

WHICH LEADERSHIP ROLES MATTER TO WHOM? AN EXAMINATION OF RATER EFFECTS ON PERCEPTIONS OF EFFECTIVENESS

Robert Hooijberg*
Jaepil Choi

Rutgers, The State University of New Jersey

Using a 360-degree feedback approach, we examined the extent to which raters vary in the leadership roles they associate with effectiveness, as well as the extent to which self-ratings reflect those of other raters. Using data from 252 managers and their subordinates, peers, and superiors from the public utility industry, we found that, depending on the rater-ratee relationship, different leadership roles are associated with effectiveness. The managers themselves resembled their superiors the most in terms of the leadership roles they associated with effectiveness. These results lend support for the importance of 360-degree feedback for both practitioners and researchers. Organizational researchers, then, should not only examine levels of rater agreement, but also try to better understand what different raters consider critical leadership roles. This article is a step in that direction.

Research on 360-degree feedback has primarily focused on the level of agreement between self and other ratings (e.g., Atwater, Ostroff, Yammarino, & Fleenor, 1998; Johnson & Ferstl, 1999) and, to a lesser extent, on measurement equivalence (e.g., Maurer, Raju, & Collins, 1998), interrater reliability (e.g., Greguras & Robie, 1998), and method variance (e.g., Mount, Judge, Scullen, Sytsma, & Hezlett, 1998). One of the main findings is that generally little agreement exists between self and other

* Direct all correspondence to: Robert Hooijberg, IMD–International Institute for Management Development, Chemin de Bellerive 23, P.O. Box 915, CH-1001 Lausanne, Switzerland; *e-mail*: hooijberg@imd.ch.

ratings and that when agreement between self and other raters exists it is positively associated with performance (e.g., Atwater & Yammarino, 1992).

Little attention, however, has been paid to the substance of the differences between self and other raters. That is, do raters differ in the leadership roles they associate most with effectiveness? Research by Bernardin and Alvares (1975) indicates that the organizational level of the constituent (relative to the ratee) has an impact on the perceptions of what constitute critical leadership behaviors. It is important for managers to know what various constituents consider critical leadership behaviors, because constituents "make decisions to give or withhold resources, such as information, materials and their own efforts, that are critical to a manager's success in performing his or her job" (Tsui, Ashford, St. Clair, & Xin, 1995, p. 1516).

Although quite a few articles have been written on 360-degree feedback, including special issues in *Human Resources Management* and *Group & Organization Management* (Church & Bracken, 1997; Tornow, 1993), few researchers (e.g., Pfeffer & Salancik, 1975; Tsui, 1984; Tsui & Ohlott, 1988) have empirically examined whether systematic differences exist in the leadership roles various constituents associate with effectiveness. In this article we address this gap in the literature. Specifically, we examine whether differences exist among managers themselves, their subordinates, peers, and superiors in the leadership roles they associate with effectiveness. We use the term *leadership effectiveness models* to refer to relationships observers see between the performance of leadership roles and effectiveness. We also examine whether the self-ratings resemble any of the other raters more than others.

For our study, we use the Competing Values Framework (CVF) of leadership roles (Quinn, 1988) and a sample of middle managers from the public utility industry. After a brief review of relevant research, we describe the study and its results, and discuss the implications of the results for leadership research in general and 360-degree feedback in particular.

CRITICAL LEADERSHIP ROLES

Vandenberg, Lance, and Taylor (1997) note that "our personal conceptualization of what constitutes performance is largely a function of our social perceptions of the individual being rated, and our interaction goals with that individual due to our position in the organization" (p. 29). Swann (1984) adds that the importance of goals may vary as a function of one's relative (to the ratee) position in the organization. Few leadership researchers (e.g., Pfeffer & Salancik, 1975; Salam, Cox, & Sims, 1997; Tsui, 1984; Tsui & Ohlott, 1988), however, have examined the relationship between one's organizational position and the leadership roles one associates most with effectiveness. Such research is important because it highlights the extent to which organizational constituents have fundamental differences about which leadership roles make leaders effective. If organizational constituents differ fundamentally in the leadership roles they associate with effectiveness, 360-degree feedback researchers should not just pay attention to rater agreement, but also to substantive differences. Below, we briefly review research that has tried to understand differences among constituents in the leadership roles they associate with effectiveness.

Pfeffer and Salancik (1975) found that supervisors in the housing division of a large state university thought that their subordinates and bosses had distinctly different expectations for them. The authors found that supervisors' expectations of subordinates were more important in influencing their social behaviors, although the expectations of the bosses were more important in determining their work-related behavior. Pfeffer and Salancik (1975), however, did not ask the subordinates and superiors directly about which behaviors they associated with the effectiveness of the housing supervisors.

Salam et al. (1997) partially addressed this last issue by relating subordinate perceptions of leadership behaviors to subordinates', managers', and superiors' perceptions of effectiveness of the focal manager. They found that the subordinates' perceptions of leadership behaviors had different relationships with effectiveness, depending on the rater of effectiveness. However, they did not examine the relationship between the managers' and superiors' perceptions of leadership behaviors to their own perceptions of effectiveness.

Tsui (1984) and Tsui and Ohlott (1988) addressed this last issue by studying the leadership effectiveness models¹ of subordinates, peers, and superiors of managers. The term *leadership effectiveness models* refers to relationships observers see between the performance of leadership roles and effectiveness. Surprisingly, they found no significant differences in the leadership effectiveness models of superiors, peers, and subordinates. Furthermore, Tsui (1984) found that the managers' own perceptions of which leadership roles were most strongly associated with effectiveness *did* differ significantly from the perceptions of their subordinates, peers, and superiors. These results seem to contradict a core notion of 360-degree feedback, because the different constituents did not have substantially different leadership effectiveness models.

Although the supervisors in Pfeffer and Salancik's (1975) study expected differences in expectations from the members of their role set, the research by Tsui (1984) and Tsui and Ohlott (1988) does not support these ideas. No research to date, then, has empirically shown that observers differ in the leadership roles they associate with effectiveness. Given the importance of better understanding differences in perceptions among members of a role set for 360-degree feedback, we examine the relationship between leadership roles and effectiveness of managers participating in an executive education program by studying the perceptions of these managers' subordinates, peers, superiors, and the managers themselves. The leadership model that guides our research is Quinn's (1988) CVF of leadership roles. Before we turn to specific hypotheses, we first briefly describe the CVF.

The CVF of Leadership Roles

The CVF suits our purposes because it distinguishes eight leadership roles that can be of differential importance to different raters. It distinguishes these eight distinct leadership roles along two dimensions that indicate how the leadership roles differ from each other theoretically (see Fig. 1). These dimensions of flexibility versus control, and internal focus versus external focus, allow us to formulate specific

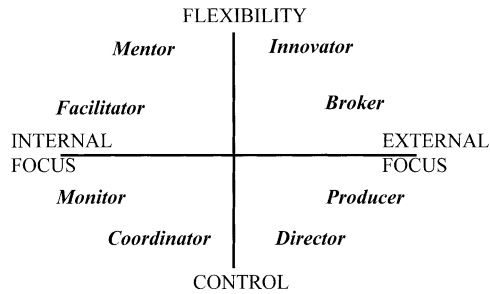


Figure 1. The Competing Values Framework
Note: Adapted from Quinn (1998).

hypotheses for different rater-ratee relationships, because they reflect distinctly different “perceptual biases that influence how we see social action” (Quinn, 1988, p. 85). The two dimensions define four quadrants and eight leadership roles that address distinct demands in the organizational arena.

