change Project Characteristics

	Managers (N=225)		Worker Representatives (N=211)		
	Mean	SD	Mean	SD	t
Satisfaction with results	3.37	(0.53)	2.94	(0.70)	6.10***
Satisfaction with the change process	2.99	(0.59)	2.60	(0.72)	6.83***
Labor-management agreement	2.58	(0.29)	2.35	(0.36)	6.96***
Worker influence in planning and executing change	2.15	(0.58)	1.89	(0.61)	4.25***
Management oriented justification	1.24	(0.99)	0.89	(0.86)	3.91***

*** $p < .001$

Comparisons were also made within firms. Table 5 contains the zero-order correlations between the responses of manager-worker representative pairs, calculated across firms, on the level of worker involvement and influence in the change projects and on characteristics of the renewal itself. These correlations are essentially indices of agreement between the manager and the worker representative in each firm.

Table 5: Correlations Between Managers' and Worker Representatives' Descriptions of Organizational and Change Project Characteristics Across Firms (N = 187-211)

Variable	Agreement Index (Correlation)
<u>Participation indicators</u>	\bar{r}
Worker involvement	.41
Worker influence in the change project	.35
Labor-management agreement	.27
Participation philosophy	.06 ^a
Local union strength	.46
Information to workers	.29
<u>Change project characteristics</u>	
Organizational climate	.28
Obstacles to the change	.29
Results of the change	.31

^aNot significant. All others are significant at .001 level.

All but one of the correlations were significant at the .001 level, and ranged from .27 to .46. The strongest agreement was found in the assessment of local union strength ($r = .46$), which is not surprising, given that it was operationalized as the number of local side-bar agreements to the centrally negotiated collective bargaining agreement. The correlation for employee involvement in decision making was .41, while the correlation for employee influence was .35. There was no agreement on the question of how the workforce should be included in the management of organizational change (participation philosophy), that is, whether workers should participate through their elected representatives as the industrial democracy legislation dictates, directly in the process, or not at all.

The results of the aggregate comparisons and the indices of agreement between managers and employee representatives show that there was considerable agreement on how, and to what extent, a firm's workforce should be involved in the management of organizational change, which support Hypothesis 1.

Hypothesis 2 concerned the level, or degree, of worker involvement in the different phases of organizational change, and was examined through the managers' descriptions of the workforce's role in the projects. We first describe where in the organization the responsibility was placed for the change project, that is, whether it was part of the general manager's normal responsibilities or had been assigned to a special steering committee or team established for this purpose.

In 55 percent of the sample, the project was the top manager's responsibility. In 36 percent (79 firms), a steering committee was responsible, while the project had been assigned to a special team in 9 percent of the cases. Where steering committees were responsible, 90 percent (71 firms) included the top manager on the committee, 68 percent had middle managers serving, 70 percent had an elected workforce representative, while 14 percent (11 firms) had other workers as members.

Management, either alone or with the assistance of outside experts, was solely responsible for project planning in 39 percent of the firms (88), while elected workforce representatives were included in the planning process in 47 percent of the cases (105). More widespread worker participation was reported in 20 firms (9 percent). There were significantly fewer firms with worker participation at the planning stage in the private than the public sector (27 versus 50 percent), which may account for the difference found in the amount of time required to complete this phase between the two sectors.

There was more worker participation in the execution phase of the projects, both through elected worker representatives (56 percent of the firms) and with direct broad-based involvement (16 percent).

A common mechanism used to encourage more direct worker participation in change projects is the establishment of *ad hoc* work groups. We found such work groups in 109 firms (48 percent of the sample). The most frequently reported reasons for using *ad hoc* groups were to ensure workforce representation, broaden the competence base, and encourage broad-based worker participation. The most common pattern was the use of 3 to 5 *ad hoc* work groups per firm, which meant that only about 10 percent of a firm's workforce was directly involved in the decision making process. A small number of firms (18, or 10 percent of the sample) had as much as half the workforce included in decision making. These data illustrate that direct participation is not the same as broad-based participation.

