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Measuring the Process of Managerial Effectiveness

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The development of an instrument to measure and evaluate managerial behavior that results in effective managerial performance is described. The instrument is designed to evaluate the performance of those activities that account for both the similarities and differences among managerial jobs. The content validity and the concurrent validity of the scale are demonstrated. Internal reliability is also determined to be satisfactory.

Campbell, Dunnette, Lawler and Weick (1970) propose a person-process-product model of managerial effectiveness. The "person" in the model refers to the individual manager's characteristic traits and abilities, while the "product" is in terms of organizational results such as profit maximization and productivity. The "process" is the manager's on-the-job behavior and activities. In measuring and evaluating managerial effectiveness, organizations have tended to focus on either the "person" or the "product." The "process" has not received the same attention because it is unclear what constitutes effective managerial behavior. All three components, person-process-product, need to be understood in evaluating the effectiveness of managerial performance, but ultimately, any measure of managerial effectiveness depends on identifying and judging observable actions and behavior leading to the accomplishment of the organization's goals (Campbell et al., 1970; Porter, Lawler & Hackman, 1975). This study focused on the process of managerial performance by defining specific behavior a manager could be rated on to gauge the effectiveness of his or her performance.

A paper-and-pencil instrument was developed to evaluate the performance of activities that account for both the similarities and differences

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among managers' jobs. On the one hand, Mintzberg (1973) suggests that managers' jobs are remarkably similar and that the work of all managers can be usefully described by common sets of behavior or roles. On the other hand, Campbell et al. (1970) suggest that managerial jobs differ substantially from one another and that the work of particular managers differs greatly because of differences in individual characteristics, situational variables, and organizational contexts. In developing the instrument, both points of view were considered. First, it was assumed that there was a common set of roles in which managers engage in performing their jobs as managers. The more a manager is aware of and engages in behavior and activities associated with each role, the more effective he or she is likely to be in achieving results in an organization. Second, it was assumed that different managers behave differently in different situations to be effective in achieving results. Nonetheless, following Mintzberg (1973), it was also assumed that whatever differences do exist in managerial work could be analyzed and explained by more or less attention to and emphasis on identifiable activities within a common set of managerial roles.

METHOD AND RESULTS

The first step in the development of an instrument measuring the process of managerial effectiveness was to identify specific behavior and activities characteristic of managerial work. The literature in organizational behavior and managerial performance was reviewed to identify concrete elements of behavior associated with managerial effectiveness. Concurrent with this review, six top-level corporate executives in six different companies were interviewed intensively and observed around their jobs as managers. The average time spent with each executive was one working day.

From these two sources, 106 original item statements were developed describing specific behavior and activities managers perform at work. These 106 item statements, on an a priori basis, were clustered around the following nine managerial roles that are built on, but are different from, the common set of roles identified by Mintzberg (1973): (1) strategic problem-solving, (2) resource managing, (3) conflict handling, (4) organizing, (5) information handling, (6) motivating, (7) providing for growth and development, (8) coordinating, and (9) managing the organization's environment. A nine-point rating scale that ranged from +4 (the statement is unqualifiedly representative of the manager's behavior) to -4 (the statement unqualifiedly does not represent the manager's behavior) was used with the item statements presented as specific aspects of one of the roles above.

The 106 statements presented as dimensions of the nine roles were administered to an initial group of managers ($n = 115$) to clarify and refine specific statements and to improve the general content of the measure. The managers were asked to complete the effectiveness instrument on a manager

with whom they worked closely. Each manager was also asked to indicate: (a) the usefulness of each of the nine roles for evaluating a manager's performance; (b) the specific item statements in the instrument that were ambiguous or irrelevant; and, most important, (c) critical incidents of effective and ineffective behavior for each managerial role. Regarding the critical incidents, each manager wrote a short description of specific incidents within the last six months where he had observed what he felt was effective and ineffective managerial behavior around each role. These descriptions were used to add new statements to the instrument and to anchor the existing statements in behavioral terms that would be familiar to other samples of managers.

The revision which followed the administration of the instrument to the initial sample resulted in a total of 96 items clustered under the nine roles for further development of the scale. This 96-item instrument was used by a new sample of 406 managers to rate the effectiveness of another manager whose managerial activities were familiar to them. In an attempt to develop an instrument measuring both the similarities and the differences in managerial work, the sample included six distinctly different types of organizations and a wide variety of managerial functions, levels, and experience. Each manager who rated another manager from these organizations also completed the Crowne and Marlowe (1960) social desirability scale on himself or herself as a means of testing for a social desirability bias in the instrument.