The *task leadership* quadrant is characterized by a control orientation and a focus on the environment external to the unit, and emphasizes setting and attaining goals. This quadrant contains the *producer* and *director* roles. As a producer, a manager is expected to motivate members to increase production and to accomplish stated goals. As a director, a manager is expected to clarify expectations, define problems, establish objectives, generate rules and policies, and give instructions. The *stability leadership* quadrant is characterized by a control orientation and a focus on the internal functioning of the unit, and emphasizes monitoring and coordinating the work of the unit. This quadrant contains the *coordinator* and *monitor* roles. As a coordinator, a manager is expected to maintain the structure and flow of the system, coordinate the scheduling of staff efforts, handle crises, and attend to technical and logistical issues. As a monitor, a manager is expected to know what is going on in the unit, to see if people comply with rules and regulations, and to see whether the unit is meeting its quotas.

The *people leadership* quadrant is characterized by a flexible orientation and a focus on the internal functioning of the unit, and emphasizes mentoring subordinates and facilitating group process in the unit. This quadrant contains the *facilitator* and *mentor* roles. As a facilitator, a manager is expected to foster collective effort, build cohesion and teamwork, and manage interpersonal conflict. As a mentor, a manager is expected to develop people through a caring, empathetic orientation. In this role, the manager is helpful, considerate, sensitive, open, approachable, and fair. The *adaptive leadership* quadrant is characterized by a flexible orientation and a focus on the environment external to the unit, and emphasizes developing innovations and obtaining resources for the unit. This quadrant contains the *innovator* and *broker* roles. As an innovator, a manager is expected to pay attention to changes in the environment and to identify and facilitate adaptation to those changes. As a broker, a manager is expected to meet with people from outside his or her unit

to represent the unit and to negotiate and acquire resources for the unit. These are the eight leadership roles that will be used to formulate the hypotheses.

Denison, Hooijberg, and Quinn (1995) report that the CVF questionnaire has discriminant, convergent, and nomological validity, and Buenger, Daft, Conlon, and Austin (1996), Hart and Quinn (1993), and Hooijberg (1996) have used the model effectively to explore leadership and organizational culture issues. Although the research using this model is promising, we realize empirical CVF research is in the early stages of development. We find the model, however, relevant for our research questions, and we will now use it to formulate our hypotheses.

Hypotheses

In an organizational context, we expect people to find those leadership roles important that will better enable them to perform the duties associated with their organizational position. Heilmann, Hornstein, Cage, and Herschlag (1984), for example, found that subordinates preferred participative leadership, regardless of the situation, but superiors preferred leadership behaviors best suited to the particular situation. We expect, then, that raters will associate those leadership roles with effectiveness that help them attain goals important to them.

Subordinates

We expect that the most important leadership roles related to subordinates' interactions with their managers lie on the *internal focus* side of the CVF model. In terms of the CVF model, the internal functioning of the unit is served by the managers performing the coordinator, monitor, facilitator, and mentor leadership roles. We assert that subordinates will see the strongest associations between these four roles and effectiveness because that would mean that their managers do a good job dividing up the work, monitoring people's contributions, managing disagreements and conflict, and that they are sensitive to individuals' needs.

In addition to the leadership roles that emphasize the internal functioning of the manager's unit, Pelz (1952) found that subordinates perceive managers who have influence with their superiors as more effective than those who do not. The need for influence with superiors is best addressed by the *broker* role, which emphasizes influencing decisions made at higher levels in the organization. Therefore, the following is hypothesized:

Hypothesis 1. A manager's subordinates will positively associate the coordinator, monitor, mentor, facilitator, and broker leadership roles with effectiveness.

Peers

One of the most understudied relationships is the relationship managers have with their peers. The relationship with peers is important because peers have "different organizational subgoals but interdependent activities that need to intermesh" (Landsberger, 1961, p. 300). The interdependence refers to the need for information and to the fact that, often, the output of one manager's unit is the input for one

of his or her peers. It is, therefore, important that there exists clarity of goals, that tasks get completed on time, that work is coordinated, and that progress is monitored. Clarity of goals helps other units develop plans that complement, rather than contradict, other units' goals. The emphasis in peer relations, then, is on the *control* dimension of the CVF model, namely, the producer, director, coordinator, and monitor leadership roles.

In addition to the emphasis on the control-oriented leadership roles, Landsberger (1961) also points out that, in these horizontal relationships, conflict and disagreement may be frequent. Effective handling of conflict requires good interpersonal skills, and the facilitator leadership role in the CVF model addresses the ability to collaborate and deal with conflict. Therefore, the following is hypothesized:

Hypothesis 2. A manager's peers will positively associate the producer, director, coordinator, monitor, and facilitator leadership roles with effectiveness.

Superiors

We expect that the most important leadership roles related to superiors' interactions with their managers lie on the *external focus* side of the CVF model. In terms of the CVF model, the external focus of the unit is served by the managers performing the innovator, broker, producer, and director leadership roles. We assert that superiors will see the strongest associations between these four roles and effectiveness because that would mean that their managers do a good job in improving the functioning of their unit, contributing meaningfully to their decisions, and delivering on the goals for their units. It is hypothesized, then, that the leadership roles that influence superiors' perceptions of managers' effectiveness are those that emphasize the external focus of the CVF model.

Hypothesis 3. A manager's superiors will positively associate the innovator, broker, producer, and director roles with effectiveness.

Managers Themselves

Salancik, Calder, Rowland, Leblebici, and Conway (1975, p. 83) argued that managers "develop behavioral styles correspondent with the mutually constraining pressures and demands of their subordinates, their peers and their superiors," and Tsui (1984, p. 66) argued that the most "effective manager is one who is able to meet the expectations of all or most of the constituencies in the role set." Assuming that a manager wants to be seen as effective, this means that managers will see themselves as effective if they engage in the performance of the leadership roles their subordinates, peers, and superiors associate with effectiveness. Because the previous three hypotheses touch on all eight leadership roles of the CVF, the following is predicted:

Hypothesis 4a. Managers will associate the frequent performance of all eight leadership roles with effectiveness.

Although it makes sense that managers want to pay attention to the expectations of all their constituents, we can also formulate two alternative hypotheses, namely, a “power” and an “interaction frequency” hypothesis. Tsui et al. (1995) argued that managers, when faced with discrepant expectations, will not always try to meet the expectations of all constituents. Rather, given limits on energy and effort, they expect managers to devote the most energy to meeting the expectations of their most powerful constituency (in terms of ability to distribute valued rewards), which usually is the superior. They argued that managers might feel most concerned about the leadership roles their superiors find most important, because “it is the opinions and perceptions of these influential but relatively detached observers that serve to perpetuate or terminate one’s position as a leader” (McElroy, 1982, p. 414). If this alternative hypothesis has validity, then we can assume the following:

Hypothesis 4b. Managers will have a leadership effectiveness model similar to their superiors.

Pfeffer and Salancik (1975), however, suggest that the constituency with whom managers interact most frequently will have the strongest influence on the managers’ leadership effectiveness model. Assuming that managers interact most frequently with their subordinates, we hypothesize the following:

Hypothesis 4c. Managers will have a leadership effectiveness model similar to their subordinates.