While over 70 percent of the organizations in our sample had some form of worker involvement in the execution phase and over half had workforce representation during the planning stage, providing support for Hypothesis 2, organizational change in Norwegian firms was clearly dominated by top management. The prevalent form of worker participation was by representation of elected delegates, in accordance with the Scandinavian model. Where we found more direct worker involvement, it was very modest in scope.

We now turn to the role played by different formal organizational governance structures, such as the board of directors, the corporate assembly, or the occupational

environment committee, where worker representation is legally mandated. This is an especially appropriate indicator of the status of the Scandinavian model because the model assumes extensive contact between an organization's management and elected worker representatives in such formal structures. Table 6 contains the mean scores on the degree of involvement in the decisions about the change project by eight formal bodies, or structures, found in private and public sector organizations in Norway. Involvement ranged from none at all through being given information, discussing the issues, to actual decision making.

Table 6: Degree of Involvement in Change Projects by Formal Structures with Worker Representation

Organizational Body	Private (130)		Public (N = 78)			Decisions made:			
	x	SD	x	SD	t	Private sector		Public sector	
						Number	%	Number	%
Board of Directors	3.23	(1.07)	2.08	(1.33)	7.07***	88	(68)	21	(10)
Political Body (Municipality government)	1.40	(.96)	2.95	(1.35)	-8.95***	13	(6)	48	(60)
Company Assembly	1.45	(.89)	1.18	(.61)	2.58**	9	(4)	2	(1)
Occupational Environment Committee	2.13	(.97)	2.47	(1.11)	-2.25*	12	(6)	18	(9)
Company Council	1.84	(1.03)	1.48	(.95)	2.53*	11	(6)	5	(6)
Cooperation Council	1.57	(.91)	1.61	(.98)	-0.19	5	(4)	6	(8)
Political Supervisory Council	1.22	(.60)	2.15	(1.36)	-5.68***	0		24	(3)
Administrative Council	1.48	(.98)	2.38	(1.40)	-4.93***	10	(8)	30	(38)

*** p < .0001 * p < .05

Note: Some of these bodies are combined in public sector firms.

In the private sector firms, the actual decision about issues related to the change projects were made by the board of directors. In the representative bodies below the board level, such as the company councils and committees, involvement that reached the decision making level occurred in only a small number of firms. The councils and committees were used primarily to give information, or to engage the members in discussions about the projects, which corresponded to the functions legally mandated for these bodies. We note that the information giving and discussion took place in about half of the organizations with such structures. There was not much decision making in company assemblies, which are, in

principle, decision making bodies with worker representation above the board of directors, but which are used infrequently and irregularly. This pattern of results was similar in the public sector organizations, where political bodies exercised the same power as a corporate board, but there was a higher degree of involvement beyond information giving in assemblies and committees.

The results were confirmed further by both the managers and worker representatives in their separate descriptions of who, among a number of different organizational interest groups, made the decision to initiate the changes. According to the managers, in only eighth percent of the firms did workers or their elected representatives take part in the decision (outside their participation in voting on the board of directors). For the worker representatives, this happened in 22 percent of the firms. Otherwise, the decisions to initiate a major change was made by the board of directors (or its political equivalent in the public sector), the owner, or top management.

Data on the influence of different interest groups over the planning and execution of the change projects are presented in Table 7. These show that top management controlled the change processes in both private and public sector firms, wielding significantly more power than boards of directors and worker representatives. In the private sector, corporate level personnel had more power than they had in the public sector, while the opposite held for elected worker representatives and the workforce as a whole.

Table 7: Influence over Planning and Execution of Organizational Change Projects, Organizational Interest Groups (Manager Sample)

Organizational Group	Private (N=124)		Public (N=70)		t
	x	SD	x	SD	
Owner	2.29	(1.12)	2.13	(1.03)	.96
Political body	1.27	(0.63)	2.40	(.98) ^b	-8.60 ^{***}
Board of directors	2.58	(1.01) ^b	1.74	(.83)	5.79 ^{***}
Top management	3.60	(.63) ^a	3.22	(.75) ^a	3.57 ^{***}
Middle management	2.67	(.77)	2.73	(.77)	-.63
Worker representative	2.26	(.76) ^c	2.63	(.82) ^c	-3.04 ^{***}
Other workers	1.83	(.68)	2.09	(.77)	-2.35 [*]

* p < .05; *** p < .0001

Differences between a and b, and a and c, significant at .0001 level.

