1996

Outcomes of Self-Directed Work Groups in Telecommunications Services

Rosemary Batt
Cornell University, rb41@comell.edu

Outcomes of Self-Directed Work Groups in Telecommunications Services

Abstract
[Excerpt] The purpose of my presentation is to consider whether the use of self-directed teams enhances competitiveness in services. In the context of heightened competition brought about by deregulation and the internationalization of service markets, do "team-based" work systems produce higher quality service and customer satisfaction? Do workers benefit as well? Should unions as well as management support this innovation? If so, under what conditions and why?

This presentation complements that of the other panelists in this session in important ways. First, while Verma provides an overview of the array of workplace innovations being introduced in telecommunications firms (from joint labor-management consultation to total quality and self-management), I focus on a more detailed quantitative assessment of use of one of those innovations—self-directed work groups. Second, I consider the ways in which the introduction of self-managed teams differentially affects the job characteristics of two of the groups identified in Herzenbergs typology of work systems in services: the semiautonomous groups (represented by customer service representatives in telecommunications) and the autonomous groups (exemplified by network field technicians).

Keywords
telecommunications, self-directed teams, work systems, customer service

Disciplines
Human Resources Management | Labor Relations | Performance Management

Comments
Suggested Citation
Batt, R. (1996). Outcomes of self-directed work groups in telecommunications services [Electronic version]. *Proceedings of the 48th annual meeting of the Industrial Relations Research Association* (pp. 340-347). Madison, WI: Industrial Relations Research Association.

Outcomes of Self-directed Work Groups in Telecommunications Services

ROSEMARY BATT
Cornell University

The purpose of my presentation is to consider whether the use of self-directed teams enhances competitiveness in services. In the context of heightened competition brought about by deregulation and the internationalization of service markets, do "team-based" work systems produce higher quality service and customer satisfaction? Do workers benefit as well? Should unions as well as management support this innovation? If so, under what conditions and why?

This presentation complements that of the other panelists in this session in important ways. First, while Verma provides an overview of the array of workplace innovations being introduced in telecommunications firms (from joint labor-management consultation to total quality and self-management), I focus on a more detailed quantitative assessment of use of one of those innovations—self-directed work groups. Second, I consider the ways in which the introduction of self-managed teams differentially affects the job characteristics of two of the groups identified in Herzenberg's typology of work systems in services: the semiautonomous groups (represented by customer service representatives in telecommunications) and the autonomous groups (exemplified by network field technicians).

Team-based or decentralized work systems in manufacturing have received mixed reviews. On the one hand, two decades of research in organizational behavior provides considerable evidence that workers in self-managed teams enjoy greater autonomy and discretion, and this effect translates into intrinsic rewards and job satisfaction; teams also outperform traditionally supervised groups in the majority of (but not all) empirical studies (for a review see Cotton 1993). On the other hand, the industrial performance literature continues to debate the relative advantages of "team-based" versus "lean" production systems (Appelbaum and Batt 1994) as exemplified in the debate over NUMMI versus Uddevalla or Saturn (Adler 1993; Adler and Cole 1993; Berggren 1994; Rubenstein et al. 1993). The debate turns on the extent to which companies can or should

Author's Address: ILR School, Cornell University, 387B Ives Hall, Ithaca, NY 14853-3901.

decentralize operational decisions in order to take advantage of workers' knowledge, while at the same time maintaining consistency and coordination across units.

There are two reasons why reorganizing work around decentralized teams may provide a greater source of strategic advantage in services than in commodity production. First, companies may improve service delivery and increase customer loyalty by developing "one-stop-shop" operations and empowering customer-contact employees to have one-on-one, long-term relationships with clients—what amounts to a quasiprofessionalization of the service workforce (e.g., Schlesinger and Heskitt 1991). Quasi-professionalization, however, is costly because it entails the use of higher-skilled and compensated employees. Self-directed teams of nonmanagement workers are an alternative means of accomplishing a similar objective: workers have greater autonomy to meet customer demands; each member may develop specialized knowledge so that as a group they have a broad range of skills and knowledge sufficient to handle complex and nonroutine problems; and ongoing learning occurs through internal group interactions (Klein 1993). This argument is consistent with the case presented below of how teams of customer service representatives in telecommunications have generated higher sales and service ratings.