The 96-item instrument was factor analyzed and a principal component solution obtained. Six factors that were not the nine original clusters were extracted with eigenvalues exceeding 1.00. The 96 statements were reduced to a final 51-item, six-role instrument based on the following criteria: (a) content validity inferred in part from the factor analysis of the 96-item instrument; (b) significant correlation of item score with the total score; and (c) insignificant correlation of item score with the Crowne and Marlowe scale. Item-total correlations exceeded .40 ($p = < .001$) for each of the 51 items, and the overall scale correlated only .11 ($p = < .01$) with the Crowne and Marlowe scale. In the final 51-item instrument, 16 negatively worded statements were included to partially control for acquiescence bias. The choice of which statements to word positively and negatively was arbitrary. The sign (+ or -) of the factor loadings for all 51 items was in the a priori designated direction.

The final 51-statement, six-role instrument was then itself factor analyzed using the correlation matrix obtained from the sample of 406 managers and a principal component solution derived. Six factors were again extracted with eigenvalues exceeding 1.00. Orthogonal rotations of the six factors to the varimax criterion accounted for 56 percent of the variance. Analytic oblique rotations of the six factors were performed to improve simple structure and to test for the degree of interrelatedness among the

TABLE 1
Factor Correlations

	<i>Factor I</i>	<i>Factor II</i>	<i>Factor III</i>	<i>Factor IV</i>	<i>Factor V</i>	<i>Factor VI</i>
Factor I						
Factor II	.39					
Factor III	.29	.43				
Factor IV	.36	.36	.38			
Factor V	.30	.27	.30	.29		
Factor VI	.44	.28	.32	.42	.38	

factors. The intercorrelation of factors (Table 1) demonstrates that the factors are in fact related to a moderate degree. This suggests that, although the factors, or managerial roles, are somewhat distinct, they interrelate in describing the similarities and differences in the work performed by managers.

Content Validity Based on Factor Interpretation

The content of the six extracted factors, when interpreted, incorporated all nine roles initially proposed in this study as characteristic of managerial work. Three of the extracted factors, or clusters of behavior, remained essentially unchanged from the initial roles. These were strategic problem solving, information handling, and providing for growth and development. The other three extracted factors were combinations of two of the roles initially identified. For example, one factor was a combination of the managing the organization's environment role and the resource managing role, another was a combination of the organizing and coordinating roles, and the third combined the motivating and conflict handling roles. Each factor is more fully interpreted and described below.

Factor I: Managing the Organization's Environment and Its Resources (11 statements)—One of the most important and often overlooked aspects of management is to manage the organization's environment and outside settings through the effective handling of organizational resources. Management is the primary force within an organization which relates the organization's resources to its environment to accomplish the organization's objectives. The appropriate management of organization resources is one of the most important means by which a manager effectively influences his organizational environment (Kast & Rosenzweig, 1974). Examples of item statements loading on factor I and the loading scores are: "In planning and allocation meetings and in on-the-spot decision making where I have observed this manager, he is characterized by his ability to be proactive and stay ahead of changes in his environment" (+.43); and "In planning and allocation meetings and in on-the-spot decision making where I have observed this manager, he does not base plans and actions pertaining to the

organization's resources on clear, up-to-date, accurate knowledge of the objectives of the company" (-.45).¹

Factor II: Organizing and Coordinating (13 statements)—Two sets of activities from the original scale load on this factor. The two sets of items, when interpreted, seem complementary. First, a manager must organize around the separate and distinct tasks which have to be performed in his organizational unit. This organizing role is similar to what Lawrence and Lorsch (1967) refer to as differentiation. Second, a manager must insure that cooperation and coordination around these separate tasks are taking place toward the accomplishment of overall organizational goals, especially where interdependencies exist in the tasks. This coordinating role is similar to what Lawrence and Lorsch (1967) call integration, or the state of collaboration which exists in the manager's organization. The ability to organize around tasks and then to coordinate where interdependent relationships among tasks exist is essential for effective management.

Factor II is characterized by such statements as: "In making decisions involving organizing, and in meetings, face-to-face interactions, and telephone conversations where cooperation and coordination are at stake, I have observed that this manager suits the amount of formal rules and regulations in his organization to the tasks to be done and to the abilities and personalities of the people doing them" (+.48); and "In making decisions involving organizing, and in meetings, face-to-face interactions, and telephone conversations where cooperation and coordination are at stake, I have observed that this manager is difficult to get along with and difficult to coordinate with" (-.60).