Note: Differences between managers and worker representatives are significant at .01 level for middle management, worker representative, and other workers.

Hypothesis 3 linked employee involvement to two aspects of organizational change, the number of obstacles, or the resistance, to change, and the results, or the outcomes, of the change effort. The zero-order correlations between the different worker involvement measures and obstacles to change (see Tables 1 and 2) were not significant in the worker representatives sample, and weak and positive in the manager sample, which is the opposite of what we predicted. When employee involvement was included in a regression equation used to predict obstacles to change, together with a number of other variables, it did not contribute significantly to R^2 . A similar pattern of nonsignificant relationships was also found with respect to the outcomes of the change projects.

There were also no significant relationships between worker involvement and satisfaction with the change process and outcomes. When worker involvement and influence were included in a regression equation used to predict affective reactions, worker involvement had no significant independent effect on satisfaction with either processes or outcomes in the worker representative sample. However, worker influence accounted for three percent of the variance in an R^2 of .45 for process satisfaction and 2.4 percent of the variance in the R^2 of .41 for result satisfaction when entered last in both equations. There were no effects of either worker involvement or worker influence on the managers' satisfaction with processes and outcomes.

The present data do not support Hypothesis 3. There was no evidence of a positive effect of worker involvement in decision making on either the obstacles placed in the way of the change effort, or on the outcomes from the change projects.

Hypothesis 4 concerned the factors which would facilitate worker participation in organizational change efforts. We argued that employee involvement would increase with an organization's philosophy of broad-based direct participation, prior experience with worker involvement in earlier organizational change projects, and local union strength, but decrease with management pressure to expedite and control the change process. This prediction equation was not successful in the manager sample. The four predictors, together with ownership form and firm size as control variables, accounted for only six percent of the variance in worker participation ($F = 2.56, p < .05$). The one significant contributor to R^2 was participation philosophy.

The equation captured sixteen percent of the variance in worker participation for the worker representative sample ($F = 6.18, p < .001$), with public sector status and prior experience with worker involvement in change projects as the significant predictors. These

findings indicate some support for the hypothesis, but by and large we were unable to determine in this study what it is that increases the extent of worker participation in change projects.

Hypothesis 5 related the scope of change to pressures experienced by the organization, the importance of the renewal for organizational survival, external institutional supports, and organizational flexibility. The results of the regression analysis, controlling for economy sector, firm size and obstacles to change, are shown in Table 8. The equation accounted for 29 percent of the variance, with pressures for change, the importance of the project and organizational flexibility as significant predictors, which supports the hypothesis. The availability of external support did not contribute to the scope of change projects, however. The obstacles encountered by the firms during the projects was also a significant contributor to the equation, in the sense that they increased as the scope of the change effort increased. Large-scale changes were simply more difficult to accomplish than smaller changes.

Table 8: Multiple Regression Results Predicting Scope of Change, Manager Sample (N = 191)

Predictors	Beta	t-value
Private vs. state ownership	-.08	-1.20
Firm size	-.07	-1.02
Pressures for change	.21	3.22**
Importance of change for organization	.26	3.84***
Organizational flexibility	.14	2.06*
Obstacles	.30	4.59***
External support	.10	1.66
R ²	.32	
R ² adjusted	.29	
F-value	10.73***	

* p < .05; ** p < .01; *** p < .001

Hypothesis 6 specified that the results of change efforts would be more extensive as a function of larger projects, pressure on the firm for change, the importance of the changes, organizational flexibility, availability of external institutional support, and worker participation. Tables 9 and 10 show the regression results for the manager and worker representative samples, respectively. The adjusted R² was .26 for both samples. The equations are different, however, because data on the scope of change, external pressures and importance were only available for the manager sample.