METHODOLOGY

Sample

The study focused on middle managers because they “cannot be directly evaluated on the basis of productivity at the shop level, nor overall performance at the corporate level. Their effectiveness depends to a large extent on their ability to exercise leadership in all directions and to meet the multiple demands” (Tsui, 1984, p. 43). Questionnaire data from 252 managers from the public utility industry who participated in executive education programs at the University of Michigan Business School were used to test the relationship between leadership behaviors and leadership effectiveness. We used a sample from the public utility industry because these managers have been found to be less mobile than managers in other industries (Hildebrandt & Miller, 1982). They therefore should have time to learn and understand the expectations of the people with whom they work.

The participants provided information about their own leadership behaviors and effectiveness. In addition, information about these participants’ leadership behaviors and effectiveness was also collected from their subordinates, peers, and superiors. We asked the managers to distribute nine questionnaire packets to subordinates, peers, and superiors who they felt could comment on their leadership performance. By giving these general instructions and by emphasizing the developmental purpose of the training program, we expected the managers to distribute

the questionnaires to subordinates, peers, and superiors whose opinions they respect and, subsequently, whose opinions they would act on. The respondents were assured of complete confidentiality and were also informed of the developmental nature of the training. Surveys were returned directly to the researchers, and the managers received only aggregate information about their leadership behaviors and effectiveness. On average, four subordinates, two peers, and between one and two superiors provided feedback for each manager.

The 252 managers came from 132 different U.S. public utility companies. The participants were predominantly white (93%) and male (90%); 79% were between 36 and 50 years of age and had been in their current position for an average of 3 years. Thirty-six percent of the participants had a bachelor's degree, 35% had a master's degree, and 7% had a doctorate degree.

Measurement

Leadership Effectiveness

The effectiveness measures in this study did not concern attempts to assess the performance of the work unit or departments that were under the supervision of the middle managers in our study. Leaders “*live* in organizational settings, and . . . they therefore neither do, nor can, exist in isolation of that setting. . . . [Therefore] the effective leader is one who is responsive to the demands of all individuals in the social system with whom he must interact and coordinate his behavior” (Salancik et al., 1975, pp. 99–100; italics in original). Consequently, we constructed four indices of leadership effectiveness, based on responses of the managers' subordinates, peers, and superiors, and on responses of the managers themselves. The effectiveness of the participating managers was assessed through five items that asked about overall performance: (1) overall managerial success, (2) overall leadership effectiveness, (3) the extent to which the manager met managerial performance standards, (4) how well he or she did compared with his or her managerial peers, and (5) how well he or she performed as a role model. These five items were measured on a 5-point scale, with high scores indicating higher levels of effectiveness. The measures of effectiveness thus indicate how effective managers were *perceived* to be, by themselves and by their constituents.

Leadership Roles

We used the 24 items that Quinn (1988) developed to assess the frequency with which managers performed the eight leadership roles of the CVF, with the response scale ranging from *almost never* (a score of 1) to *almost always* (a score of 7). We assessed the *frequency* with which, rather than *how well*, managers performed the leadership roles in order to avoid creating response scale tautologies with the effectiveness items.

As with the effectiveness items, the leadership role items were aggregated by relative organizational position. That is, the responses of all subordinates for each item for a given manager were averaged into one subordinate score, and the same

was done for the peers and superiors. We did this because we have emphasized that individuals' goals in interactions with others vary as a direct function of their relative organizational positions (Morrison, 1994; Scandura & Schriesheim, 1994) and because the hypotheses stress organizational role relationships rather than individual relationships (Keller, 1986).

Demographic Variables

Because we wanted to examine the relationships between leadership roles and perceptions of leadership effectiveness, we needed to rule out alternative explanations of perceptions of leadership effectiveness. Past studies have demonstrated that sex (e.g., Dobbins & Platz, 1986; Eagley & Johnson, 1990), age, managerial experience, and level of education affect perceptions of leadership effectiveness (e.g., Bass, 1990). Therefore, we included those four demographic variables in this study.

Statistical Analyses

We used LISREL VIII (Jöreskog & Sörbom, 1993) to analyze the data, because it takes measurement errors into consideration, gives parameter estimates based on the maximum likelihood method, and provides various indices of the extent to which the proposed covariance structural model fits the data. In this study, we used four indices to assess the goodness of fit of the covariance structural model: (1) χ^2 , (2) root mean square error of approximation (RMSEA), (3) incremental fit index (IFI), and (4) comparative fit index (CFI). The most common goodness-of-fit index is the chi-square value. The rule of thumb is that if the p value of the chi-square statistic is greater than .05 (i.e., the chi-square value is nonsignificant), then the proposed model is acceptable (Hayduk, 1987). However, because the traditional chi-square test is very sensitive to sample size, Browne and Cudek (1993) suggest using the RMSEA as the principal goodness-of-fit index. They suggest that a value of RMSEA of less than .05 indicates a close fit and that values up to .08 represent reasonable errors of approximation in the population. In addition, because Bollen (1989a, 1989b) and Bentler (1990) have shown that IFI and CFI are much less dependent on sample size, we also used IFI and CFI to assess the fit between the data and the model. The values of IFI and CFI can vary between 0 and 1, with values closer to 1 indicating a close fit between data and model.

By using a linear structural relations (LISREL) model that combines factor analysis and path analysis (Bollen, 1989a), we can evaluate the following: (1) the discriminant and convergent validity of leadership roles and leadership effectiveness and (2) the significance of the relationships between leadership roles and leadership effectiveness. To accomplish these two purposes, we followed the two-step procedure suggested by Anderson and Gerbing (1988). First, the measurement model is tested with confirmatory factor analysis for all latent constructs. Once the measurement model is judged to be a good fit, we go on to test the significance of the relationships among the latent constructs.

RESULTS

Confirmatory Factor Analysis

We performed four confirmatory factor analyses (CFA) on the leadership roles and leadership effectiveness items; one each for the managers themselves, their subordinates, peers, and superiors. However, closer examination of the intercorrelations among the latent leadership role factors showed that high intercorrelations ($>.8$) existed in all four groups (i.e., self, subordinates, peers, and superiors) among the producer, director, and coordinator roles. These high intercorrelations suggested that these three roles might be multiple indicators of a second-order factor. Podsakoff, MacKenzie, Moorman, and Fetter (1990) recommended using a second-order factor analysis in this type of a situation, and we found that these three leadership roles were adequately represented by a second-order factor. Moreover, the results of this second-order CFA improved the overall fit and limited extremely high correlations among the latent factors. Based on this second-order factor analysis, the items for these three leadership roles were modeled to be explained by the same factor, which we labeled the *goal achievement* factor, in the subsequent LISREL analyses.

The goodness-of-fit indices for the CFAs of the six-factor models were as follows: for managers themselves, RMSEA = .05, IFI = .91, CFI = .90; for subordinates, RMSEA = .07, IFI = .90, CFI = .90; for peers, RMSEA = .06, IFI = .90, CFI = .89; and for superiors, RMSEA = .06, IFI = .88, CFI = .88. Although the χ^2 were significant, all the χ^2 over degrees of freedom (χ^2/df) were less than 2.25, which also indicates good fit between model and data (Marsh & Hocevar, 1985). Overall, these indices indicated that the data confirm a six-factor model for all four groups. Examination of the latent construct correlations supported the discriminant validity of the constructs, because individual tests of the correlations indicated that they were significantly lower than 1.0 (Bagozzi, 1980). Furthermore, the CFAs for the effectiveness items confirmed that these five items are adequately represented by one common factor for all four groups. Table 1 shows the factor loadings for the individual items for all four groups.

