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Predictors of Perceived Empowerment: An Initial Assessment

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16. Abstract

Empowerment of employees regarding their work procedures is considered an important approach to improved organizational effectiveness. Recent research suggests that employee empowerment is related to a number of variables besides organizational structure and the use of teams. The present paper examined a number of organizational context variables, obtained from three samples in two government agencies. Perceptions of empowerment were then predicted from these context variables. The results show that perceptions of communication are the strongest predictor of empowerment perceptions across samples. In addition, the size of the communication slope estimate (B value) did not differ across the sample. The results support the contention that context factors besides teams and restructuring are related to empowerment. Specifically, communication perceptions are consistently the strongest predictor across samples and measures. Future research should examine the mechanisms that relate communication and empowerment.

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Predictors of Perceived Empowerment: An Initial Assessment

Empowered employees are desired by many private and public organizations (Kanter, 1989), including the Federal Aviation Administration (FAA). Empowerment is sought, not for its own sake, but because empowered employees are believed to contribute more effectively to organizational success (Quinn & Spreitzer, 1997). Touted outcomes include improved customer service, higher individual and organizational performance, and greater employee commitment to the organization's goals and opportunities for growth (e.g., Shipper & Manz, 1992).

The path to empowerment, however, is not perfectly clear. Some organizations try to increase employee empowerment by altering the organization's hierarchical structure (e.g., Randolph, 1995). In other organizations, empowerment is assumed to occur by decree (e.g., Thorlakson & Murray, 1996). For yet other organizations, the creation of work teams is expected to increase employee empowerment (e.g., Fisher, 1993). The use of teams, particularly self-managed teams, is supposed to increase empowerment through elimination of the supervisory position, which distributes the decision making and authority of the former supervisor to the members of the team.

Recent research, however, suggests that there are cognitive contributors to employee empowerment that do not depend on specific organizational changes (Conger & Kanungo, 1988; Spreitzer, 1995, 1996; Thomas & Velthouse, 1990). These studies instead suggest empowerment is related to a multitude of organizationally relevant perceptions. For example, Conger and Kanungo (1988) focus on empowerment as a motivational process that is driven primarily by self-efficacy perceptions. To obtain empowerment, the organization must identify and eliminate context factors that are disempowering. Next, the organization must utilize managerial techniques that can improve an employee's belief in his or her ability to be empowered, such as effective goal setting, performance feedback, and making rewards contingent upon performance. Also, Conger and Kanungo suggest that the organization bolster employee self-efficacy perceptions. Collectively, these efforts lead to empowering experiences for employees that will increase employee persistence and independence (i.e., an empowered employee).

Thomas and Velthouse (1990) treat empowerment as a form of intrinsic motivation. They suggest that many of the new management techniques (such as self-managed teams) tend to converge with the recommendations made by the job-design literature (e.g., Hackman & Oldham, 1976). These practices demonstrate how job and organizational-context supports for the job can be modified to increase the level of an employee's intrinsic motivation. The Thomas and Velthouse motivational approach suggests that employees perceive themselves to be empowered to the extent that: 1) the work is meaningful to the employee, 2) the employee feels competent, 3) the employee perceives a degree of autonomy or self-determination, and 4) the work has impact on the department or the organization. Thomas and Velthouse further suggest that there are a number of context factors that contribute to such perceptions, such as rewards systems, job design, and leadership.

Finally, Spreitzer (1995) has expanded and tested components of these models. She found support for the Thomas and Velthouse (1988) contention that empowerment is partly determined by perceptions of meaningfulness, competency, self-determination, and impact. Additional research also has shown that there are social-context factors that contribute to perceptions of empowerment. For example, Spreitzer (1996) found that role ambiguity, span of control, socio-political support, access to information, and work-unit climate were related to perceptions of empowerment.

The present research focuses on organizational context as a predictor of empowerment perceptions. Organizations that possess higher levels of attributes related to organizational success, such as adequate communication, training, and recognition and rewards, are expected to possess higher levels of perceived empowerment. This finding would support the contention that an organization does not need to restructure or implement autonomous work teams to

increase empowerment, and can instead focus on improving common organizational attributes that will, in turn, enhance empowerment.