Table 9: Multiple Regression Analyses Predicting Results of Organizational Change Projects Manager Sample (N = 164)

Predictors	Beta	t-value
Private vs. state ownership	-.04	-.44
Firm size	-.07	-.88
Scope of change	-.08	1.04
Pressures for change	.20	2.74***
Importance of change for organization	.24	3.27***
Organizational flexibility	.19	2.61***
Management oriented justification	.15	2.06*
Local union strength	.15	1.94
Worker involvement	-.14	-2.06*
External support	.15	1.93
R ²	.31	
R ² adjusted	.26	
F-value	6.82***	

* p = .05; *** p < .001

Table 10: Multiple Regression Analyses Predicting the Results of Organizational Change Projects, Worker Representative Sample (N = 164)

Predictors	Beta	t-value
Private vs. state owned	-.10	-1.21
Firm size	-.15	-2.17*
Worker involvement	.14	2.03*
Organizational climate	.10	-1.41
Management oriented justification	.25	3.51***
Local union strength	.14	1.84
Idea sources	.28	3.91***
External support	.13	1.82
R ²	.29	
R ² adjusted	.26	
F-value	7.93***	

* p < .05; *** p < .001

The data support parts of the hypothesis. From management's perspective, the results of the change project were more extensive when the pressures for change were greater and the changes were important for organizational survival. In addition, being a flexible organization contributed positively to the results. However, there was no independent effect of the scope of change.

We had included three indicators of employee participation in the equations: worker involvement, local union strength (the number of local agreements between management and labor), and the opposite of participation, a management preference for quick and decisive change. There was no effect of local union strength. Worker involvement contributed negatively, and the management oriented justification for the change process contributed positively, to the equation, which is the opposite of what was predicted. There was also no relationship between the availability of external support and the breadth of results. Of course, only 25 firms in the sample (11 percent) had received external support. In most of these firms, the assistance was reported to be quite useful.

For the worker representative sample, the most important predictors were the worker participation indicators, which included the breadth of ideas used to design the change process, a management oriented justification for the design, and worker involvement. There was no effect of organizational flexibility, external support or local union strength. Firm size, a control variable, was negatively related to the results, suggesting that there were more extensive results in smaller firms. This was not confirmed in the management sample, however, and we will therefore not ascribe much importance to this finding.

Hypothesis 7 defined the factors that would facilitate, or create obstacles to, organizational change projects. These were the labor-management relationship, the strength of the local union, management's philosophy with respect to worker participation and organizational flexibility. Table 11 contains the results of the regression analyses for both sets of respondents. The only significant predictor for the management sample was one of the control variables, economy sector, showing that there were more obstacles to change in the public sector. The worker representatives, however, believed that there were fewer obstacles when the organization was flexible, when more ideas were used to design the change projects, and when there was more agreement between labor and management. The obstacles increased when a management preference for a quick and decisive change was allowed to determine the way the project was run. Thus, we found some support for the hypothesis among the employee representatives, but not among the managers.

Table 11: Multiple Regression Results Predicting Obstacles to Organizational Change Projects, Both Samples

Predictor	Management (N=174)		Employee Representatives (N=178)	
	Beta	t-value	Beta	t-value
Private vs. state owned	-.24	-2.86***	.00	
Firm size	.06	.78	.03	.42
Organizational climate	.12	1.54	-1.29	-4.2***
Management oriented justification	.07	.92	.18	2.55*
Local union strength	.04	.50	.12	1.65
Ideas	.09	1.09	-.21	-3.03**
Labor-management agreement	.13	1.86	-.21	-3.20**
Participation philosophy	.04	.55	.10	1.54
R ²	.15		.29	
R ² adjusted	.11		.26	
F-value	3.57***		8.71***	

* p < .05; ** p < .01; *** p < .001

It is worth noting that in only 25 percent of the firms did fundamental differences of opinion between labor and management about the change make the process more difficult (worker representatives put this figure at 36 percent). The most frequently identified problem sources, by both managers and worker representatives, were the employees' attitudes and motivation and time pressure, which occurred in 51 and 42 percent of the companies, respectively.