Reliabilities and Validity of Measurement

Table 2 is based on correlation tables available from the authors and shows composite reliabilities for the leadership roles and leadership effectiveness constructs for all four groups. The composite reliability, like the Cronbach alpha, assesses internal consistency of multiple items to measure a construct (Fornell & Larcker, 1981; Netemeyer, Johnston, & Burton, 1990). Note that items of the monitor role have weak internal consistency for three groups. Although four of the composite reliability coefficients fall below the .70 level, all others show satisfactory internal consistency.

Table 2 also presents the variance-extracted estimates for all constructs for all four groups. The variance-extracted estimate suggests the proportion of variance captured by a construct relative to the proportion of variance due to measurement

Table 1. Results of Confirmatory Factor Analysis of All Latent Variables

<i>Leadership Roles</i>	<i>Self</i> (N = 252)	<i>Subordinates</i> (N = 245)	<i>Peers</i> (N = 235)	<i>Superiors</i> (N = 228)
Innovator				
X1: Comes up with inventive ideas	0.74	0.77	0.70	0.77
X2: Experiments with new concepts and procedures	0.65	0.76	0.68	0.66
X3: Does problem solving in creative, clever ways	0.78	0.79	0.81	0.78
X4: Searches for innovations and potential improvements	0.78	0.87	0.83	0.85
Broker				
X5: Exerts upward influence in the organization	0.59	0.81	0.77	0.68
X6: Influences decisions made at higher levels	0.78	0.84	0.81	0.72
X7: Gets access to people at higher levels	0.48	0.65	0.65	0.69
X8: Persuasively sells new ideas to higher-ups	0.73	0.89	0.82	0.79
Goal Achievement				
X9: Maintains a "results" orientation in the unit	0.45	0.64	0.63	0.60
X10: Sees that the unit delivers on stated goals	0.64	0.60	0.75	0.73
X11: Gets the unit to meet expected goals	0.69	0.66	0.74	0.77
X12: Makes the unit's role very clear	0.64	0.79	0.77	0.68
X13: Clarifies the unit's priorities and direction	0.68	0.82	0.81	0.78
X14: Anticipates workflow problems, avoids crisis	0.54	0.72	0.67	0.54
X15: Brings a sense of order and coordination into the unit	0.62	0.78	0.76	0.70
Monitor				
X16: Maintains tight logistical control	0.57	0.77	0.66	0.71
X17: Monitors compliance with the rules	0.64	0.76	0.64	0.62
X18: Compares records, reports, and so on to detect discrepancies	0.59	0.62	0.67	0.59
Mentor				
X19: Shows empathy and concern in dealing with subordinates	0.76	0.89	0.89	0.82
X20: Treats each individual in a sensitive, caring way	0.81	0.91	0.91	0.80
X21: Shows concern for the needs of subordinates	0.80	0.94	0.91	0.90

(continued)

error (Fornell & Larcker, 1981; Netemeyer et al., 1990). Table 2 shows that most variance-extracted estimates are over .50, which is a critical value suggested by Fornell and Larcker (1981). Although several constructs have variance-extracted estimates below .50, an additional analysis provides evidence of satisfactory con-

Table 1. (Continued)

<i>Leadership Roles</i>	<i>Self</i> (N = 252)	<i>Subordinate's</i> (N = 245)	<i>Peers</i> (N = 235)	<i>Superior's</i> (N = 228)
Facilitator				
X22: Facilitates consensus building in the work unit	0.58	0.82	0.70	0.67
X23: Surfaces key differences among group members, then works participatively to resolve them	0.66	0.73	0.67	0.72
X24: Develops consensual resolution to openly expressed differences	0.58	0.82	0.78	0.76
Leadership Effectiveness				
Y1: Meeting of managerial performance standards	0.67	0.78	0.68	0.57
Y2: Overall managerial success	0.76	0.86	0.77	0.72
Y3: Comparisons to the person's managerial peers	0.54	0.83	0.81	0.77
Y4: Performance as a role model	0.49	0.85	0.76	0.54
Y5: Overall effectiveness as a manager	0.84	0.91	0.90	0.94

Notes: All of the factor loadings in this table are from the standardized solution. Calculated from null of 2,954.58 with 528 *df* in Self; calculated from null of 5,858.20 with 528 *df* in Subordinate; calculated from null of 4,930.14 with 528 *df* in Peer; calculated from null of 4,226.48 with 528 *df* in Superior. All of the factor loadings in this table are significant at or below $p = 0.01$.

struct validity of those constructs. We compared the chi-square value of an unconstrained model and the chi-square values of all possible constrained models in which the correlations of a pair of the constructs that have low variance-extracted estimates are fixed at 1.0 (Anderson & Gerbing, 1988; Bagozzi & Phillips, 1982; Netemeyer et al., 1990). All chi-square differences are significant, which indicates discriminant validity of those constructs. Therefore, despite low variance-extracted estimates of some constructs, the additional evidence allows us to conclude that the measures and constructs in our study have satisfactory psychometric properties.

Table 2. Composite Reliability and Variance-Extracted Estimates for Leadership Roles and Leadership Effectiveness

	<i>Self</i> (N = 252)		<i>Subordinates</i> (N = 245)		<i>Peers</i> (N = 235)		<i>Superiors</i> (N = 228)	
Leadership Roles								
Innovator	0.83	0.54	0.87	0.63	0.84	0.57	0.85	0.59
Broker	0.74	0.43	0.87	0.64	0.85	0.59	0.81	0.52
Goal achievement	0.81	0.38	0.88	0.52	0.89	0.54	0.86	0.48
Monitor	0.63	0.36	0.76	0.52	0.69	0.43	0.67	0.41
Mentor	0.83	0.62	0.94	0.83	0.93	0.81	0.88	0.71
Facilitator	0.63	0.37	0.83	0.63	0.75	0.50	0.76	0.52
Leadership Effectiveness								
	0.80	0.45	0.93	0.72	0.89	0.62	0.84	0.52

Note: In each column, the first number is a composite reliability and the second number is a variance-extracted estimate for corresponding leadership roles and leadership effectiveness.

Table 3. Parameter Estimates for the LISREL Paths

	<i>Self</i>	<i>Subordinate</i>	<i>Peer</i>	<i>Superior</i>
Path Description to Leadership				
Effectiveness				
Innovator	-0.11	0.08	0.19*	0.19*
Broker	0.20	0.13*	0.14	0.10
Goal achievement	0.48**	0.44**	0.09	0.35**
Monitor	-0.31**	-0.17*	-0.07	-0.14
Mentor	0.04	0.08	-0.25	-0.06
Facilitator	0.18	0.29*	0.67*	0.23
Sex	0.08	-0.02	0.04	0.12*
Age	-0.15*	0.01	-0.02	-0.01
Education	0.01	0.04	-0.13*	0.10*
Years in current position	-0.04	0.11**	0.02	0.03
Goodness-of-Fit Indices				
Chi-square	680.36	994.62	907.73	888.58
<i>df</i>	443	443	443	443
<i>p</i> <	0.00	0.00	0.00	0.00
Chi-square/ <i>df</i>	1.54	2.25	2.05	2.01
RMSEA	0.05	0.07	0.06	0.06
IFI	0.91	0.90	0.90	0.88
CFI	0.90	0.90	0.89	0.88

Notes: All of the parameters are standardized parameter estimates.

* *p* < 0.05; ***p* < 0.01.