METHOD

Study 1

Participants and Procedures. In the first study, a stratified random sample of 15% of the Federal Aviation Administration's (FAA's) employees and managers (n=8,311) was administered a survey assessing the organizational climate of the FAA. A similar survey was administered two years later (1995) to a second stratified random sample (15%) of FAA employees and managers (n=6,874). The second survey followed significant workforce downsizing in the FAA. Response rates for the two surveys were 59% and 52%, respectively. Both surveys were mailed to participant's work addresses and returned through the mail. All participants completed the surveys voluntarily and anonymously.

Measures. The organizational climate measures used in both surveys were identical and consisted of perceptions of employee empowerment (4 items, sample 1 α = .77, sample 2 α = .80), recognition and rewards (3 items, α = .78, .77), communication (6 items, α = .81, .84), training adequacy (3 items, α = .64, .75), utility of new technology (3 items, α = .81, .81), people orientation (4 items, α = .89, .84), supervisor satisfaction (3 items, α = .64, .76), pay equity perceptions (4 items, α = .77, .81), work satisfaction (4 items, α = .82, .81), and eliminating a hostile work environment (4 items, α = .72, .71). All items were answered on a 1 to 5 point Likert-type scale (e.g., 1 = strongly disagree and 5 = strongly agree; 1 = not at all and 5 = to a very great extent; or 1 = very dissatisfied and 5 = very satisfied). The specific items may be found in Appendix A.

Study 2.

Participants and Procedures. In the second study (1996), an organizational culture survey was administered to employees and managers of another federal agency (n=1,275); 931 surveys were returned, for a response rate of 73%. The difference in response rates between the two agencies is likely due to the higher number of surveys administered in the FAA. The response rates for both studies, nonetheless, fall into the norm for the social sciences (Fowler, 1988). The survey was administered through the mail, and all respondents completed the survey voluntarily and anonymously.

Measures. The survey tapped organizational climate perceptions that were similar to those used in the first study, but the specific measures that assessed the constructs were different. All items were answered on a 1 to 5 point Likert-type scale (1 = strongly disagree to 5 = strongly agree). The survey items used in this study also included a "don't know" response option, which was treated as missing data. The organizational climate measures consisted of perceptions of employee empowerment (6 items, α = .87), adequacy of rewards (6 items, α = .88), communication (6 items, α = .87), training adequacy (3 items, α = .79), the use of new technology (2 items, α = .50), teamwork (6 items, α = .81), the effectiveness of union and management partnership (4 items, α = .84), the organization's ability to assess performance (6 items, α = .84), and the extent to which the organization had simplified decision making (4 items, α = .65). The specific items for each construct may be found in Appendix B.

Combined Results

Descriptive statistics (i.e., means and standard deviations) for the first study are presented in Table 1. Mean comparisons were not conducted because there were no hypothesized time-related average score changes for any of the dimensions. Descriptive statistics for the second study are summarized in Table 2.

There were no a priori expectations for the relative contributions of organizational context in predicting empowerment perceptions. Therefore, the data for both studies (all three samples) were analyzed using stepwise linear regression. For each sample, separate regression analyses were used to predict empowerment perceptions from the remaining organizational climate measures. The results of the three regression analyses are summarized in Table 3.

Table 3 illustrates a high degree of consistency across the three samples. Communication was the first variable to enter the equation in all analyses. Other predictors that emerged across samples included people orientation, work satisfaction, recognition and rewards, and training adequacy. Other measures that were unique to one study or the other also entered the equation and accounted for significant portions of the variance in empowerment. Each of these predictors is summarized in Table 3.

Table 1. Descriptive Statistics for Study 1 Measures.

Organizational Climate Measure	Sample 1 Mean	Sample 1 SD	Sample 2 Mean	Sample 2 SD	Number of Items
Employee Empowerment	2.92	0.88	3.15	0.92	4
Recognition and Rewards	2.37	0.95	2.71	0.93	3
Communication	2.85	0.83	2.96	0.94	6
Training Adequacy	3.24	0.80	3.12	0.90	3
Utility of New Technology	2.55	0.86	2.48	0.82	3
People Orientation	2.58	1.14	3.01	1.18	4
Supervisor Satisfaction	3.69	1.04	3.43	1.01	3
Pay Equity Perceptions	3.57	0.74	3.30	0.86	4
Work Satisfaction	3.75	0.89	3.70	0.89	4
Eliminating a Hostile Work Environment	3.96	0.83	3.92	0.72	4

Table 2. Descriptive Statistics for Study 2 Measures.

