BEYOND SELF-MANAGEMENT: ANTECEDENTS AND CONSEQUENCES OF TEAM EMPOWERMENT

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We examined the antecedents, consequences, and mediational role of team empowerment using 111 work teams in four organizations. The results indicated that the actions of external leaders, the production/service responsibilities given to teams, team-based human resources policies, and the social structure of teams all worked to enhance employee team empowerment experiences. More empowered teams were also more productive and proactive than less empowered teams and had higher levels of customer service, job satisfaction, and organizational and team commitment.

The use of work teams continues to grow in the United States (Lawler, Mohrman, & Ledford, 1995; Osterman, 1994) and in the foreign affiliates of U.S. multinationals (Kirkman & Shapiro, 1997; Manz & Sims, 1993). A work team is a group of individuals who work interdependently to solve problems or carry out work (Hackman, 1987; Manz & Sims, 1993). As both the use of work teams in industry and the amount of research on teams has increased, scholars have paid more attention to employee empowerment (Argyris, 1998; Conger & Kanungo, 1988; Ford & Fottler, 1995; Hardy & Leibas-O’Sullivan, 1998; Spreitzer, 1995, 1996; Spreitzer, Kizilos, & Nason, 1997; Thomas & Velthouse, 1990; Thomas & Tymon, 1994). Empowerment is increased task motivation resulting from an individual’s positive orientation to his or her work role (Spreitzer, 1995). Interestingly, there has been little scholarly attention to the interaction of empowerment and work team membership—that is, to empowerment at the team level of analysis (Hyatt and Ruddy [1997] is an exception). Empowerment researchers have devoted their attention primarily to individual-level models, and more scholarly research is needed on the empowerment of teams.

Research on empowered teams has lagged behind that on self-managing teams, or teams whose members manage themselves, assign jobs, plan and schedule work, make production- or service-related decisions, and take action on problems (Wellins et al., 1990). Self-managing teams have been associated with high productivity (Cohen & Ledford, 1994; Goodman, Devadas, & Griffith-Hughson, 1988; Trist, Susman, & Brown, 1977; Wellins et al., 1990), quality (Cohen & Ledford, 1994; Wellins et al., 1990), customer service (Wellins et al., 1990), safety (Cohen & Ledford, 1994; Goodman et al., 1988; Trist et al., 1977), job satisfaction (Cordery, Mueller, & Smith, 1991; Wall, Kemp, Jackson, & Clegg, 1986), and organizational commitment (Cordery et al., 1991). Some researchers use the terms empowered teams and self-managing teams synonymously (Fisher, 1993; Ford & Fottler, 1995; Manz & Sims, 1993), but others differentiate the concepts (Mohrman, Cohen, & Mohrman, 1995). Regardless of the semantic confusion, there has been very little empirical work on teams strictly defined as empowered teams.

Recently, we developed a theoretical model of empowered teams that distinguishes the concept from self-managing teams (Kirkman & Rosen, 1997). Our team-level model contains four dimensions that parallel the dimensions of empowerment that have been specified at the individual level of analysis (Thomas & Velthouse, 1990), along with empowerment’s antecedents and consequences. The purpose of the research reported here was to test hypotheses generated from our team empowerment model. In this article, we first review the four team empowerment dimensions and differentiate the concept from the construct of self-managing teams. Second, we review the antecedents and consequences of team empowerment. Third, we report a factor analysis of the team empowerment construct and separate analyses of its antecedents and...
consequences. Fourth, we report tests of the direct relationships between team empowerment and its antecedents and consequences. Fifth, we examine team empowerment as a mediator between the antecedents and consequences. Finally, we discuss theoretical implications and future research, managerial implications, and limitations of our study.

THEORY AND HYPOTHESES

Team Empowerment Defined

In our earlier work, we defined team empowerment as having four dimensions: potency, meaningfulness, autonomy, and impact (Kirkman & Rosen, 1997).

**Potency.** Potency, which parallels the individual-level empowerment construct of competence, or self-efficacy (Conger & Kanungo, 1988; Thomas & Velthouse, 1990), is the collective belief of a team that it can be effective (Guzzo, Yost, Campbell, & Shea, 1993; Shea & Guzzo, 1987a). Potency is different from self-efficacy in at least three ways: (1) self-efficacy refers to individual performance and potency refers to team performance, (2) self-efficacy experiences are private but potency experiences develop collectively, and (3) self-efficacy relates to specific task performance but potency refers to generalized effectiveness (Guzzo et al., 1993).

**Meaningfulness.** Meaningfulness, corresponding to meaningfulness at the individual level of analysis (Thomas & Velthouse, 1990), refers to a team’s experiencing its tasks as important, valuable, and worthwhile (Hackman, 1987; Hackman & Oldham, 1980). Team members collectively develop and share the meaningfulness of their tasks. Thus, team members have direct effects on the experiences of meaningfulness of other members.

**Autonomy.** Autonomy parallels the individual-level empowerment construct of choice (Thomas & Velthouse, 1990) and is the degree to which team members experience substantial freedom, independence, and discretion in their work (Hackman, 1987; Hackman & Oldham, 1980). Important decisions are made and executed by teams. Thus, high levels of team autonomy may actually decrease individual autonomy as important decision making is shared rather than carried out alone and responsibility is diffused rather than granted to a single individual (Uhl-Bien & Graen, 1998).

**Impact.** Team members experience impact, which is similar to impact at the individual level of analysis (Thomas & Velthouse, 1990), when a team produces work that is significant and important for an organization (Hackman, 1987). Team members seek out, share, and collectively understand feedback from other organization members. Team member interaction enables the gathering of more information on team impact from customers than individuals alone could gather (Ancona, 1990).

Both self-managing teams and empowered teams are autonomous, but the members of the latter also share a sense of doing meaningful work that advances organizational objectives; thus, team empowerment is a much broader construct. Self-management is most analogous to only one of our empowerment dimensions—autonomy—and some scholars have even used “autonomous work teams” as a synonym for self-managing teams (e.g., Corder et al., 1991; Pearson, 1992; Wall et al., 1986). In addition, measures of the two constructs are very similar. Self-management scales have included items that assess the extent to which team members believe that they have high levels of decision-making latitude and responsibility (e.g., Campion, Medsker, & Higgs, 1993; Campion, Papper, & Medsker, 1996; Kirkman, Shapiro, Novelli, & Brett, 1996). Items measuring autonomy typically specify the degree to which individuals have freedom to make important decisions about how and what they do (Corder et al., 1991; Gulowsen, 1972; Susman, 1976).