LISREL Analyses

We use LISREL analyses to examine the leadership effectiveness models of the managers themselves and their subordinates, peers, and superiors. Detailed information on the measured indicators was presented in Table 1. Table 3 shows the results of the standardized parameter estimates. The overall fit of the LISREL models is the same as for the CFAs because none of the paths were restricted. The overall fit, as with the CFAs, is good.

The leadership roles as a group explain a significant proportion of variance in the perceptions of effectiveness, ranging from 37% to 69%. The leadership roles that explain that variation, however, depend on who is rating the manager. In the self-perceptions, the goal achievement role has a positive, and the monitor role, a negative, association with effectiveness. Within the subordinate equation, the broker, goal achievement, and facilitator roles have a positive, and the monitor role, a negative, association with perceptions of effectiveness. In the equation for the peers, the facilitator role has a very strong, and the innovator role, a weaker, but still significant, association with perceptions of effectiveness. Within the superior model, the goal achievement role has a strong, and the innovator role, a weaker, but still significant, association with perceptions of effectiveness.

These results provide partial support for H1–H3 and H4b, but not for H4a and H4c. H1 stated that subordinates would associate the coordinator, monitor, facilitator, mentor, and broker roles with effectiveness. This hypothesis receives partial support because the facilitator and broker roles have a significant association

with subordinates' perceptions of effectiveness. In addition, the coordinator role is significant as part of the goal achievement role. Contrary to our hypothesis, the monitor role has a significantly negative association with subordinates' perceptions of effectiveness. Also, the producer and director roles (as part of the goal achievement role) do have a significant association with subordinates' perceptions of effectiveness. Path coefficients comparison tests show that the goal achievement role has a significantly stronger association than any of the other leadership roles with perceptions of effectiveness, while the other significant leadership roles do not differ significantly from each other.

H2 stated that peers would associate the producer, director, coordinator, monitor, and facilitator roles with effectiveness. This hypothesis receives little support. Although the facilitator, as well as the innovator, role has a highly significant association with peers' perceptions of effectiveness as hypothesized, the producer, director, coordinator, and monitor roles do not. However, path coefficients comparison tests show that the association of the facilitator role with peers' perceptions of effectiveness is significantly stronger than the impact of the innovator role.

H3 stated that superiors would associate the innovator, broker, producer, and director roles with effectiveness. This hypothesis receives partial support, because the producer, director (as part of the goal achievement role), and innovator roles have a significant association with superior perceptions of effectiveness, but the broker role does not. Contrary to our hypothesis, the coordinator role (as part of the goal achievement role) does have a significant association with superior perceptions of effectiveness. Path coefficients comparison tests do not show statistically significant differences between the associations of the goal achievement and innovator roles with perceptions of effectiveness.

H4a does not receive support, because not all leadership roles have a significant association with managers' self-perceptions of effectiveness. Only the producer, director, and coordinator roles (as part of the goal achievement role) have a significant association with self-perceptions of effectiveness. In addition, the monitor role has a significantly negative association with managers' self-perceptions of effectiveness. Path coefficients comparison tests show that the goal achievement role has a significantly stronger association than the monitor role with perceptions of effectiveness.

To test H4b (the managers' leadership effectiveness resembles that of the superiors' model) and H4c (the managers' leadership effectiveness resembles that of the subordinates' model), we conducted two series of two-group LISREL analyses, self-superior and self-subordinate, respectively. In each two-group LISREL analysis, we first assessed measurement equivalence to explore whether the same measurement model holds across two groups (Bollen, 1989a; Jöreskog & Sörbom, 1993; Kline, 1998). More specifically, the measurement equivalence test shows whether the number of factors, factor loadings, and error variances for corresponding measures are invariant across two groups. Therefore, the first purpose of two-group analysis is to examine invariance in factor structure, as well as factor pattern. We also used two-group analysis to identify structural similarities and differences between two groups, comparing the corresponding structural parameters. The struc-

Table 4. Results of the Two-Group LISREL Analyses: Self and Superior (H4b)

	χ^2	df	$\Delta\chi^2$	Δdf	RMSEA	IFI	CFI
Measurement Equivalence Test							
Model 1. Equal number of factors	1568.94	886			0.05	0.89	0.89
Model 2. Invariance constraints on factor loadings	1599.66	915			0.05	0.89	0.89
(Model 2 – Model 1)			30.72	29			
Model 3. Invariance constraints on factor loadings and error variances	1671.48	944			0.05	0.88	0.88
(Model 3 – Model 2)			71.82	29			
Structural Equivalence Test							
Model A. No invariance constraints on all structural parameters	1745.10	993			0.05	0.88	0.88
Model B. Invariance constraints on all structural parameters	1753.98	1003			0.05	0.88	0.88
(Model B – Model A)			8.88	10			

tural equivalence test in two-group analysis shows similarities of leadership effectiveness models across groups.

First, we conducted a two-group analysis with self and superior responses to test H4b. Table 4 presents results of the two-group analysis with self and superior responses to test measurement equivalence across the two groups. Basically, two-group analysis uses a series of comparisons of nested models, which have a hierarchy of invariance (Bollen, 1989a; Jöreskog & Sörbom, 1993). We first formulated a baseline model (Model 1 in Table 4) that assumed the same number of factors and same patterns of fixed, free, and constrained factor loadings between the two groups (Bollen, 1989a). The baseline model has no invariance constraints on factor loadings and error variances across two groups. Note that Model 1 has a chi-square value and *df* that are the summation of separate single-group analyses of the managers themselves and their superiors. The goodness-of-fit indices of the model indicate that the model is quite acceptable, providing evidence that both groups have the same number of factors. In the next step, we imposed invariance constraints on the corresponding factor loadings across the two groups (Model 2). We conducted a chi-square difference test between Model 2 and Model 1 to examine the invariance of factor loadings across the two groups. A nonsignificant chi-square difference ($\Delta\chi^2 = 30.71$, $\Delta df = 29$) suggests the equivalence of the corresponding factor loadings between the two groups. We further added invariance constraints on error variances between the two groups (Model 3). The chi-square difference test between Model 3 and Model 2 ($\Delta\chi^2 = 71.83$, $\Delta df = 29$, $p < .001$) suggests that the error variances across the two groups are significantly different. In sum, two-group analysis for measurement equivalence test with self and superior responses demonstrated the equivalence in factor numbers and factor loadings, but not in error variances.

Table 4 also presents the results of the two-group analysis for structural equivalence test with self and superior responses. Like the measurement equivalence test, this test also used a series of comparisons of nested models (Singh, 1995). We first

Table 5. Results of the Two-Group LISREL Analyses: Self and Subordinate (H4c)

	χ^2	df	$\Delta\chi^2$	Δdf	RMSEA	IFI	CFI
Measurement Equivalence Test							
Model 1. Equal number of factors	1674.98	886			0.06	0.90	0.90
Model 2. Invariance constraints on factor loadings (Model 2 – Model 1)	1734.20	915	59.22	29	0.06	0.90	0.89
Structural Equivalence Test							
Model A. No invariance constraints on all structural parameters	2142.12	971			0.07	0.85	0.85
Model B. Invariance constraints on all structural parameters (Model B – Model A)	2172.64	981	30.52	10	0.07	0.85	0.85

evaluated a model that has no constraints on structural parameters across the two groups (Model A). Here, we fixed the corresponding factor loadings to be equal across the two groups, because our measurement equivalence test found no differences in the corresponding factor loadings between the two groups. Next, we added invariance constraints on all structural parameters from the leadership roles and demographic variables to leadership effectiveness. The result corresponds to Model B, which is nested within Model A. A nonsignificant chi-square difference between Model B and Model A ($\Delta\chi^2 = 8.88$, $\Delta df = 10$) indicates that the corresponding structural parameters are equivalent across the two groups. In sum, we conclude that the leadership effectiveness model of managers themselves is, overall, similar to that of their superiors. This conclusion supports H4b.