We did not state a hypothesis about relationships between the characteristics of change processes and worker influence over such processes. However, we believed that worker influence would be related to aspects of both the change projects and the nature of labor-management relations. We combined these variables in a regression analysis to control for their covariances. The results are shown in Table 12. The managers and employee representatives had completely different perspectives on the sources of worker influence. For the management sample, worker influence over the planning and execution of change projects was larger in public sector firms, and increased further with the scope of change, local union strength, a workforce orientation to the design of change, management's wish to ensure employees' cooperation and build on their expertise, and the degree of worker involvement. Altogether, these variables accounted for 30 percent of the variance in the worker influence scores. Employee representatives had a simpler model of the sources of influence: they saw it

as a function of worker involvement in decision making and management's preference for involving workers in decision making.

Table 12: Multiple Regression Results Predicting Worker Influence over Planning and Execution of Organizational Change Projects

Predictor	Managers (N=168)		Worker Representatives (N=176)	
	Beta	t	Beta	t
Private vs. public sector	-.29	-4.31 * *	-.12	-1.80
Size	-.01	-.0	.10	1.57
Scope of change	.20	2.99***		
Local union strength	.25	3.51***	.06	.91
Worker involvement	.31	4.61***	.44	6.68***
Worker oriented justification	.13	1.86*	.18	2.73**
R ²	.33		.33	
R ² adj.	.30		.31	
F-value	13.08		17.18	

* p < .05; ** p < .01; *** p < .001

DISCUSSION

This study had two goals: to describe the extent and nature of organizational change in Norwegian firms and to examine the role of worker participation in the planning, design and execution of change projects. As a framework for the study we used the Scandinavian model of employment relations, which emphasizes workforce participation through elected representatives, negotiations between labor and management as a means for solving workplace disputes, and a commitment by both parties in the employment relationship to long-term collaboration.

We were particularly interested in the possible erosion of a participative model anchored so firmly in indirect, representative participation. There were two reasons why such an erosion might occur. Industrial relations in American and European countries have undergone a substantial transformation in the last fifteen years, which has involved a shift in relative power from trade unions to the employer (see Kochan, Katz and McKersie, 1986; IDE, 1993; Turner, 1991). The shift in the balance of power, which has been more pronounced in the U.S. than in Europe, has given employers considerably more freedom to operate with human resource management practices that emphasize the role of the individual worker, or the small work team, over the workforce as a collective unit. In turn, this has led the adoption of direct forms of worker involvement in decision making with a focus on the immediate work situation (Strauss and Hammer, in press).

The second reason is the demand for quick responses placed on organizations by a competitive market environment. This will mitigate against policies and practices that can slow down an internal renewal effort, such as decision making with representative worker participation in legislatively specified organizational bodies and structures. Practicing industrial democracy takes time, and time is a precious commodity to a company faced with demands for quick turnarounds.

Our findings showed that the changes taking place in Norwegian organizations are substantial. They clearly have had, and continue to have, an impact on employees' working conditions and employment security. However, despite the important role which legislation and centrally bargained agreements accord the workforce in organizational change efforts that affect conditions of employment, non-managerial employees are very modest players in these projects. Organizational change efforts are dominated by upper management, who make the decisions to start the projects, plan and design them, often with the assistance of a steering committee established for this purpose, shepherd them through the board of directors and other top level governance bodies, and run the projects as a part of their regular management duties.

Employees have been included in decision making primarily in the execution phases of the projects, and usually through elected representatives. We also found evidence of direct worker involvement in a number of firms, although this was by no means spread widely throughout the firms which used it. Clearly, direct participation in organizational change projects has not meant widespread participation. Worker participation in general, either direct or indirect, was more extensive when management used its experiences with earlier renewal projects and wanted to increase employee involvement to ensure workers' cooperation, or capitalize on their special knowledge and expertise where relevant. There was no evidence which would suggest that the Scandinavian model is on its way out. Direct participation appeared to be a supplement to, not a replacement for, representative participation.