**The multidimensionality of team empowerment.** We have argued that team empowerment consists of four related (but independent) dimensions (Kirkman & Rosen, 1997). The dimensions are related because they are likely to be mutually reinforcing (Spreitzer, 1995). For example, if a team’s members experience impact (that is, talk to customers about how the team’s work affects them), they may find their work more meaningful (Ancona, 1990; Hackman, 1987). Research on psychological empowerment at the individual level has shown that the four dimensions, although related, are still distinct components of empowerment (Spreitzer, 1995; Tynon, 1988). Thus,

**Hypothesis 1.** The four dimensions of team empowerment—potency, meaningfulness, autonomy, and impact—are distinct but related.

Antecedents of Team Empowerment

From an extensive review of the work team, empowerment, and group motivation literatures, we theoretically identified job and organizational characteristics that may act as antecedents to team empowerment (Kirkman & Rosen, 1997). Our search yielded antecedents in four thematic areas: external leader behavior, production/service responsibili-
ties, team-based human resources policies, and social structure. We believed that most of the job and organizational characteristics identified would likely affect all four dimensions of team empowerment (Kirkman & Rosen, 1997).

**External team leader behavior.** External team leaders have a supervisory role but are not members of the teams they lead (Manz & Sims, 1987). When team leaders delegate responsibility, ask for and use employee input, and enhance team members’ senses of personal control, the team members are more likely to experience meaning, impact (Hackman, 1987), and autonomy in their work because they are taking on more responsibility (Susman, 1976; Thomas & Velthouse, 1990). When team leaders actually use member ideas, members should become more confident in their abilities, or experience more potency (Guzzo et al., 1993).

External team leaders who allow teams to set their own performance and output goals create more autonomy experiences (Manz & Sims, 1987) and increase team potency as members decide which goals should be adjusted and how much effort is needed in relation to performance (Guzzo et al., 1993). Members will likely find these goals more meaningful because they participate in their creation (Hackman, 1987; Hackman & Oldham, 1980). When leaders have high expectations, team members are more likely to complete challenging assignments, further strengthening potency experiences (Burpitt & Bigoness, 1997; Manz & Sims, 1987). Guzzo and colleagues (1993) argued that transformational leaders—those who energize, inspire, and communicate high performance expectations—directly influence potency. For many team leaders, however, empowering their teams may translate directly into losing power (Hardy & Leiba-O’Sullivan, 1998). Thus, if team leaders do not trust the capabilities of team members, they will be less likely to empower them (Burke, 1986; Culbert & McDonough, 1986). Consequently,

*Hypothesis 2. The more that an external team leader exhibits encouraging leader behaviors by, for instance, delegating responsibility to a team, soliciting and using team input when making decisions, enhancing team members’ senses of personal control, encouraging team goal setting, self-evaluation, and high team expectations, and trusting the team, the more the team’s members will experience team empowerment.*

**Production/service responsibilities.** When teams set production schedules and standards, monitor customer feedback, develop and train for quality improvement practices, and assume ownership for the completion of finite units of work, they have high production/service responsibilities (Kirkman & Rosen, 1997). In practice, team member participation in the day-to-day regulation of a team’s work varies greatly (Cohen & Bailey, 1997). More participation in goal setting leads to greater intrinsic motivation (Hackman & Oldham, 1980) and a greater sense of empowerment (Gulowsen, 1972), but effects on performance have been mixed (Locke, Shaw, Saari, & Latham, 1981). Perhaps empowerment mediates the relationship between participative goal setting and team performance (cf. Campion et al., 1993; Campion, Papper, & Medsker, 1996). At the individual level, participative goal setting leads to higher task comprehension (Latham & Saari, 1979). A more complete understanding of tasks can, in turn, enhance meaningfulness (Thomas & Velthouse, 1990). Participative goal setting also increases team member autonomy by transferring the goal-setting responsibility from management to employees (Susman, 1976).

Similarly, increased decision making in production scheduling and job assignments makes team members a meaningful part of the production process (Hackman, 1987; Manz & Sims, 1993) and creates more autonomy (Susman, 1976). Team members who make job assignments have a demonstrable impact on the work flow of other members (Hackman, 1987). Further discretion exists for teams created within a total quality management (TQM) environment (Lawler et al., 1995). Teams responsible for quality frequently collect data to measure discrepancies (Ishikawa, 1985), which can allow teams to make adjustments in their work and lead to more potency experiences (Guzzo et al., 1993). More control over product or service quality also creates more autonomy (Hackman, 1987; Susman, 1976). One of the basic tenets of TQM is that employees who have increased responsibility for quality will find their work more personally meaningful (Ishikawa, 1985). Team members constantly update the skills and knowledge necessary to achieve high levels of production/service quality (Lawler et al., 1995), and their doing so should affect all four dimensions of empowerment (Thomas & Velthouse, 1990).

Related to quality and learning is a team’s level of customer contact (Ancona, 1990). Increased customer contact and feedback should make team members feel more potent (Guzzo et al., 1993), demonstrate that a team’s work makes a difference
for customers (impact; Cummings, 1978), make the production or delivery of a service more personally meaningful to team members (Manz & Sims, 1993), and allow team members to experience more freedom (autonomy) in handling customer issues (Susman, 1976). Team members who provide customers with a whole product or service use a variety of skills that are likely to enhance meaningfulness (Hackman, 1987; Hackman & Oldham, 1980), confidence in their team’s ability to perform (potency; Guzzo et al., 1993), and knowledge of how their efforts affect the overall organization (impact; Griffin, 1991). Consequently,

Hypothesis 3. The higher the level of a team’s production/service responsibility—the more, for instance, that team members set their own production or service goals, make important decisions such as scheduling and production/service assignments, monitor and train for quality, handle customer issues and complaints, and work with a whole, contained product or service—the more the team members will experience team empowerment.

Team-based human resources policies. Human resources policies for teams, including team-based rewards, receiving or delivering cross-training, and making staffing decisions, should support and enhance team empowerment. For example, Shea and Guzzo (1987b) found that when highly interdependent teams received team pay, they were more likely to experience potency. Team incentives provide motivation that may enhance the meaningfulness of a team’s work (DeMatteo, Eby, & Sundstrom, 1998; Gibson & Kirkman, 1999; Mohrman et al., 1995). Some team members receive incentives to cross-train for team jobs or the jobs of other teams (Manz & Sims, 1993; Wells et al., 1990). Cross-training results in higher team flexibility and breadth of experience (meaningfulness; Hackman, 1987), confidence in multiple job-related skills (potency; Guzzo et al., 1993), and a higher chance that team members will have a significant impact on their organization (Manz & Sims, 1993).