The second reason concerns how quality is defined in goods versus service production. Quality control in goods manufacturing requires high levels of standardization, and total quality tools such as statistical process control serve as a means of *reducing variances* in the production process. Each commodity is the result of a highly coordinated set of worker activities in assembly line operations. Quality in service delivery, by contrast, requires the use of standard operating procedures to *enhance variation and customization* to meet particular customer demands. In other words, there is a strong argument for service companies to follow a strategy of "market sensitive decentralization": workers who use the same technology and information systems require quite different skills, knowledge, and customer interactions in order to serve particular clients and service markets. In many service industries, including the telecommunications case presented here, market sensitivity not only varies by customer segment (e.g., large businesses versus residential service) but also by region and locality. Hence it may be useful for groups or teams of workers to develop specialized knowledge of geographically delimited service markets. In this presentation I draw on the evidence of geographically based, self-managed teams of field technicians in telecommunications services to exemplify this argument.

In addition, by using self-directed teams of workers, companies shift the work of supervisors to subordinates, creating the potential to reduce

indirect labor costs, increase supervisory spans of control, and reduce management hierarchies.

Workers and the union should support the innovation in theory because it frees up workers from historic "oversupervision" in the industry and it offers the potential to save jobs by incorporating work back into the bargaining unit.

I conducted a detailed, qualitative, and quantitative case study of one regional Bell operating company in order to consider whether self-directed teams provide mutual gains to relevant stakeholders—firms, managers, unions, workers, and consumers. I selected the company because it is representative of others in terms of the range of its restructuring strategies, but the most advanced in terms of its experimentation with self-directed teams among customer contact workers. It is also unusual in that the union played a significant role in shaping the experiment: the union and management negotiated clear procedural but broad overall guidelines for using self-directed teams and then encouraged local union leaders and managers to experiment with voluntary programs. Workers and managers who wish to initiate teams do so by arriving at an agreed upon set of responsibilities for workers to adopt, and workers vote on whether they want to go "self-directed" or not. Thereafter, most teams elect a group leader who rotates periodically among members and who assumes certain administrative tasks. Where a minority of workers in a group do not want to participate, local management and union representatives may resolve the issue either by not going forward with the change or by having the worker(s) who does not want to participate report separately to a supervisor. Workers do not get extra pay for assuming supervisory tasks; in fact, they give up "relief supervisor" pay—pay that workers traditionally receive when they fill in for supervisors when they are absent. At the time I surveyed workers and managers in 1994, roughly 5% of the workforce in network and customer services were organized into self-directed groups.

What Do Teams Do That's Different?

Ironically, self-directed work groups in telecommunications provide a means of returning work to the way it was organized in the 1950s through 1970s. Until the late 1970s, for example, customer service representatives worked in highly decentralized or local business offices where they answered any question or problem a customer had. They were "universal reps" offering one-stop shopping often to people they knew personally or came to know through repeated transactions. Because these were hard-to-monitor jobs, ratios of supervisors to workers were low—about 1:10. With the break-up of the Bell system in the early 1980s, Bell companies sought

ways to become more cost competitive—increasing sales and decreasing unit costs—by Taylorizing and automating these office jobs. Companies divided universal representatives' jobs into separate sales, billing, and collections functions and instituted automated call distribution systems that set the pace of incoming calls. Customer service jobs came increasingly to resemble operator jobs. Self-directed team innovations partially offset the negative effects of these changes by allowing workers greater discretion to set daily tasks and solve nonroutine problems through group interaction or by directly contacting subject matter experts outside of their department. Among traditionally organized groups, supervisors answer all questions and handle nonroutine problems. Self-directed groups also gain relief from supervisory monitoring and say that morale improves.

Network field technicians hold highly skilled and autonomous craft jobs that were historically resistant to Taylorism: building and maintaining the network transmission and switching infrastructure required workers to have electro-mechanical skills and knowledge and to complete entire tasks—for example, an installation or a service repair. The difficulty of monitoring field crews led Bell companies over time to increase supervisory ranks so that by the 1980s, the ratio of supervisors to workers averaged 1:5-6. To improve efficiency and deployment, companies implemented automatic dispatch systems that randomly assign the next available technician to a service call. It was not cost-effective, however, to implement these management practices in geographically dispersed rural areas. As a result, rural telephone workers continue to the present to have considerably greater discretion and direct responsibility for customers in a prescribed geographic area. The idea behind self-directed field crews, therefore, is to recreate in urban areas what has continued to exist in rural areas: work groups with complete responsibility for a given geographic area and with autonomy to decide which members will handle which customers. Quality should improve in theory because workers have greater incentives to undertake preventative maintenance: they know they are solely responsible for the network and customers in their turf, and problems not fixed today will come back tomorrow. The net effect of teams on productivity is contingent on a variety of factors: productivity may increase because workers can solve nonroutine problems on the spot without consulting supervisors, or they call a fellow team member for help ("doubling up" on a job was historically prohibited or frowned upon). This advantage may be offset by the time required to hold group meetings and absorb supervisory tasks. One manager called self-directed teams, "the patrol officer model in which each telephone repair team has a 'beat.' It allows local residents to get to know their repairmen . . . allows teams to handle more than one problem at a

time. Under the old system, a customer with a problem called into a dispatcher who notified the foreman who assigned the work to an individual randomly. Now the customer calls the team directly and the team gets right on it. Faster cycle time, better service."