Organizational Climate Measure	Other Federal Agency Sample Mean	Other Federal Agency Sample SD	Number of Items
Employee Empowerment	2.88	0.83	6
Adequacy of Rewards	3.04	0.83	6
Communication	3.12	0.84	6
Training Adequacy	3.27	0.91	3
Use of New Technology	2.30	0.92	2
Teamwork	3.40	0.68	6
Effectiveness of Union and Management Partnership	2.92	0.83	4
Organization's Ability to Assess Performance	3.25	0.74	6
Simplified Decision Making	3.18	0.73	4

Table 3. Stepwise Regression Summary of Organization Context Predictors of Empowerment

Organizational Climate Measure	FAA Sample 1 E(β)	FAA Sample 1 ΔR^2	FAA Sample 2 E(β)	FAA Sample 2 ΔR^2	Other Agency Sample E(β)	Other Agency Sample ΔR^2
Communication	.298	.460	.328	.424	.289	.631
People Orientation	.182	.053	.106	.030	N/A	N/A
Technology	.160	.017	.061	.004	N/A	N/A
Recognition and Rewards	.085	.005	.108	.010	.083	.003
Supervisor Satisfaction	.075	.007	.098	.005	N/A	N/A
Training Adequacy	.064	.004	.053	.003	.096	.009
Work Satisfaction	.036	.001	.117	.018	.073	.005
Pay Equity	.031	.001	.028	.001	N/A	N/A
Partnership	N/A	N/A	N/A	N/A	.318	.082
Teamwork	N/A	N/A	N/A	N/A	.180	.027

While all predictors in Table 3 accounted for significant unique variance, it should be noted that communication accounted for the most variance across samples: 46%, 42%, and 63%, respectively. For the two FAA samples, the second strongest predictor of employee empowerment (based on change in R^2) is people orientation of management, accounting for 5% and 3% of the variance, respectively. The next two variables to enter differed for the two FAA samples. In the first sample, the third variable to enter is technology perceptions, accounting for about 2% of the variance. In the second FAA sample, the third variable to enter is work satisfaction perceptions, also accounting for about 2% of the variance. Other variables that emerge for these two samples differ in terms of variance accounted for and order of entry. The second variable to emerge in the third sample (the other agency) is partnership, accounting for about 8% of the variance. The third variable to enter is teamwork, accounting for about 3% of the variance. After these variables enter the respective equations, the remaining predictors that emerge account for small proportions of variance. The large sample sizes, however, make even these small changes in R^2 statistically significant. Although statistically significant, these variables are not given additional consideration because they contribute very little towards the understanding of empowerment perceptions. Table 3 also provides the change in the coefficient of determination for each model step. Note that the variables in Table 3 are in the order of the analysis based on FAA sample 1.

The consistent emergence of communication as the strongest predictor of employee empowerment across the three samples was unexpected. Recall that the communication measures for the two studies differ. Specifically, the communication attributes assessed in the first study focus on the adequacy of information employees receive regarding their job and organizational policies and procedures; encouragement of employees to express their views, and willingness to engage in open and honest upward communication, as well as perceptions communication regarding conflict. In the second study, communication was more focused on managerial communication of the organization's mission and goals, and the utility of upward communication. Given the diversity of the two measures, it is surprising that they consistently predict empowerment.

To assess the degree of consistency of prediction for these measures the communication Beta values were compared following Cohen and Cohen (1983) to determine if communication had the same predictive effect across the analyses. These tests indicated the weights for communication did not differ significantly across samples. This result suggests that communication perceptions, even when using different measures, make a consistent contribution to perceptions of employee empowerment.

CONCLUSIONS

The results of the regression analyses provide an illustration of the contribution of organizational climate factors to employees' perceived level of empowerment. The sizeable predictive effect of communication indicates that effective organizational communication is an important correlate of empowerment. This finding supports contentions that empowered employees require an understanding of the organization's policies and goals in order to make decisions that contribute to the organization's mission effectiveness. The results also suggest that empowerment is enhanced when employees perceive they can communicate openly and honestly up the chain of command.