In addition to cross-training, team members might also train other team members or assist in their selection, performance evaluation, discipline, and dismissal (Gibson & Kirkman, 1999). By demonstrating relevant skills and behaviors in the training of new team members, members are more likely to feel confident that their team can perform tasks (potency; Guzzo et al., 1993), find intrinsic interest in their work (meaningfulness), have a greater impact because other team members will be directly affected by the quality of their training (Hackman, 1987), and feel more autonomy in carrying out a wider variety of jobs (Susman, 1976). When assessing fellow members with peer evaluations (Saavedra & Kwun, 1993), team members will experience more autonomy in the evaluation process (Susman, 1976), have a greater impact on fellow members’ development and rewards, use the wide variety of skills that are required in a performance appraisal process (meaningfulness; Hackman, 1987), and more accurately perceive how capable their team is by rating its performance (potency; Guzzo et al., 1993). Consequently,

Hypothesis 4. The more that organizations implement team-based human resources policies, whereby, for instance, team members are paid on the basis of team membership, at least in part are cross-trained within and across teams, participate in the selection, training, discipline, and dismissal of fellow team members, and formally evaluate the performance of fellow members, the more the team members will experience team empowerment.

Social structure. Spreitzer (1996) defined socio-political support as the endorsement, approval, and legitimacy obtained from various constituencies in organizational political networks. Belonging to a support network increases an individual’s interdependence with important organizational constituents and, in turn, increases that individual’s sense of personal power (Crozier, 1964). Increased personal power will likely result in more competence and impact at the individual level (Thomas & Velthouse, 1990). Manz (1990) argued that at the team level of analysis, participation broadens team members’ activities in organizational networks and thus, their sense of potency.

With increased legitimacy and participation in networks comes a higher degree of access to strategic organizational information, which in turn can help team members determine their particular impact on overall organizational performance (Spreitzer, 1996), enable team members to experience higher levels of potency (Guzzo et al., 1993), and enhance the meaningfulness of team tasks (Hackman, 1987). Similarly, access to important resources—from other teams or departments or even from outside an organization—will likely enhance the experience of empowerment (Spreitzer, 1996). Beyond access, some teams provide resources to other teams, departments, or external customers. Team members in charge of providing important informa-

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1 Throughout the rest of this section, a dimension identified in parentheses after a statement should be understood to be exemplified by the statement.
tion or resources will likely utilize their full capabilities (potency; Guzzo et al., 1993), have a better sense of how their actions affect other teams or customers (impact; Manz & Sims, 1993), heighten their experience of autonomy (Susman, 1976), and create more intrinsic meaning in their work (Hackman, 1987).

Team members who develop their own rules and procedures experience a greater sense of participation in how their teams function on a day-to-day basis than do team members who are not able to decide on rules and procedures (Manz & Sims, 1993). Such teams will likely experience a high level of autonomy, because they have the authority to design and enforce their own particular manner of operation (Susman, 1976), a high level of intrinsic caring about the work (meaningfulness; Hackman, 1987), and a high level of impact, because of the effect of the rules and procedures on fellow members (Manz & Sims, 1993). Consequently,

Hypothesis 5. The more that a team's members are embedded in a well-developed social structure—for instance, have sociopolitical support, have access to strategic information and work unit resources, have a high degree of interteam coordination and communication, and make their own rules and policies, the more they will experience team empowerment.

Consequences of Team Empowerment

Frequently cited criteria of work team effectiveness include productivity (Banker, Field, Schroeder, & Sinha, 1996; Cohen & Ledford, 1994; Gladstein, 1984; Hackman, 1987; Pearce & Ravlin, 1987; Shea & Guzzo, 1987a; Trist et al., 1977; Wall et al., 1986), quality (Banker et al., 1996; Cohen, Ledford, & Spreitzer, 1996; Hackman, 1987; Shea & Guzzo, 1987a), low costs (Cohen et al., 1996; Trist et al., 1977), safety (Cohen et al., 1996; Goodman et al., 1988; Pearce & Ravlin, 1987; Trist et al., 1977), job satisfaction (Cordery et al., 1991; Wall et al., 1991), and organizational commitment (Cordery et al., 1991). We included productivity, proactivity, and customer service as performance outcomes and job satisfaction, organizational commitment, and team commitment as attitudinal outcomes. We made the distinction between performance and attitudinal outcomes to be consistent with previous research (Campion et al., 1993; Campion, Papper, & Medsker, 1996; Gladstein, 1984; Hackman, 1987).

Team productivity. Empowerment has been associated with productivity at both the team (Hyatt & Ruddy, 1997; Tesluk, Brass, & Mathieu, 1996) and individual levels of analysis (Spreitzer, 1995; Spreitzer et al., 1997; Thomas & Tymon, 1994; Tymon, 1988). At the individual level, managers have higher levels of performance when they feel a sense of control (autonomy) on the job (Wood & Bandura, 1989). Employees who have more complete knowledge of their jobs (impact) often make better job-related decisions (Miller & Monge, 1986). Gorn and Kanungo (1980) found that employees were more productive when they actively participated in decision making and found their jobs meaningful. Conger and Kanungo (1988) conceptualized empowerment at the individual level as self-efficacy, which has been linked to productivity (Frayne & Latham, 1991; Gist, Schwaerzer, & Rosen, 1991). At the team level of analysis, Guzzo and colleagues (1991) found that more potent teams were also more productive than those with less potency. Thus,

Hypothesis 6. The more that a team's members experience team empowerment, the more productive the team will be.

Proactivity. Working at the individual level of analysis, Bateman and Crant (1993) defined proactive behavior as individuals' actions effecting environmental change through their scanning for opportunities, showing initiative, taking action on and solving problems, and persevering until changes are made. Spreitzer (1995) argued that empowerment leads to a proactive orientation toward jobs, management, and organizations. High levels of self-efficacy lead to more initiating behaviors and persistence in the face of obstacles (Bandura, 1997). Deci and Ryan (1985) found that the more an individual perceived that he or she had autonomy, the more initiative that person took in work-related situations. At the team level of analysis, teams are proactive when they seek continuous improvement, revise work processes, and seek innovative solutions to work problems (Hyatt & Ruddy, 1997). Empowered teams have been found to frequently take action on problems and improve the quality of their work by initiating changes in the way work is carried out (Wellins, Byham, & Wilson, 1991). Thus,

Hypothesis 7. The more that a team's members experience team empowerment, the more proactive their team will be.