Even in rural areas the shift to formal self-directed teams changes the responsibilities of workers who absorb additional internal administrative duties of supervisors and external duties of interacting with customers as well as other departments to get the job done. This includes ordering supplies, bringing in jobs, negotiating with parties over turf responsibilities, answering customer complaints, and working with engineers in the presurvey stage.

To summarize, workers in self-directed teams in both network and customer services report changes in their job responsibilities and behavior along four important dimensions: they (1) absorb more administrative tasks, (2) have greater autonomy to handle customer demands, (3) help each other more to solve problems (internal group learning), and (4) interact more with managers and experts outside of their department to get their job done (cross-functional interaction) (see Table 1).

Outcomes of Self-directed Work Groups

Evidence from survey and objective company performance data support more generally what workers in field interviews stated. A full analysis of the data comparing a sample of 800 workers from matched pairs of self-directed (SDT) and traditional groups (TWG) is found in Batt (1995). Self-directed groups were significantly more likely to absorb administrative tasks, exercise greater autonomy to handle customer demands, help each other more to solve problems, and interact more with managers and experts outside of their department to get their job done. Significant differences remained in multivariate analyses after controlling for technology, service market, geographic location, human resource practices, and demographic characteristics.

I then examined whether self-directed work groups performed better than traditional work groups by considering self-reports of quality and by matching individual survey data to objective company performance data over an 18-month period. On average, self-directed groups in customer services reported higher customer service quality and had 15.4% higher monthly sales revenues ($5,784 compared to $5,011). In multivariate analyses with appropriate controls, being in a self-directed group significantly predicted higher self-reports of service quality and raised monthly sales by more than 17%. This finding is particularly surprising given the considerable organizational and technological constraints on these service representatives. Among

TABLE 1
Comparison of Workers in
Self-directed (SDT) and Traditional Work Groups (TWGs)
Percent with Positive Responses to Questions

Job Dimension	Network SDT	Network TWG	Customer Services SDT	Customer Services TWG
Sample size	N=238	N=226	N=120	N=202
Administrative tasks				
Wk grp. "primarily responsible" for:				
Setting work group goals	27.7***	1.8	26.7***	1.5
Assigning daily tasks	56.0***	5.0	53.5***	3.6
Setting lunch, rest breaks	64.4***	28.8	7.8	5.6
Scheduling vacations	60.0***	8.0	11.5	11.7
Dealing with absences	24.4***	1.8	4.3	1.5
Doing quality inspections	16.1***	0.5	15.8***	1.0
Customer relations and service				
Workers have "complete or a lot of"!!				
Control over tasks	33.6***	12.8	17.8***	11.4
Control over tools	64.3***	45.5	21.2	18.9
Control over pace	55.5***	47.9	34.5***	24.7
Have adequate authority to meet customer needs:!!	45.3***	21.7	49.6	43.8
Have increased control over:!				
Meeting customer needs	48.3***	30.8	63.6**	50.5
Pace of work	29.0***	21.2	27.5**	20.1
Task assignments	31.8***	13.5	18.4***	9.1
Internal Group Relations				
Members often help each other	61.5***	35.0	70.0***	54.3
Members rely on each other to solve problems	64.6***	48.0	73.1	67.0
Members rely on supervisor to solve problems	13.7***	27.5	9.5***	27.0
Members have good relations	83.7***	78.6	93.2**	89.9
Members' relations have improved in last 2 yrs.	40.3***	22.7	58.7***	31.7
Cross-functional Relations				
Members have authority to directly contact managers	86.1***	66.3	94.9***	72.4
Members have daily/wkly. contact:				
With managers outside dept.	34.7***	17.3	22.3***	17.8
With workers outside dept.	65.1	75.5	84.9	83.5
Members have "good" relations with employees in other depts.	69.6***	52.0	53.2	49.4
Relations with other depts. have improved in 2 yrs.	21.9**	14.9	30.3	23.8

! % of positive responses to yes/no questions
!! % of positive responses to questions (1-2 on 5 point scale).
** significant differences between SDT and TWG at 05% level of probability
*** significant differences between SDT and TWG at 01% level of probability

network technicians, SDTs and TWGs maintained the same levels on objective performance measures, but SDTs absorbed the work of supervisors in roughly one-third of the time taken by supervisors to do the work. In calculations that compared the wages, hours, and overtime of supervisors versus SDTs, I found that the company saved an average of $52,000 in indirect labor costs for each self-directed team initiated.