We followed the same procedure with self and subordinate responses to test H4c. The results of the two-group analyses are presented in Table 5. In the measurement equivalence test, we found a significant chi-square difference between Model 1 and Model 2 ($\Delta\chi^2 = 59.22$, $\Delta df = 29$, $p < .001$), which suggests that the corresponding factor loadings differ across the two groups. Because we failed to find evidence of invariance in the corresponding factor loadings between the two groups, we did not further impose invariance constraints on error variances. In sum, the two-group analysis for measurement equivalence test with self and subordinate responses demonstrated the equivalence in factor numbers, but not in factor loadings.

Table 5 also shows results of the two-group analysis for the structural equivalence test with self and subordinate responses. We freely estimated all factor loadings of each group in Model A, since our measurement equivalence test found some differences in factor loadings between the two groups. We then added invariance constraints on the corresponding structural parameters across the groups. We, again, found a significant chi-square difference between Model A and Model B ($\Delta\chi^2 = 30.520$, $\Delta df = 10$, $p < .001$), which suggests that the corresponding structural parameters are not equivalent across the two groups. To examine the sensitivity of our results, we then conducted the same series of nested model comparisons with invariance constraints on the corresponding factor loadings across groups. The overall results of this analysis are essentially identical to the structural equivalence

test in Table 5. So, we can conclude that our results are quite consistent, regardless of the invariance of factor loadings. In sum, the leadership effectiveness model of managers themselves is, overall, different from that of the subordinates. This conclusion contradicts H4c.

The demographic variables have some small, yet significant, impacts in the different leadership effectiveness models. In the self model, the negative coefficient for age indicates that the older managers see themselves as less effective than younger managers. Age does not play a role in the other models. The longer managers have held their current position, the more effective subordinates think they are. Education has a negative effect on peers', and a positive effect on superiors', perceptions of effectiveness. Finally, the superiors tend to see male managers as more effective than female managers.

DISCUSSION

Our study supports the basic assumption of 360-degree feedback, which the rater-*ratee* relationship influences and which leadership roles raters associate with effective leadership, because we found distinct subordinate, peer, and self leadership effectiveness models. Our study, however, did not support the hypothesis that the leadership effectiveness model of the managers themselves represents an integration of the leadership effectiveness models of their subordinates, peers, and superiors. Rather, the leadership effectiveness model of the managers showed the most similarity with the leadership effectiveness model of their superiors. We discuss the results in more detail in the following paragraphs.

The managers themselves, as well as their subordinates and superiors, stress the goal achievement role, indicating that assuring attainment of goals, setting clear goals, and coordinating work have a strong relationship with perceptions of leadership effectiveness. The goal achievement role has the highest regression coefficient within each of the self, subordinate, and superior models.

The strong resemblance between the self and superior models of leadership effectiveness provides support for the power rather than the interaction frequency hypothesis. However, the leadership effectiveness model of the managers themselves is not exactly the same as that of their superiors either. This finding may imply that managers face diverse demands from constituents other than subordinates, peers, and superiors. Managers in the public utility industry, for example, need to interact frequently with outside constituents, such as rate boards, and their own leadership effectiveness models may partially reflect those outsiders' expectations.

The effectiveness models of the subordinates and peers diverge most from the self model in their emphasis on the facilitator role. For the subordinates and peers, facilitating group processes has a strong positive relationship with being an effective manager. For the peers, this is the most important criterion for effective leadership. The managers themselves, however, do not see the facilitator role as important for being effective. This raises the question as to how these managers fail to see the importance two constituents attach to the facilitator role. In addition, the managers

also do not see trying out new ideas (i.e., the innovator role) as important for being effective, although their peers and superiors do.

The results support Pfeffer and Salancik's (1975) findings of differential expectations of subordinates and superiors, but not their assertion that subordinates focus on interpersonal and superiors on task-oriented behaviors. The results contradict the findings of Tsui (1984) and Tsui and Ohlott (1988), because we found distinct leadership effectiveness models for the subordinates, peers, and the managers themselves, and because the leadership effectiveness model of the managers themselves most closely resembles that of their superiors.

Our results reemphasize the importance of conducting 360-degree feedback sessions, because managers either do not know or understand the importance of the facilitator (subordinates and peers) and innovator (peers and superiors) roles, or even the nonsignificance of the monitor (peers and superiors) role. Although the managers seem to have internalized the leadership effectiveness model of their superiors, they could be more effective if they were more aware of which leadership roles their subordinates and peers find important for leadership effectiveness.

With respect to the importance of leadership, it is noteworthy that the leadership roles explain more variation in the perceptions of effectiveness of the subordinates than the other three models: 69% versus 54% for peers, 45% for superiors, and 37% for self. The relatively high proportion of variation explained in the subordinate model indicates that the leadership roles of the CVF have an important impact on their work. In contrast, the lower proportion of variation explained in the self, peer, and superior models indicates that future research should examine other factors as well. For example, other factors that may be important for peers and superiors in their evaluations of managerial effectiveness are strategic planning, visioning, networking, and broader social skills (Hooijberg, Hunt, & Dodge, 1997).

Although Quinn (1988) suggested that all eight leadership roles in his CVF need to be performed for a leader to be effective, our results suggest two concerns. First, we found support for six, rather than eight, leadership roles. A detailed reading of Denison et al. (1995) also shows a clustering of the producer, director, and coordinator roles. It seems, then, that although theoretical distinctions among these roles can be made, respondents see these roles as part of a larger underlying role, perhaps best referred to as the goal achievement role. Second, in none of the effectiveness models do all leadership roles reach statistical significance. Furthermore, the monitor role has a negative parameter estimate in the self and subordinate leadership effectiveness models, and the mentor role has no significant association with effectiveness in any of the models. Although some of the effects for the innovator role did reach statistical significance, the overall effect is quite small. One possible explanation for this effect might be that the presence of extensive regulations and procedures in the public utilities limits the discretion of managers in exercising their leadership roles and even substitutes for some of the leadership roles (Kerr & Jermier, 1978).

Limitations

One limitation concerns the way in which the surveys were distributed. Although we encouraged the managers to distribute the questionnaires to people whose

opinion they respected and who knew them well, we do not know to what extent managers followed these instructions. Given the developmental nature of the program, we do not believe people had a great incentive to disregard these instructions and or to only ask friends to fill out the questionnaires.

A second limitation concerns the sample. The sample consists primarily of white, male managers from a single industry; hence, the results can be generalized to white, male middle managers and their subordinates, peers, and superiors in public utility companies. The extent to which these results can be extended to female and/or minority middle managers in the public utility or other industries remains to be determined.

A third limitation of this study is that we used the same respondents to measure both leadership behaviors and effectiveness within each leadership effectiveness model, suggesting common method bias in our data set. However, some metaanalyses indicate that the concern about inflated correlations due to common method bias may not be as big of a problem as Campbell (1982) once feared. Crampton and Wagner (1994), for example, found that the “percept-percept inflation may be more the exception than the rule in micro-research on organizations” (p. 72). Doty and Glick (1998) also state that, even though common method variance exists, its biasing effect to distort true correlations among constructs is usually not so large as “to invalidate many of our theoretical interpretations and research conclusions” (p. 400). Yet, because Crampton and Wagner (1994) also found that correlations among leadership behaviors are more susceptible to common methods bias than other areas of research, some caution should be exercised in interpreting the results.