Customer service. Company-reported evidence demonstrates consistent links between the use of work teams and high levels of quality and customer service (Lawler et al., 1995; Manz & Sims, 1993; Wellins et al., 1990). Empowered teams take responsibility for handling customer complaints directly and often diagnose their own quality prob-
lems and issues (Wellins et al., 1991). Guzzo and his associates (Guzzo et al., 1991; Shea & Guzzo, 1987b) found that more potent teams also provided higher levels of internal and external customer service. Thus,

*Hypothesis 8. The more that a team’s members experience team empowerment, the higher will be the team’s level of customer service.*

**Team job satisfaction.** Tymon and his associates (Thomas & Tymon, 1994; Tymon, 1988) and Spritzer and her colleagues (1997) found associations between empowerment and job satisfaction at the individual level of analysis. In addition, employees working in teams have reported higher levels of job satisfaction than employees working in traditional settings in the same company (Cordery et al., 1991; Wall et al., 1986). Gorn and Kanungo (1980) found that the more meaningful an employee’s job was, the more satisfied the employee was with his or her job. Typically, employees find more meaning in their jobs when the scope of their activities is large (Griffin, 1991), which is often the case on empowered work teams (Wellins et al., 1991). Thus,

*Hypothesis 9. The more that a team’s members experience team empowerment, the higher will be the team’s level of job satisfaction.*

**Team organizational commitment.** Steers (1977) found that work-related experiences and perceptions, rather than personal, job, or organizational factors, were the most powerful predictors of organizational commitment. Thus, an employee’s experience of empowerment may account for more variance in his or her commitment level than more objective job or organizational characteristics. Steers also found that a positive attitude among one’s peers was one of the more important experiences affecting commitment. Empowered teams often generate these positive peer experiences (Wellins et al., 1991). Finally, Steer’s research showed that if employees perceive that their organization consistently makes and keeps its commitments to employees, they are more likely to be committed. The high level of support and trust inherent in an empowered team system will likely contribute to higher commitment levels among team members (Manz & Sims, 1993; Wellins et al., 1991). At the team level of analysis, Cordery and colleagues (1991) found that organizational commitment was higher for employees in autonomous teams than for those traditionally organized in the same company.

Hackman (1987) suggested that commitment effects may be stronger for an employee’s work team than for his or her organization. For example, Wall and colleagues (1986) found no effect of autonomous team membership on employee organizational commitment, a fact attributed to an overwhelming team commitment effect. To be consistent with our theoretical model and these previous arguments, we included both organizational and team commitment. Thus,

*Hypothesis 10. The more that a team’s members experience team empowerment, the higher will be the team’s level of organizational commitment.*

*Hypothesis 11. The more that a team’s members experience team empowerment, the higher will be the team’s level of team commitment.*

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**FIGURE 1**

A Model of Work Team Empowerment

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<tr>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>STAGE 3</th>
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<tr>
<td><strong>Organizational and Job Characteristics</strong></td>
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<td>• External team leader behavior</td>
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<td>• Production/service responsibilities</td>
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<td>• Team-based human resources policies</td>
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<tr>
<td>• Social structure</td>
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<td><strong>Team Empowerment</strong></td>
<td></td>
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<tr>
<td>• Potency</td>
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<td>• Meaningfulness</td>
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<td>• Autonomy</td>
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<td>• Impact</td>
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<td><strong>Work Team Effectiveness</strong></td>
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<td><strong>Performance Outcomes</strong></td>
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<tr>
<td>• Productivity</td>
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<td>• Proactiveness</td>
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<td>• Customer service</td>
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<td><strong>Attitudinal Outcomes</strong></td>
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<tr>
<td>• Job satisfaction</td>
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<td>• Organizational commitment</td>
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<tr>
<td>• Team commitment</td>
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*Source: Kirkman and Rosen (1997).*
Figure 1 summarizes the hypothesized relationships.

Our model is consistent with previous models of work team effectiveness (e.g., Campion, Stevens, & Medsker, 1996; Hackman & Morris, 1975; McGrath, 1964) as well as with models of job design framed at the individual level of analysis, such as Hackman and Oldham’s (1980) Job Characteristics Model. Classified as input-process-output models, these models separate objective job characteristics from both effectiveness and internal responses to these characteristics. All these models include a three-stage process in which organizational leaders take action in stage one (inputs), those actions affect employee experiences in stage two (process), and important outcomes result from positive employee orientations toward work in stage three (outputs). Like our model of team empowerment, these models imply that employee experiences in stage two will mediate managerial actions taken in stage one and outcomes realized in stage three. For example, Guzzo and colleagues (1991) found that potency mediated the relationships between both team composition and team effectiveness and goal setting and team effectiveness. Consequently,

Hypothesis 12. Team empowerment will mediate the relationships between job and organizational characteristics (external leader behaviors, production/service responsibilities, team-based human resources policies, and social structure) and team effectiveness outcomes (productivity, proactivity, customer service, job satisfaction, organizational commitment, and team commitment).

METHODS

Sample

We used a field study to test the multidimensionality of team empowerment, the relationships between team empowerment and its antecedents and outcomes, and the mediational role of team empowerment. We conducted the study in four organizations (two Fortune 50 organizations and two smaller companies) that had formally implemented work teams. The companies, all of which were located in the southeastern and southwestern United States, included two textile manufacturers, a high-technology manufacturer, and an insurance company. Response rates, age ranges, race, sex, education levels, organizational tenure, team size, and team tenure are shown in Table 1 for team members and team leaders overall and for each organization separately. Table 1 also shows significant differences between organizations.

Level-of-Analysis Issues

Researchers can measure group-level phenomena using individual member data in at least three ways (Tesluk, Zaccaro, Marks, & Mathieu, 1997). First, respondents can rate themselves on their individual attributes, and researchers can then aggregate these data to the group level. Second, individuals can rate their groups or teams on particular attributes (rather than rate their own attributes as individuals), and these ratings can be averaged to form a group score (see Campion et al. [1993], Campion, Papper, and Medsker [1996], and Hyatt and Ruddy [1997] for examples). Third, groups can provide consensus survey ratings. Following the recommendations of previous researchers (Campion et al., 1993; Guzzo et al., 1993) we measured team empowerment by facilitating group consensus on 26 team empowerment items for each team. Thus, our team empowerment scores captured a group-level phenomenon without aggregation.

We measured the antecedents of team empowerment (job and organizational characteristics) by surveying external team leaders in order to avoid the same-source bias that would have been present if we had used team member data (Podsakoff & Organ, 1986). We also obtained measures of the performance outcomes (productivity, proactivity, and customer service) from external team leaders. Purely objective performance data were not used because most of the teams in the study were assessed by their organizations with their own measurement systems, so comparability within and across organizations was limited (Spreitzer, 1995, 1996; Spreitzer et al., 1997). However, in a cover letter accompanying the survey we instructed the team leaders to review performance data to help ensure that objective data were considered in their ratings.