If companies and consumers benefit from the use of self-directed teams, do workers and unions as well? For workers, survey results show that the changes in jobs brought about by SDTs do translate into positive benefits in terms of greater autonomy, greater on-the-job learning and use of skills and creativity, more job satisfaction and pride in work accomplishments. In multivariate analyses with appropriate controls, self-directed team membership positively predicts workers' satisfaction with their jobs, but not their commitment to the company. More than 75% of surveyed workers who are currently in traditional work groups say they would volunteer for teams if given the opportunity. By contrast, less than 10% who are now in teams say they would like to return to traditional supervision. Team members in this case did not work under any gainsharing arrangement or negotiate wage increases attached to additional assignments; network team members, however, worked an average of 5.5 additional overtime hours per month. Given that work groups rotate voluntary overtime by seniority, we may conclude that network team members did gain additional pay as a result of the overtime used to absorb added supervisory responsibilities.

Should unions support self-directed team initiatives? In this case, anticipated deregulation of local telephone markets had led Bell companies to initiate *voluntary* workforce reductions, but unions and employees anticipated eventual forced reductions (which in fact began for managers in 1995). Self-directed teams were one of several union strategies to put work back into bargaining unit jobs. Local union leaders overwhelmingly (86% of those surveyed) supported SDTs, and 71% viewed them as a way of improving customer service; middle managers viewed SDTs as one way to manage operations in a downsizing environment. The clear losers were firstline supervisors whose job security was threatened; yet those who had made the transition to overseeing self-directed teams said they enjoyed their jobs more and viewed teams as the only viable solution for the company in its goal of tripling (from 1:6-8 to 1:20-30) supervisory spans of control.

This case offers a rare example of a work innovation that appears to benefit most of the stakeholders involved—firms, managers, unions, workers, customers—with the exception of firstline supervisors. But how generalizable are these results? Clearly, the outcomes of work innovations are

contingent upon the nature of the work and technology: while both customer service and network groups showed positive gains, the extent and dynamics of change were quite different for the two occupational groups. More importantly, the historical and institutional context of this case shapes the outcomes in important ways—particularly the role of the union. A history of mature bargaining allowed the union to negotiate the parameters of worker participation in teams. The written agreements between workers and managers in conjunction with union stewards, which clarified the terms and conditions of self-directed teams, created high levels of trust. Despite anticipated downsizing, the mutual respect for mature bargaining institutions allowed union leaders, managers, and workers to participate more freely in work innovations than would otherwise have been possible.

References

Adler, Paul. 1993. "The Learning Bureaucracy: New United Motor Manufacturing, Inc." In Barry Shaw and Larry Cummings, eds., *Research in Organizational Behavior*. Greenwich, CT: JAI Press. Vol. 15, pp. 111-94.

Adler, Paul, and Robert Cole. 1993. "Designed for Learning: A Tale of Two Auto Plants." *Sloan Management Review* (Spring), pp. 85-94.

Appelbaum, Eileen, and Rosemary Batt. 1994. *The New American Workplace: Transforming Work Systems in the United States*. Ithaca, NY: Cornell ILR Press.

Batt, Rosemary. 1995. "Performance and Welfare Effects of Work Restructuring: Evidence from Telecommunications Services." Dissertation, MIT.

Berggren, Christian. 1994. "NUMMI vs. Uddevalla." *Sloan Management Review* (Winter), pp. 37-49.

Cotton, John L. 1993. *Employee Involvement: Methods for Improving Performance and Work Attitudes*. Newbury Park: Sage Publications.

Klein, Janice. 1993. "Teams." In J. Klein and J. Miller, eds., *The American Edge*. New York: McGraw Hill, Chapter 4.

Rubinstein, Saul, Michael Bennett, and Thomas Kochan. 1993. "The Saturn Partnership: Reinventing the Local Union." In Bruce Kaufman and Morris Kleiner, eds., *Employee Representation: Alternatives and Future Directions*. Madison, WI: IRRA.

Schlesinger, Leonard, and James Heskett. 1991. "Breaking the Cycle of Failure in Services." *Sloan Management Review*, Vol. 32 (Spring), pp. 17-28.