Of course, the data in these studies are cross-sectional, and causal interpretation is not possible. However, it is important to note that the same pattern of results emerged from three separate samples that were taken from two organizations engaged in different types of work. The robustness of this pattern across situations suggests that communication practices may be one of the most important organizational-context contributors to the process of empowering the workforce.

Additional research is necessary to identify the mechanisms through which organizational communication contributes to empowerment perceptions. Much research has focused on organizational decision-making practices that should relate to empowerment, such as delegation and participation (Leana, 1987). It may be helpful to examine communication and empowerment perceptions in organizational settings where such practices are used.

REFERENCES

Cohen, J., & Cohen, P. (1983). Applied multiple regression/correlation analysis for the behavioral sciences (2nd Ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.

Conger, J.A., & Kanungo, R.N. (1988). The empowerment process: Integrating theory and practice. *Academy of Management Journal*, 13, 471-82.

Fisher, K. (1993). *Leading self-directed work teams.* New York: McGraw Hill.

Fowler, F.J. (1988). *Survey research methods* (Rev. ed.). Newbury Park, CA: Sage.

Hackman, J.R., & Oldham, G.R. (1976). Motivation through the design of work; Test of a theory. *Organizational Behavior and Human Performance*, 16, 250-79.

Kanter, R.M. (1989). The new managerial work. *Harvard Business Review*, 67, 85-92.

Leana, C.R. (1987). Power relinquishment versus power sharing: Theoretical clarification and empirical comparison of delegation and participation. *Journal of Applied Psychology*, 72, 228-33.

Quinn, R.E., & Spreitzer, G.M. (1997). The road to empowerment: Seven questions every leader should consider. *Organizational Dynamics*, 26, 37-49.

Randolph, W.A. (1995). Navigating the journey to empowerment. *Organizational Dynamics*, 23, 19-31.

Shipper, F., & Manz, C.C. (1992). Employee self-management without formally designated teams: An alternative road to empowerment. *Organizational Dynamics*, 20, 48-61.

Spreitzer, G.M. (1995). Psychological empowerment in the workplace: Dimensions, measurement and validation. *Academy of Management Journal*, 38, 1442-65.

Spreitzer, G.M. (1996). Social structural characteristics of psychological empowerment. *Academy of Management Journal*, 39, 483-504.

Thomas, K.W., & Velthouse, B.A. (1990). Cognitive elements of empowerment: An "interpretive" model of intrinsic task motivation. *Academy of Management Review*, 15, 666-81.

Thorlakson, A.J.H., & Murray, R.P. (1996). An empirical study of empowerment in the workplace. *Group & Organization Management*, 21, 67-83.

Appendix A. Items from Study 1 (Federal Aviation Administration Survey).

Employee Empowerment

I am required to get approval for decisions that I think I should be able to make myself.*
I have the authority to make decisions required by your day-to-day work problems.
I am able to contribute to decision-making that affects your job.
Decisions in my organization are made at those levels where the most adequate and accurate information is available.

Recognition and Rewards

It's pretty common to hear "job-well-done" within my organization.
Promotions in my organization are given to those who are well-qualified.
Rewards or recognition are given for exceptional performance in my organization.

Communication

Conflicts and differences in my organization are brought out and managed, rather than avoided or worked around.
Policies and procedures affecting my work are communicated adequately.
Management in my organization ensures that the information I need to do my job is readily available.
Some employees may be hesitant to speak up for fear of retaliation.*
It is generally safer to say that you agree with management even when you don't really agree.*
We are encouraged to express our concerns openly.

Training Adequacy

To what extent have you had an opportunity to participate in FAA-funded training programs?
To what extent have you been able to apply what you have learned from FAA training to your job?
To what extent have you received the training you need to perform effectively in your job?

Utility of New Technology

To what extent do you receive advance information from the FAA concerning major innovations or organizational changes that affect you job?
To what extent do you receive sufficient information from the FAA to understand how innovations and changes might affect you?
To what extent is your organization generally quick to use improved work methods?

People Orientation

The FAA is committed to people concerns?
My facility/organization has a real interest in the welfare and satisfaction of those who work there.
Within the past 2 years, I have seen positive change in the emphasis that the FAA places on managing people
The FAA takes into account the impact of organizational changes on employees.