We obtained data on the attitudinal outcomes (job satisfaction, organizational commitment, and team commitment) by aggregating team member data. Researchers typically use self-report measures of satisfaction and commitment for direct measures of these internal states (Markoczy, 1997). We used different sources and measurement methods to minimize common method variance (Podsakoff & Organ, 1986). Consequently, our study design followed a two-source (external team leaders and team members), three-method (external team leader ratings, team member consensus interviews, and team member aggregated ratings) strategy.
### TABLE 1
Demographic Information

<table>
<thead>
<tr>
<th>Variable</th>
<th>Team Member Data</th>
<th>Team Leader Data</th>
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<tbody>
<tr>
<td></td>
<td>Overall</td>
<td>A</td>
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<tr>
<td>Response rate</td>
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<tr>
<td>Surveys</td>
<td>85%</td>
<td>93%</td>
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<tr>
<td>Interviews*</td>
<td>81</td>
<td>93</td>
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<tr>
<td>Age range</td>
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<tr>
<td>Under 20</td>
<td>1.88</td>
<td>1.67</td>
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<tr>
<td>20–35</td>
<td>55.15</td>
<td>49.16</td>
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<tr>
<td>36–50</td>
<td>35.64</td>
<td>38.46</td>
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<td>Over 50</td>
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<td>10.71</td>
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<tr>
<td>Chi-square</td>
<td>31.31</td>
<td>(df = 12, p &lt; .002)</td>
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<tr>
<td>Race</td>
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<td>Caucasian</td>
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<td>0.71</td>
</tr>
<tr>
<td>Chi-square</td>
<td>210.01</td>
<td>(df = 12, p &lt; .001)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>58.62</td>
<td>39.19</td>
</tr>
<tr>
<td>Chi-square</td>
<td>114.54</td>
<td>(df = 3, p &lt; .001)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some high school</td>
<td>8.87</td>
<td>15.31</td>
</tr>
<tr>
<td>High school diploma</td>
<td>83.47</td>
<td>79.59</td>
</tr>
<tr>
<td>Four-year-college degree</td>
<td>6.55</td>
<td>4.42</td>
</tr>
<tr>
<td>Master's</td>
<td>1.11</td>
<td>0.68</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Chi-square</td>
<td>67.44</td>
<td>(df = 9, p &lt; .001)</td>
</tr>
<tr>
<td>Team characteristics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average organizational tenure in years b</td>
<td>6.36d</td>
<td>4.00d</td>
</tr>
<tr>
<td>Average team tenure in years b</td>
<td>2.05a</td>
<td>1.84x</td>
</tr>
<tr>
<td>Average team size b,c</td>
<td>12.75f</td>
<td>13.83x</td>
</tr>
<tr>
<td>Average number of teams led by one leader b</td>
<td>2.61i</td>
<td>3.31x</td>
</tr>
</tbody>
</table>

*a* Percentage calculated from returned surveys.

*b* Different subscripts indicate significant differences.

*c* Number of members.

$d F_{3, 977} = 50.41, p < .001.$

$e F_{3, 900} = 60.25, p < .001.$

$f F_{3, 925} = 13.63, p < .001.$

$g F_{3, 9} = 19.96, p < .001.$

$h F_{3, 88} = 9.96, p < .001.$

$i F_{3, 90} = 8.24, p < .001.$

We tested for the efficacy of the aggregation of individual-level data to the team level in two ways: (1) we ran an analysis of variance to ensure that the variance between teams was greater than the variance within teams (this was positively confirmed for each variable) and (2) we used the interrater agreement procedure to assess the reliability of each aggregated variable for each team (James, Demaree, & Wolf, 1984, 1993). We report the interrater agreement results for the three aggregated variables in Table 2, which appears in our Results section, in a column headed “rwg.”
### TABLE 2
Descriptive Statistics, Reliabilities, and Correlations$^{a, b, c}$

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>s.d.</th>
<th>$r_{wg}$</th>
<th>$r_{between}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Potency</td>
<td>98</td>
<td>5.92</td>
<td>0.85</td>
<td>.82</td>
<td></td>
</tr>
<tr>
<td>2. Meaningfulness</td>
<td>98</td>
<td>5.67</td>
<td>1.28</td>
<td>.69</td>
<td>.92</td>
</tr>
<tr>
<td>3. Autonomy</td>
<td>98</td>
<td>3.91</td>
<td>1.79</td>
<td>.48</td>
<td>.60</td>
</tr>
<tr>
<td>4. Impact</td>
<td>98</td>
<td>5.74</td>
<td>1.24</td>
<td>.79</td>
<td>.80</td>
</tr>
<tr>
<td>5. Team empowerment</td>
<td>98</td>
<td>5.31</td>
<td>1.10</td>
<td>.81</td>
<td>.89</td>
</tr>
<tr>
<td>6. External leader behavior</td>
<td>101</td>
<td>5.59</td>
<td>0.83</td>
<td>.27</td>
<td>.32</td>
</tr>
<tr>
<td>7. Production/service responsibilities</td>
<td>101</td>
<td>4.88</td>
<td>1.10</td>
<td>.42</td>
<td>.16</td>
</tr>
<tr>
<td>8. Team-based human resources policies</td>
<td>101</td>
<td>3.89</td>
<td>0.94</td>
<td>.39</td>
<td>.16</td>
</tr>
<tr>
<td>9. Social structure</td>
<td>101</td>
<td>4.73</td>
<td>1.12</td>
<td>.46</td>
<td>.14</td>
</tr>
<tr>
<td>10. Team-level productivity</td>
<td>101</td>
<td>5.36</td>
<td>1.02</td>
<td>.47</td>
<td>.60</td>
</tr>
<tr>
<td>11. Team-level proactivity</td>
<td>101</td>
<td>4.96</td>
<td>0.96</td>
<td>.48</td>
<td>.39</td>
</tr>
<tr>
<td>12. Team-level customer service</td>
<td>101</td>
<td>5.60</td>
<td>0.88</td>
<td>.38</td>
<td>.40</td>
</tr>
<tr>
<td>13. Team-level job satisfaction</td>
<td>111</td>
<td>4.05</td>
<td>0.86</td>
<td>.29</td>
<td>.36</td>
</tr>
<tr>
<td>14. Team-level organizational commitment</td>
<td>111</td>
<td>4.56</td>
<td>0.86</td>
<td>.44</td>
<td>.44</td>
</tr>
<tr>
<td>15. Team-level team commitment</td>
<td>111</td>
<td>4.32</td>
<td>1.07</td>
<td>.48</td>
<td>.44</td>
</tr>
</tbody>
</table>

$^a$ N indicates the number of teams and varies with the data source and method used; for team member consensus ratings, N = 98; for data from external team leaders, N = 101; for team-member-aggregated data, N = 111.

$^b$ For correlations greater than .20, $p < .05$; for $r > .26$, $p < .01$; for $r > .33$, $p < .001$.

$^c$ The statistic $r_{wg}$ represents the reliability within groups averaged across all teams (James et al., 1984, 1996); $r_{between}$ is the correlation between team leader and team member data. Reliabilities are in parentheses.

### Measures

All of the items described below were measured on a seven-point Likert-type scale, with 1 for “strongly disagree” and 7 for “strongly agree.”