Despite the modest role of employees in these projects, labor-management relations did not suffer appreciably. Relationships appeared to have been quite good to begin with, and remained relatively unchanged. There was considerable agreement between management and local union leaders (or other workforce representatives) on both the conditions facing the firm and on how the change projects should be organized and run, which is indicative of a common understanding developed over time in an ongoing collaborative relationship. This does not

imply an absence of conflict in general, but rather a unity of purpose around an organizational change effort.

With respect to the importance of worker involvement for the success of these projects, it did not prove to be either a serious obstacle or a great benefit. The results of the change projects for the organizations were much more contingent on external pressures than on the internal mechanisms used to manage the change processes. It was also interesting to note that external support for the involvement of workers in the management of change had no effect on either processes or outcomes.

Thus, the concern that the web of rules governing the workers' voice on the firm level, laid down in industrial democracy legislation and nationally negotiated union-employer agreements, will hamper management's response to market demands for rapid and radical change, was not supported by data. Organizational change in Norway is a management domain, whose success or failure cannot be attributed to worker involvement and influence.

It may seem paradoxical that large scale organizational changes with substantial consequences for employment levels, the nature of work, and working condition can be accomplished without much involvement of the workforce in a country with extensive industrial democracy legislation, with very little labor-management conflict. It is as if the elaborate structure of laws and negotiated settlements to empower employees have either not succeeded in doing so, or the intended effects have not come at the expense of management dominance. This would be an incorrect conclusion. There is, in fact, a strong effect of industrial democracy. This effect can be observed in ahistorical data, collected at one point in time, as we have demonstrated in this study, but it cannot be understood unless one adopts a developmental, historical perspective.

Our findings of management dominated, low-conflict change projects are a result of a long-term investment in labor agreements and industrial democracy laws which prescribe labor management collaboration at all levels of the enterprise. This mandated collaboration has meant that both managers and labor leaders on the local level have developed ways to work together which either prevent large conflicts, even on distributive issues, or serve to contain the conflicts that arise. Applied to the management of large scale change, this means that (1) managers dominate the projects from beginning to end, but are not likely to take actions which they know will alienate the workforce, (2) worker representatives can judge, with considerable accuracy, how realistic and necessary management's plans for the change are, because they have been educated (as a result of collective bargaining agreements) in economic analysis,

organizational theory and strategy, and know how their firm is managed as well as how they can influence its governance, and (3) if conflict erupts, local management and labor leaders can push it out of the firm onto the branch level by calling in industry and/or union branch personnel, to be managed there to prevent it from escalating inside the firm (Basic Agreement, LO-NHO 1994-1997).

The common understanding of the problems facing the firm, and of the expected utility of different solutions, is aided by two other developments. First, the role of the worker representative (or local union leader) has changed in Norwegian firms from a partisan interest group representative to more of an internal "social worker," who acts as an information source and problem solver for employees and maintains informal contact with management about issues of relevance to the firm and its workforce (Bjoernstad, 1993). Second, in a large number of firms, labor and management representatives on boards of directors receive formal training which emphasizes their roles as partners in firm governance instead of as special interest group representatives. In addition, the National Confederation of Employers' training programs for management directors stress the importance of communication to and with employees.

The accommodation by both parties to the interests of the other in the search for solutions to joint problems and the containment of conflict are the results of the Scandinavian model. But if the model works so well in organizational change projects, despite its apparent costs, why try to improve on it with special programs? Our data show that there is very little reason for doing so, as we found no discernible effects on either change processes or results from the use of external support programs sponsored, at considerable expense, by municipal and state governments as well as by trade union and employers' confederations. Not many firms used this assistance and it is far from clear that it was needed. Of course, this study was not an evaluation of the effectiveness of these programs. It is possible that the firms in our sample which had sought out and received support were not the ones with the strongest need for such assistance. Therefore, the programs may not have added value beyond the competence and economic strength already present in the firms. Most firms relied on their own experiences in the management of change projects, an observation also made by Smith and Vidvei (1992) in a study of innovation in Norwegian industry. This means that the ideas about how to manage large-scale change are carried by people and shaped through the formal and informal negotiations between them that are anchored in many years of experience with integrative bargaining.

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