A final limitation concerns the use of the CVF in this study. Although some studies (e.g., Denison et al., 1995; Hooijberg, 1996; Quinn, 1988) have demonstrated the utility and validity of the CVF, more theoretical and empirical research of the model is needed. For example, although Quinn (1988) proposed an eight-factor leadership model, the results of this study show support for a six-factor leadership model. Although the results of one study should not cause the rejection of the eight-factor leadership model, future research should develop more reliable and valid measures of all the roles.

Future Research

Our study suggests interesting areas for future research. We highlight four areas: (1) research in the same industry after deregulation and in different industries; (2) research that incorporates both other people’s perceptions of the focal manager, as well as the focal managers’ perceptions of the expectations of the members of their role set; (3) longitudinal research on people who have participated in 360-degree training and development programs; and (4) an examination of the extent to which organizational position explains differences over and above individual differences.

First, we recommend extending this research to include managers from other industries. The public utility industry is characterized by a stable, regulated environment, where change is slow, and where there does not exist any meaningful competition. Managers in the public utility industry have historically been found less mobile,

less politically active, and more technically oriented than managers in other industries (Hildebrandt & Edington, 1985; Hildebrandt & Miller, 1982). We expect that most private, for-profit companies operate in a more volatile environment than the public utility industry. We expect that leadership activities are more relevant and appropriate in an environment characterized by change and volatility than in an environment characterized by stability (Kerr & Jermier, 1978) and expect, therefore, that leadership roles will explain more variation in the effectiveness measures, and that more leadership roles will be important. As the public utility industry becomes more deregulated, we expect to see leadership behaviors become more important in that industry as well.

Second, while we examined which leadership roles the various raters associated with effectiveness, we did not assess what the managers themselves thought their raters would find important. That is, to get a more complete picture of the relationships between raters and ratees, we should ask the managers themselves which leadership roles they believe their subordinates, peers, and superiors will associate with effectiveness. Adding such data to our current database would allow us to establish whether managers are unaware of others' effectiveness models, or if they have their own ideas about which leadership roles are important, regardless of what their constituents think.

Third, it would be interesting to examine effectiveness models of managers and their constituents before and after they participate in a 360-degree feedback program. Although the expectations of the constituents may not reach them for a variety of reasons, once they have participated in a 360-degree feedback program, their awareness of the expectations should have been increased substantially. If the managers do not demonstrate a change in their effectiveness models on the basis of the 360-degree feedback, then the managers' discrepancy-response strategies (Tsui et al., 1995) and/or their organization's support and reward systems need to be examined further.

Fourth, Mount et al. (1998) and Yammarino and his colleagues (e.g., Yammarino, Spangler, & Dubinsky, 1998) found more variation within than between groups. For example, Yammarino et al. (1998) found "individual differences in the responses of superiors and subordinates and [that these differences] are unaffected by dyad and group membership of the individuals" (p. 48). Researchers will need to explore the implications of these results for 360-degree feedback. As Yammarino et al. (1998) indicate, "actual leader behaviors differ for different subordinates, and so the differing perceptions of subordinates are valid" (p. 50). If all individual responses are truly valid, then perhaps 360-degree feedback sessions should no longer aggregate information by respondent type. Although our study uses aggregation by respondent type, other research does not support the aggregation. This is an important issue for future research.

Practical Implications

The results of our study also point to three important practical implications. First, superiors should increase their awareness of the effectiveness models of their managers' subordinates and peers, because their managers depend on their

subordinates and peers for the attainment of unit goals. Superiors can increase their awareness by analyzing aggregated results of 360-degree programs in their companies.

Second, organizations should be concerned that managers' models of effectiveness diverge significantly from those of other constituents, because this signals a lack of awareness of expectations, which might result in less than optimal leadership performance. Leadership training and development programs that involve 360-degree feedback can provide a good start for increasing managers' awareness of and sensitivity to the expectations of relevant others in their organization. We realize that this suggestion carries the strong assumption that managers, when made aware of the expectations of their constituents, will make an effort to meet those expectations.

Third, our study shows the difficulties associated with the linking pin roles (Likert, 1961) of middle managers. As we have shown, middle managers are surrounded by diverse, sometimes competing, expectations of leadership behaviors from different constituents. It may be very difficult, if not impossible, to satisfy those diverse expectations. As a result, they may feel high role conflict. To handle this situation, it seems that middle managers in our study came to be more sensitive to their superiors' expectations. However, middle managers should realize that sensitivity to only their superiors' expectations may cause complaints from their peers and subordinates. If they develop a response mechanism that takes diverse expectations into account, we would expect them to be more effective as leaders in their organizations.

CONCLUSION

The results, in sum, support the use of 360-degree feedback. They support the notion that, depending on the organizational role relationship between rater and ratee, different leadership roles are associated with effectiveness. The results further show that the managers' effectiveness model most reflects that of their superiors, which indicates the need for more 360-degree feedback research. Future research will also need to determine the extent to which these findings are industry specific and the extent to which managers purposely ignore the expectations of certain constituents, and examine the extent to which organizational position explains differences over and above individual differences.

Acknowledgments: We thank Chao Chen, Fariborz Damanpour, George Dodge, Varghese George, Gretchen Spreitzer, the editor, and three anonymous reviewers for their feedback on earlier versions of this article. We also thank the Executive Education program and Robert E. Quinn at the University of Michigan Business School for allowing us to use the data.

NOTE

1. Tsui (1984) and Tsui and Ohlott (1988) use the term *managerial effectiveness model*, but it refers to the same association between roles and effectiveness that we study.