**Antecedents of team empowerment.** The items making up the antecedents were based on our literature review (Kirkman & Rosen, 1997). The external leader behavior group construct was measured with a 14-item scale. Examples of the items include the extent to which a team leader agreed or disagreed that he or she gave a team many responsibilities, asked the team for advice when making decisions, controlled much of the activity of the team (reverse-coded), allowed the team to set its own goals, stayed out of the way when the team worked on its performance problems, told the team to expect a lot from itself, and trusted the team.

The production/service responsibilities group construct was measured with a 12-item scale. Examples include the extent to which a team leader agreed or disagreed that the team he or she led had access to other teams’ resources, got support from other groups in the company when it needed it, had access to important information, depended on other teams for resources or information, and had the responsibility to make its own rules.

**Team empowerment.** Potency was assessed with Guzzo and colleagues’ (1993) 8-item team-level measure. The items assessed the extent to which team members agreed or disagreed that their team had confidence in itself, believed it could be extremely good at producing high-quality work, expected to be known as a high-performing team, felt it could solve any problem, believed it could be very productive, could get a lot done when it worked hard, believed that no job was too tough, and expected to have influence.

Team meaningfulness was assessed with Thomas and Tymon’s (1993) 6-item individual-level measure adapted for the team level. The items assessed the extent to which team members agreed or disagreed that their team cared about what it did, believed that its work was valuable, believed that a group, was cross-trained to do different jobs, and formally evaluated the performance of its own members.

The social structure group construct was measured with an 11-item scale. Examples include the extent to which a team leader agreed or disagreed that the team he or she led had access to other teams’ resources, got support from other groups in the company when it needed it, had access to important information, depended on other teams for resources or information, and had the responsibility to make its own rules.
its projects were significant, felt that its group purpose was important, found that what it was trying to do was meaningful, and felt that its group tasks were worthwhile.

Team autonomy was assessed with Thomas and Tymon’s (1993) 6-item individual-level measure adapted for the team level. The items assessed the extent to which team members agreed or disagreed that their team could select different ways to do its work, determined how things were done, felt a sense of freedom in what it did, determined as a team what things were done, made its own choices without being told by management, and had a lot of choice in what it did.

Team impact was assessed with Thomas and Tymon’s (1993) 6-item individual-level measure adapted to the team level. The items assessed the extent to which team members agreed or disagreed that their team made progress on its projects, had a positive impact on other employees, had a positive impact on company customers, accomplished its objectives, performed tasks that mattered to its company, and made a difference in the organization.

**Outcomes of team empowerment.** Team-level productivity was assessed with a 6-item measure developed specifically for this study and administered to external team leaders. The items represented a synthesis of the key performance indicators of each of the participating organizations. Examples include the extent to which respondents agreed or disagreed that their team met or exceeded its goals and completed its tasks on time.

Team-level proactivity was assessed with a 7-item adaptation of Bateman and Crant’s (1993) measure of individual proactivity administered to external team leaders. Examples include the extent to which respondents agreed or disagreed that their team could fix things it did not like and was always looking for better ways to do something.

Team-level customer service was assessed with a 5-item scale developed specifically for this study and administered to external team leaders. The items represented a synthesis of the key customer service indicators of each of the participating organizations. Examples include the extent to which respondents agreed or disagreed that their team produced high-quality products and services and provided a satisfactory level of customer service overall.

Team-level job satisfaction was assessed with Thomas and Tymon’s (1994) 4-item measure. The items assessed the extent to which a team’s members agreed or disagreed that team members were satisfied with their pay, the promotion opportunities possible, the team’s relations with other employees and departments, and the team’s current job assignments.

**Team-level organizational commitment** was assessed using a 3-item measure taken from Shapiro and Kirkman (1999). The items assessed the extent to which a team’s members agreed or disagreed that team members were loyal to their organization, expected to work for the company for a long time, and trusted management.

**Team-level team commitment** was assessed with a 3-item measure adapted from Shapiro and Kirkman’s (1999) organizational commitment scale. The items assessed the extent to which a team’s members agreed or disagreed that team members were loyal to each other, expected to work together for a long time, and trusted each other.

**Procedures**

We used four criteria to select the teams that participated in the study: (1) a minimum team life span of one year, (2) team distinctiveness (that is, the teams had names and clear boundaries existed between teams), (3) varying levels of team effectiveness (that is, some of the teams at each site had to be high on productivity and customer service and others low), and (4) consistent application of the job and organizational characteristics across sites (that is, teams could not have been selected to participate in an empowerment program). A total of 112 teams met the criteria for participation.

We administered surveys to external team leaders to assess antecedents and performance consequences and to team members to assess attitudinal consequences. Facilitators, who administered surveys during scheduled breaks, instructed team members to fill out their surveys on company time, insert completed surveys into supplied envelopes, seal them, and place them in a collection box located in a secure area. The facilitators stated that if any employee wished not to participate, he or she should place the blank survey in the envelope and then the collection box. Facilitators were instructed to leave the room once all instructions had been read and understood. A total of 1,075 surveys returned from 112 teams represented an 85 percent response rate. One team had to be dropped from the study because of an inadequate number of team member responses, leaving a total of 111 teams in all analyses involving aggregated data. A total of 101 leader surveys were returned (a 91 percent response rate).

We used team consensus to assess team empowerment. The first author conducted meetings of approximately 45 minutes each with 98 teams (88 percent of the teams). Some teams could not be
interviewed owing to absenteeism or work-related duties. The interviews, which were conducted on-site and on company time in conference rooms, took place no earlier than 3 weeks and no later than 6 weeks after survey completion; the mean time between survey and interview was 5.2 weeks. Each member of the team was given a copy of the 26-item team empowerment measure. The researcher informed each team's members that they must reach consensus on where their team stood on each of the 26 items and that one team member should record the team's answers. Responses were made on a one-to-seven scale (1 = strongly disagree and 7 = strongly agree). The researcher read each item and then instructed the team to discuss the item, resolve differences of opinion, and reach consensus. The researcher did not clarify any of the items, instead instructing team members to form their own opinions about the meaning of each item. A total of 868 team members participated (81 percent of all the team members who completed surveys).

RESULTS

We conducted several sets of analyses on the data, including (1) three factor analyses, one for the job and organizational characteristics, one for the team empowerment items, and one for the team performance outcome items,2 (2) reliability checks on the factored scales, (3) interrater agreement checks on the aggregated scales, (4) correlation and multiple regression analyses, to test hypotheses regarding direct relationships, (5) a hierarchical regression analysis, to test for the increased explanatory power of team empowerment beyond autonomy on the team effectiveness outcomes, and (6) a hierarchical regression analysis, to test for the mediating effects of team empowerment (Baron & Kenny, 1986).