Factor III: Information Handling (seven statements)—A manager deals primarily with information and communications rather than with tools and machines. His access to information places him in a critical position relative to communication flows both within his organization and between his organization and its external environment. Proper information handling helps the manager identify problems, provides for the understanding of a changing environment, and serves as the input for effective decision making. Sample statements in the factor are: "In my observations of this manager when he is dealing with information and communication, he makes sure that information entering the organization is processed by formal reports, memos, and word of mouth on a timely basis, so that it is useable, current, and provides rapid feedback" (+.76); and "In my observations of this manager when he is dealing with information and communication, he makes sure that the person who has to use the information clearly understands it" (+.64).

¹ Copies of the complete 51-item statement instrument and the factor pattern matrix are available from the first author. All the item statements in the final version of the instrument are the same as those used for the factor analyses. Nonetheless, because three of the factors each combine two of the initially defined managerial roles, the introduction to the item statements for these factors in the final version has been slightly modified to reflect this.

Factor IV: Providing for Growth and Development (eight statements)—Effective managers provide for their own personal growth and development and the personal growth and development of associates. A growing expectation of people in formal organizations is that the work place should provide opportunities for them to continue to learn and develop on the job. The effective manager directly influences and enhances the opportunities in his organization for the growth and development of his associates. Item statements representing the factor are: "In dealing with associates where I have observed this manager, he insures, through career counseling and careful observation and recording, that his subordinates are growing and developing in their skills for performing their work" (+.82); and "In dealing with associates where I have observed this manager, he guides subordinates by commendation of good performance" (+.36).

Factor V: Motivating and Conflict Handling (seven statements)—Effective management means effective motivating of organizational members toward the accomplishment of organizational goals. In addition to using the formal rewards and punishments which the formal organization provides to motivate its members, the effective manager creates conditions to increase the likelihood that organizational members can become motivated in their work. In part to accomplish this end, a manager has to handle disturbances and conflicts that arise in the organization that may be detrimental to the energizing and motivating of his associates. The effective motivation of organizational members requires both the enhancement of the positive aspects of motivation so that employees are motivated to perform their work and the concurrent elimination of those conflicts that may inhibit their motivation. The factor is represented by items such as "In face-to-face interactions with associates that I have observed, this manager transmits his own enthusiasm for attaining organizational goals to others" (+.51); and "In face-to-face interactions with associates that I have observed, this manager is plagued by recurring conflicts of a similar nature which get in the way of associates' efforts to perform their jobs" (-.73).

Factor VI: Strategic Problem Solving (five statements)—Effective decision making, or problem solving, seems to be the universally accepted cornerstone of effective management. An effective manager not only takes responsibility for the effectiveness of his own decision making process but also insures his associates are effectively utilizing their problem solving skills. This factor describes the manager's decision making behavior with statements such as: "From my observations of this manager's decision making activities, I have found that he periodically schedules strategy and review sessions involving the design of projects to improve organizational performance and to solve organizational problems" (+.74); and "From my observations of this manager's decision making activities, I have found that he rarely spends time looking at his organization for opportunities to improve performance or for problem situations" (-.53).

Replicating the Results of the Factor Analysis

A replication of the factor analysis of the 51-item instrument seemed appropriate, since the instrument in its final form had not yet been used to evaluate managerial behavior. A new sample of managers ($n = 420$) representing a variety of managerial functions, levels, and experience from two additional organizations was used to assess the scale resulting from the first factor analysis. Data descriptive of these managers were factor analyzed using the identical procedures employed to obtain the factors identified as the major constructs in the 51-item instrument. It is important to remember that this sample was the first to use the final 51-statement scale.

In the replication study, six factors again emerged with eigenvalues exceeding 1.00. Analytic oblique rotations of the factors resulted in a factor pattern matrix that was similar to the first factor pattern matrix in the following manner. Simple structure achieved was visually equivalent and the interrelatedness of the factors was again moderate, ranging from a high of .44 to a low of .29. The statements clustered together in the same manner as in the questionnaire to form the same factors, that is, each of the 51 item statements loaded on the same factor in the second factor analysis as it did in the first. These data support the replicability of the six factor scales in describing managerial behavior.