REFERENCES

- Anderson, J.G., & Gerbing, D.W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*, 411–423.
- Atwater, L. E., Ostroff, C., Yammarino, F. J., & Fleenor, J. W. (1998). Self-other agreement: Does it really matter? *Personnel Psychology*, *51*, 577–598.
- Atwater, L. E., & Yammarino, F. J. (1992). Does self-other agreement on leadership perceptions moderate the validity of leadership and performance predictions? Behavior of U.S. Naval Academy students and performance of naval officers. *Personnel Psychology*, *45*, 141–164.
- Bagozzi, R. P. (1980). *Causal models in marketing*. New York: Wiley.
- Bagozzi, R. P., & Phillips, L. W. (1982). Representing and testing organizational theories: A holistic construal. *Administrative Science Quarterly*, *27*, 459–489.
- Bass, B. M. (1990). *Bass and Stogdill's handbook of leadership: A survey of theory in research*. New York: Free Press.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, *107*, 238–246.
- Bernardin, H. J., & Alvares, K. M. (1975). The effects of organizational level on perceptions of role conflict. *Organizational Behavior and Human Performance*, *14*, 1–9.
- Bollen, K. A. (1989a). *Structural equations with latent variables*. New York: Wiley.
- Bollen, K. A. (1989b). A new incremental fit index for general structural equation models. *Sociological Methods and Research*, *17*, 303–316.
- Browne, M. W., & Cudek, R. (1993). Alternative ways assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models*. (pp. 136–162). Newbury Park, CA: Sage.
- Buenger, V., Daft, R. L., Conlon, E. J., & Austin, J. (1996). Competing values in organizations: Contextual influences and structural consequences. *Organization Science*, *7*(5), 557–576.
- Campbell, J. P. (1982). Editorial: Some remarks from the outgoing editor. *Journal of Applied Psychology*, *67*, 691–700.
- Church, A. H., & Bracken, D. W. (Eds.). (1997). 360-degree feedback systems [Special issue]. *Group & Organization Management*, *22*(2), 147–309.
- Crampton, S. M., & Wagner III, J. A. (1994). Percept–percept inflation in microorganizational research: An investigation of prevalence and effect. *Journal of Applied Psychology*, *79*, 67–76.
- Denison, D. R., Hooijberg, R., & Quinn, R. E. (1995). Paradox and performance: Toward a theory of behavioral complexity in managerial leadership. *Organization Science*, *6*(5), 524–540.
- Dobbins, G. H., & Platz, S. J. (1986). Sex differences in leadership: How real are they? *Academy of Management Review*, *11*(1), 118–127.
- Doty, D. H., & Glick, W. H. (1998). Common methods bias: Does common methods variance really bias results? *Organizational Research Methods*, *1*, 374–406.
- Eagley, A. H., & Johnson, B. T. (1990). Gender and leadership style: A meta-analysis. *Psychological Bulletin*, *108*, 233–256.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with observable variables and measurement error. *Journal of Marketing Research*, *18*, 39–50.
- Greguras, G. J., & Robie, C. (1998). A new look at within-source interrater reliability of 360-degree feedback ratings. *Journal of Applied Psychology*, *83*(6), 960–968.
- Hart, S. L., & Quinn, R. E. (1993). Roles executives play: CEOs, behavioral complexity, and firm performance. *Human Relations*, *46*, 543–574.

- Hayduk, L. A. (1987). *Structural equation modeling with LISREL*. Baltimore: Johns Hopkins University Press.
- Heilmann, M. E., Hornstein, H. A., Cage, J. H., & Herschlag, J. K. (1984). Reactions to prescribed leader behavior as a function of role perspective: The case of the Vroom-Yetton model. *Journal of Applied Psychology, 69*, 50–60.
- Hildebrandt, H. W., & Edington, D. (1985). The lifestyles and career patterns of utility executives. *Public Utilities Fortnightly, 115*, 24–31.
- Hildebrandt, H. W., & Miller, E. L. (1982). The newly promoted utility executive. *Public Utilities Fortnightly, 110*, 11–16.
- Hooijberg, R. (1996). A multidirectional approach toward leadership: An extension of the concept of behavioral complexity. *Human Relations, 49*, 917–946.
- Hooijberg, R., Hunt, J. G., & Dodge, G. E. (1997). Leadership complexity and development of the leaderplex model. *Journal of Management, 23*(3), 375–408.
- Johnson, J. W., & Ferstl, K. L. (1999). The effects of interrater and self-other agreement performance feedback. *Personnel Psychology, 52*, 271–303.
- Jöreskog, K. G., & Sörbom, D. (1993). *LISREL 8: Structural equation modeling with the SIMPLIS command language*. Chicago, IL: Scientific Software International.
- Keller, R. T. (1986). Predictors of the performance of project groups in R&D organizations. *Academy of Management Journal, 29*, 715–726.
- Kerr, S., & Jermier, J. M. (1978). Substitutes for leadership: Their meaning and measurement. *Organizational Behavior and Human Performance, 22*, 375–403.
- Kline, R. B. (1998). *Principles and practice of structural equation modeling*. New York: Guilford Press.
- Landsberger, H. A. (1961). The horizontal dimension in bureaucracy. *Administrative Science Quarterly, 6*, 298–333.
- Likert, R. (1961). *New patterns of management*. New York: McGraw-Hill.
- Marsh, H. W., & Hocevar, D. (1985). Application of confirmatory factor analysis to the study of self-concept: First- and higher order factor models and their invariance across groups. *Psychological Bulletin, 97*, 562–582.
- Maurer, T. J., Raju, N. S., & Collins, W. C. (1998). Peer and subordinate performance measurement equivalence. *Journal of Applied Psychology, 83*(5), 693–702.
- McElroy, J. C. (1982). A typology of attribution leadership research. *Academy of Management Review, 7*, 413–417.
- Morrison, E. W. (1994). Role definitions and organizational citizenship behavior: The importance of employee's perspective. *Academy of Management Journal, 37*, 1543–1567.
- Mount, M. K., Judge, T. A., Scullen, S. E., Sytsma, M. R., & Hezlett, S. A. (1998). Trait, rater and level effects in 360-degree performance ratings. *Personnel Psychology, 51*, 557–576.
- Netemeyer, R. G., Johnston, M. W., & Burton, S. (1990). Analysis of role conflict and role ambiguity in a structural equations framework. *Journal of Applied Psychology, 75*, 148–157.
- Pelz, D. C. (1952). Influence: A key to effective leadership. *Personnel, 29*, 209–217.
- Pfeffer, J., & Salancik, G. R. (1975). Determinants of supervisory behavior: A role set analysis. *Human Relations, 28*, 139–164.
- Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *Leadership Quarterly, 1*, 107–142.
- Quinn, R. E. (1988). *Beyond rational management: Mastering the paradoxes and competing demands of high performance*. San Francisco: Jossey-Bass.
- Salam, S., Cox, J. F., & Sims, H. P. (1997). In the eye of the beholder: How leadership

- relates to 360-degree performance ratings. *Group & Organization Management*, 22(2), 185–209.
- Salancik, G. R., Calder, B. J., Rowland, K. M., Leblebici, H., & Conway, M. (1975). Leadership as an outcome of social structure and process: A multidimensional analysis. In J. G. Hunt & E. E. Larson (Eds.), *Leadership frontiers* (pp. 81–101). Columbus, OH: Kent University Press.
- Scandura, T. A., & Schriesheim, C. A. (1994). Leader-member exchange and supervisor career monitoring as complementary constructs in leadership research. *Academy of Management Journal*, 37, 1588–1602.
- Singh, J. (1995). Measurement issues in cross-national research. *Journal of International Business Studies*, 26, 597–619.
- Swann, W. B. (1984). Quest for accuracy in perception: A matter of pragmatics. *Psychological Review*, 91, 457–477.
- Tornow, W. W. (Ed.). (1993). Special issue on 360-degree feedback. *Human Resources Management*, 32, 209–384.
- Tsui, A. S. (1984). A role set analysis of managerial reputation. *Organizational Behavior and Human Performance*, 34, 64–96.
- Tsui, A. S., Ashford, S. J., St. Clair, L., & Xin, K. R. (1995). Dealing with discrepant expectations: Response strategies and leadership effectiveness. *Academy of Management Journal*, 38, 1515–1543.
- Tsui, A. S., & Ohlott, P. (1988). Multiple assessment of leadership effectiveness: Interrater agreement and consensus in effectiveness models. *Personnel Psychology*, 41, 779–803.
- Vandenberg, R. J., Lance, C. E., & Taylor, S. C. (1997). *A latent variable approach to rating source equivalence: Who should provide ratings on organizational citizenship behavior dimensions?* Paper presented at the meeting of the Academy of Management, Boston, MA.
- Yammarino, F. J., Spangler, W. D., & Dubinsky, A. J. (1998). Transformational and contingent reward leadership: Individual, dyad, and group levels of analysis. *Leadership Quarterly*, 9(1), 27–54.