Factor Analysis and Correlation Matrix

There were too many job and organizational items (46 in all) to analyze using confirmatory factor analysis (Bentler & Chou, 1987). In addition, the items were based on a literature review and were exploratory (Kirkman & Rosen, 1997). Thus, we used exploratory factor analysis to assess whether the four antecedents of team empowerment should be kept separate in subsequent analyses (Nunnally & Bernstein, 1994). Four factors emerged from a “varimax” rotation with eigenvalues greater than 1.0 and explaining a total of 75 percent of the variance. The four factors corresponded to our original theoretical specification (Kirkman & Rosen, 1997). Six items (1 from external leader behavior, 3 from production/service responsibilities, and 2 from team-based human resources policies) failed to load on any factor and were dropped from subsequent analyses. Post hoc analyses of regressions that included these dropped variables demonstrated highly similar results.3

The 26-item measure of team empowerment resolved into four separate factors (under varimax rotation) with eigenvalues greater than 1.0 and explaining a total of 91 percent of the variance. The four factors corresponded to our original theoretical specification. One potency item (“My team believes that no job is too tough”) did not load on any factor and was subsequently dropped from the analysis. The three performance scales “factored” as expected (varimax rotation) with three factors with eigenvalues greater than 1.0 explaining a total of 92 percent of the variance.

Table 2 shows the correlations and reliabilities for the study’s variables. Table 2 also shows acceptable interrater reliabilities for the aggregated variables averaged across all of the teams (James et al., 1984, 1993).

Hypothesis Testing

We included organization-level variables in all regression analyses. The results are shown with these variables included. The multidimensionality of team empowerment. The results of the team empowerment factor analysis supported Hypothesis 1, which states that team empowerment consists of four distinct dimensions. For further support, we examined the correlations between the dimensions, which, contrary to our expectations, were exceedingly high (for meaningfulness and impact, r = .80; for potency and impact, r = .79; and for potency and meaningfulness, r = .69). Thus, given the inability of an exploratory factor analysis to provide more solid evidence for multidimensionality (as might be obtained with confirmatory factor analysis) and the very high correlations between the dimensions, we used a composite measure of team empowerment. Spreitzer (1995) used a similar strategy to measure empowerment at the individual level of analysis and also noted that the high correlations between

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2 We did not factor-analyze the attitudinal outcome items because all three of the scales had been previously factor-analyzed in earlier studies.

3 Tables depicting the results of each of the factor analyses are not included owing to space limitations but are available from the first author upon request.
the dimensions did not provide sufficient evidence for discriminant validity. Thus, overall, Hypothesis 1 received only mixed support.

**Job and organizational characteristics.** To test the relationship between the job and organizational characteristics and team empowerment, we entered all four characteristics simultaneously into a regression equation as predictors. To check for multicollinearity, we included measures of tolerance (Darlington, 1990) that did not indicate the presence of multicollinearity. The results showed that team empowerment was significantly related to external team leader behaviors ($\beta = .37, p < .01$), production/service responsibilities ($\beta = .26, p < .05$), team-based human resources policies ($\beta = .31, p < .05$), and social structure ($\beta = .35, p < .01$). Thus, Hypotheses 2–5 were supported.

**The outcomes of team empowerment.** To test for relationships between team empowerment and effectiveness outcomes, we examined correlations, because the relationships consisted of only two variables each. Team empowerment was significantly related to productivity ($r = .64, p < .001$), proactivity ($r = .49, p < .001$), customer service ($r = .38, p < .001$), job satisfaction ($r = .48, p < .001$), organizational commitment ($r = .56, p < .001$), and team commitment ($r = .57, p < .001$). Thus, Hypotheses 6 through 11 were all supported.

As a check on our assertion that team empowerment explains more variance in team effectiveness than autonomy (i.e., self-management) alone, we entered autonomy as a predictor variable in a hierarchical regression equation in which the six team effectiveness outcomes were criterion variables. In a second step, we entered the team empowerment composite. We found significant changes in $R^2$ for every outcome (productivity, $\Delta R^2 = .22, p < .001$; proactivity, $\Delta R^2 = .10, p < .001$; customer satisfaction, $\Delta R^2 = .07, p < .001$; job satisfaction, $\Delta R^2 = .02, p < .05$; organizational commitment, $\Delta R^2 = .05, p < .001$; team commitment, $\Delta R^2 = .07, p < .001$). Thus, we have some support for the assertion that team empowerment is a more powerful predictor of team effectiveness than self-management alone.

**Team empowerment as a mediator.** We first created two effectiveness indexes, the first made up of the three team performance variables (productivity, proactivity, and customer satisfaction; $\alpha = .86$) and the second made up of the team member attitudinal variables (job satisfaction, organizational commitment, and team commitment; $\alpha = .90$). We created the indexes to simplify what would have been a needlessly complicated mediation analysis involving four predictors, one mediator, and six outcomes, and we maintained consistency with previous team effectiveness models that have defined team effectiveness in terms of both performance and member attitudes (e.g., Campion et al., 1993; Campion, Papper, & Medsker, 1996; Gladstein, 1984; Hackman, 1987).

For team performance, we used a hierarchical regression analysis to control for team empowerment in the first step. In the second step, we entered the four job and organizational characteristics variables to assess their residual variance. Team empowerment remained significant ($\beta = .36, p < .001$) and, with the exception of external leader behavior ($\beta = .51, p < .001$), none of the other job and organizational characteristics were significant. Thus, for three of the four characteristics, team empowerment fully mediated their relationship to team performance.

For the attitude index, we again used hierarchical regression analysis to control for team empowerment in the first step. In the second step, we entered the four job and organizational characteristics variables to assess their residual variance. Team empowerment remained significant ($\beta = .51, p < .001$), but none of the other job and organizational characteristics were significant. Thus, team empowerment fully mediated the relationship of each of the four characteristics to team member attitudes.

**DISCUSSION**

**Theoretical Implications and Future Research**

Our major finding is that highly empowered teams are more effective than less empowered teams. Although some previous research has shown strong productivity effects for self-managing teams, other researchers have reported more modest effects (Goodman et al., 1988) or found none at all (Wall et al., 1986). Perhaps these studies included both highly empowered and less empowered teams. Our study demonstrated that work teams vary on empowerment (and, consequently, productivity and other outcomes). Such variation could influence the results of a study that simply assessed aggregate productivity effects (e.g., Wall et al., 1986). Similarly, at the individual level, researchers have found mixed effects when assessing participative management's influence on performance (Cotton, Vollrath, Foggatt, Lengnick-Hall, & Jennings, 1988; Wagner, 1994). Perhaps the lack of significant findings has been due in part to the absence of empowerment. For example, individuals might have experienced their tasks as trivial rather than meaningful, believed that they did not have the competency to participate effectively, or failed to see their suggestions followed up or supported by management (Thomas & Velthouse, 1990).
Second, although we found high correlations between the four empowerment dimensions, the team empowerment composite explained variance in team effectiveness that went beyond what autonomy explained. This pattern underscores the importance of not treating self-management and empowerment as synonymous concepts. In addition, Table 2 shows that the correlations between autonomy and the other dimensions were much lower than the correlations those dimensions had with each other. Clearly, autonomy makes up a very important part of team empowerment. A team with no autonomy that compensates with high potency, meaningfulness, and impact is probably not truly empowered. However, our results suggest that in order for teams to be highly effective, they must be autonomous and their members must experience potency, meaningfulness, and impact (cf. Alper, Tjosvold, & Law, 1998), even though autonomy alone did explain some unique variance in team effectiveness. In fact, self-managing teams have a much greater productivity impact on complex tasks, which are likely to generate potency, meaningfulness, and impact experiences, than on routine tasks (Cordery, Wall, & Wright, 1997). Thus, autonomy is most likely a necessary, but not a sufficient, condition for team empowerment.