Supervisor Satisfaction

Overall, how satisfied are you with your immediate supervisor/teamleader?
I feel free to discuss with my immediate supervisor/teamleader the problems and difficulties I have in my job without jeopardizing my position or having it "held against" me later.
My supervisor takes effective action to counsel or discipline employees whose behavior might be seen as harassing or discriminating.

Pay Equity Perceptions

Compared to other places, to what extent does the FAA pay well?
Compared to other places, to what extent does the FAA offer good job security?
Compared to other places, to what extent does the FAA have a good retirement plan?
Compared to other places, to what extent does the FAA have other good employee benefits (holiday, leave, insurance)?

Work Satisfaction

Overall, how satisfied are you with your job- kind of work you do?
Overall, how satisfied are you with your work group?
Overall, how satisfied are you with your organization as a place to work?
Overall, how satisfied are you with your job overall?

Eliminating a Hostile Work Environment

Complaints about discrimination and harassment are not taken seriously by management where I work.*
Sexual harassment is a problem in my workplace.*
Jokes about women, people of color, etc. are common in my workplace.*
To be a "part of the crowd" in my workplace, I have to go along with jokes about people of color, women, etc.*

* Reversed item

Appendix B. Items from Study 2 (Anonymous Federal Agency).

Employee Empowerment

New practices and ways of doing business are encouraged.
Employees have a feeling of personal empowerment and ownership of work processes.
Management seeks employee's ideas and opinions before making important decisions affecting their work.
Management informs employees and teams about the scope of their authority when assigning work.
There is trust between employees and their supervisors/team leaders.
Risk-taking is encouraged without fear of punishment for mistakes.

Adequacy of Rewards

In this organization, recognition and rewards are based on merit.
In this organization, recognition and rewards are given to teams for significant achievement.
Employees are rewarded for providing high quality products and services to customers.
Creativity and innovation are rewarded.
Supervisors are fair in recognizing individual and team accomplishments.
When work units or individuals in this organization surpass expectations, they promptly receive recognition.

Communication

Managers communicate the organization's mission, vision, and values.
Managers let employees know how their work contributes to the organizational mission and goals.
Managers promote communication among different work units (for example, about projects, goals, needed resources).
Employees are kept informed on issues affecting their jobs.
Managers in my organization lead by example.
I think that management will use the feedback from this survey.

Training Adequacy

In this organization, everyone is encouraged to continually build new skills.
Employees receive the training they need to perform their jobs (for example, on-the-job training, conferences, workshops.)
Education and training programs are developed based on an assessment of employee's training needs.

Use of New Technology

Managers in this organization effectively use electronic mail to communicate with employees.
Employees in my organization use the Internet to accomplish their work.

Teamwork

Teams are used to accomplish organization goals, when appropriate.
When an individual is faced with a difficult task, other work unit members are expected to lend a hand.
Employees are rewarded for working together in teams (for example, performance ratings, cash awards, certificates, public recognition).
Managers provide an environment that supports employee involvement, contributions, and teamwork.
Different work units cooperate to get the job done.
In this organization, work units are expected to allocate rather then hoard the people and resources they no longer need.

Effectiveness of Union Management Partnership

In this organization, management involves the labor partners in all important decisions that impact the employees.
My organization values partnerships between management and labor.
In this organization, our labor/management partnership has increased the typical employee's ability to innovate on the job.
My organization encourages resolving disputes cooperatively (e.g., interest-based problem solving, alternative dispute resolution).

Organization's Ability to Assess Performance

In this organization, everyone from the senior manager on down is held accountable for quality results.
Work units in this organization monitor and formally report progress toward mission-related goals.
Work units in this organization have measurable standards against which team achievement is assessed.
Supervisors/team leaders communicate what is expected of employees in terms of job performance (for example, task responsibilities, performance standards).
Managers set challenging and attainable performance goals.
Everyone in this organization is clear about how "good performance" is defined.

Simplified Decision Making

My organization has significantly simplified travel regulations.
My organization has significantly simplified the process for hiring employees.
In my organization, the time keeping systems is based on trust.
In my organization, employees can purchase supplies and services easily.

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