Third, we found that external leader behavior influenced team empowerment experiences. These findings support previous theoretical arguments for these relationships (Culbert & McDonough, 1986; Cummings, 1978; Denison, 1982) and empirical studies of supervisory empowerment (Burpitt & Bigoness, 1997) and self-management (Manz & Sims, 1987). Similarly, we found a relationship between production/service responsibilities and team empowerment experiences, a finding that supports previous theoretical work in this area (Cummings, 1978; Hackman, 1987; Manz & Sims, 1993).

The link between team-based human resources policies and team empowerment supports previous empirical findings (Blackburn & Rosen, 1993; Frayne & Latham, 1987; Gist et al., 1991) and theoretical work on teams (Hackman, 1987; Manz & Sims, 1993). In addition, the fact that the mean we report here for team-based human resources policies is lower than the other antecedents’ means (see Table 2) may indicate that organizations adopt team pay and peer evaluations at a much slower rate than other team-related changes or perhaps do not adopt them at all (cf. Mohrman et al., 1995). Changing existing pay and evaluation systems is complex and can be emotional for change recipients (DeMatteo et al., 1998; Gibson & Kirkman, 1999; Kirkman et al., 1996). Researchers should continue to examine team-based human resources policies because our findings indicate that they are integral drivers of team empowerment and, consequently, of team effectiveness.

With regard to social structure, we validated Spreitzer’s (1996) individual-level findings at the team level of analysis and supported previous empirical (Gladstein, 1984) and theoretical work (Hackman, 1987) on structure at the team level of analysis. Specifically, work units that provided sociopolitical support and access to important information and resources enhanced team empowerment. In summary, our findings highlight the importance of the organizational context in creating team empowerment experiences (cf. Wageman, 1997). Organizations should attend to context at multiple levels of analysis (from leader behavior to organization-wide policies) to more fully realize the benefits of team empowerment (Campbell & Martinco, 1998).

Our fourth implication concerns Spreitzer’s (1995) suggestion that empowerment researchers expand their research by broadening outcome measures to include organizational commitment, organizational effectiveness, and total quality management. Following Spreitzer’s recommendations proved useful; team empowerment was positively associated with a broad range of positive employee and organizational outcomes such as commitment, proactivity, and customer service. Researchers may have understated the payoffs for empowered work teams.

Perhaps what is needed most now in the team effectiveness literature is research that examines empowerment at the individual and team levels simultaneously (see Tesluk et al. [1996] for an example). Manz (1993) suggested that granting teams more empowerment might, in fact, detract from individual levels of empowerment, in that an individual may actually feel less autonomy on a team where decision making and responsibilities have to be shared among team members. Such research could help determine the specific impact of empowerment at multiple levels of analysis and thus identify optimal levels of empowerment at both the individual and team levels (cf. Uhl-Bien & Graen, 1998). We urge more researchers to use the team consensus technique in these future studies. Perhaps future research will also help determine when it is most appropriate to use team consensus and when it might be suitable to use team-member-aggregated ratings.

Team empowerment research should also be conducted on various types of teams, including management teams, project teams, and virtual teams, to determine if the results of our findings with permanent work teams are generalizable (Cohen & Bailey, 1997). Obviously, empowered teams will not be right for every task or work situation. The challenge for work team and empowerment researchers will
be to (1) continue moving beyond anecdotal evidence of team success to more rigorous research designs that effectively test both the causes and payoffs of work team empowerment and (2) continue to move beyond self-managing work team models to broaden the conceptualization of work team effectiveness.

Managerial Implications

First, we recommend that managers use the team empowerment scale developed for this research program to assess the teams they lead. Our findings suggest that it is imperative that managers identify those teams with low levels of empowerment and engage in activities designed to raise their levels of empowerment. Managers should take actions in multiple contextual arenas and at multiple levels in their organizations to (1) ensure that team leaders receive training to exhibit appropriate behaviors, such as encouraging teams to solve their own problems and setting high team expectations, (2) increase the production/service responsibilities of teams, such as the production of whole products or the delivery of integrated services, and allow team members to set their own goals, (3) alter human resource policies, for example, increasing the amount of cross-training and training team members to hire and discipline fellow teams, and (4) modify social structures to increase team member access to resources and information and establish more communication and coordination across teams.

Second, there is evidence that the team consensus technique meets more of the theoretical requirements for obtaining team-level data than does the aggregation method and that the former is a superior predictor of team-level outcomes (Kirkman, Tesluk, & Rosen, 1998). Managers may want to consider the team consensus technique as a viable alternative to collecting team-level data and as a way to overcome the limitations of the aggregation technique.

Limitations

To preclude the questions of causality often begged by cross-sectional studies, in our design we only included organizations in which the relevant job and organizational characteristics (the team empowerment antecedents) were present at the site or organizational level—not team-by-team. As a partial statistical check on whether empowerment practices were uniform within organizations, an analysis of variance was conducted, with organization as the predictor variable and the four job and organizational characteristics as criterion variables. The test statistic \(F\) was significant for all four of the characteristics, which indicated lower variance within organizations than between organizations. Thus, the empowerment of the teams in our sample cannot have been a function of their relative effectiveness.

A cross-sectional design cannot speak to the possibility that team empowerment experiences are caused by team effectiveness, rather than vice versa. In fact, researchers have suggested that effectiveness and empowerment may be reciprocally related (Spreitzer, 1995) and self-reinforcing (Thomas & Velthouse, 1990) at the individual level of analysis. Lindsley, Brass, and Thomas (1995) made the same argument for effectiveness and potency at the team level of analysis. Longitudinal studies are needed to explore these reciprocal effects over time.

Conclusion

Our study adds to the growing body of research that has isolated the effects of work team implementation on organizational effectiveness. We have tried to take a first step with a relatively new construct, team empowerment. In view of our findings, we hope that managers will attempt to create empowerment experiences for their work teams. We also hope that researchers will continue to examine team empowerment and use the team consensus technique to assess important team constructs. More generally, we hope that researchers will keep identifying and assessing the conditions necessary to make work teams optimally effective in organizations.

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