However, the factor analysis of the new sample of managers did not replicate the findings of the original one in two respects. First, comparing the orthogonal solutions, the second factor analysis accounted for 53 percent of the variance (? percent less than the first solution), and the distribution of variance by individual factor was different from the first. Specifically, the percentage of variance explained by each factor in the initial analysis was in the order in which the factors were described earlier, with factor I accounting for a high of 17 percent and factor VI accounting for a low of 5 percent. In the replication study, the order of factors relative to the amount of variance explained was factor III (a high of 12 percent), factor II, factor V, factor VI, factor IV, and factor I (a low of 6 percent). These findings suggest that item variances and, therefore, variance associated with each factor may not be generalizable and may vary from one managerial situation to another. Second, although the item statements loading on any one factor remained consistent for both factor analyses, the actual factor loadings varied between the two. As an example, if the item statements loading on a particular factor in the initial factor analysis were ranked from highest factor loading to lowest factor loading, the order did not replicate for the new sample. This suggests that the importance of each item statement in defining the factor on which it loads is also not generalizable and may depend to some extent on the specific situation in which a manager finds himself.

Concurrent Validity of the Instrument

Since the instrument focuses on the "process" of managerial effectiveness, its concurrent validity was assessed in terms of widely-used indices of the "product" of managerial effectiveness. Managers from two organizations not included in any previous sample in developing the measure were used to determine validity. In both organizations, the concurrent validity of the instrument was tested in two ways: (a) by comparing data from the instrument with objective end result data from each manager's organizational unit; and (b) by comparing data from the instrument with superiors' rankings of each manager's effectiveness.

In the first organization, the sample consisted of 231 managers in six separate, geographically-scattered offices. Based on objective end result criteria such as net profit, budgeting data, and customer billing volume, the six offices were ranked from one (highest performer) to six (lowest performer) by corporate top management. In each of the six offices, all managers except the head of the office were described on the effectiveness scale by a superior. The mean overall score, that is, the sum of the factor scores, and the means for each of the six separate factor scores for the managers in the six offices are shown in Table 2. The table also shows comparisons of differences in overall scores and factor scores for managers in the three highest performing offices and the three lowest performing offices. In all comparisons, there was a significant relationship between the level of end result performance and scores on the instrument. Average scores on the research instrument were higher for managers in the three top-rated offices than average scores for managers in the low-rated offices.

Also in the first organization, the annual performance appraisal procedure included a ranking of the managers' effectiveness by immediate superiors. Each superior used a ranking form on which only his subordinate managers were listed by name. In most instances, a superior ranked at least

TABLE 2
Overall Scores and Factor Scores on the Effectiveness
Instrument and Their Relationship to End Result Performance

	<i>Means by Office</i>					<i>t-values^a</i>	
	<i>Highest Performer</i>				<i>Lowest Performer</i>	<i>1-3 versus 4-6</i>	
	<i>1</i> (<i>n=40</i>)	<i>2</i> (<i>n=39</i>)	<i>3</i> (<i>n=40</i>)	<i>4</i> (<i>n=36</i>)	<i>5</i> (<i>n=37</i>)		<i>6</i> (<i>n=39</i>)
Overall Score	154.5	148.5	113.4	88.7	50.8	37.1	7.39*
Factor I	34.0	33.9	26.8	17.8	13.8	16.2	8.26*
Factor II	34.8	37.2	29.8	22.0	16.0	7.0	4.04*
Factor III	24.9	20.8	14.7	12.1	7.2	3.0	8.69*
Factor IV	23.1	21.6	16.1	11.7	4.1	5.9	8.65*
Factor V	21.6	19.0	14.0	10.3	5.9	1.0	8.15*
Factor VI	16.1	16.0	12.0	14.8	3.8	4.0	6.11*

^a One-tailed probability

* $p < .01$

four subordinates on the basis of how well they were performing their jobs as managers. A few superiors ranked as many as seven managers or as few as three. These rankings were converted to standard scores with a mean of 50 and a standard deviation of 10, consistent with the methodology of Porter and Lawler (1968). The Pearson correlation coefficients between superiors' rankings and the overall scores on the effectiveness measure were significant at $p < .01$ in all six offices and for the sample as a whole. These data are in Table 3. These findings from the first organization support the validity of the instrument.

In the second organization, the sample consisted of 29 middle and upper-level managers in the headquarters offices of a large manufacturing firm. Economic end result data such as return on investment and budgeted versus actual costs over the prior six-month period were gathered for each manager. These data were used by headquarters top management and the researchers to provide a numerical score for each of the 29 managers' particular economic end result performance. Four economic criteria, each considered of equal importance, were used in the analysis, and each criterion was scored from 1 to 10. The distribution of scores was 11 to 37, and an examination of the scatterplot of the data supported that this distribution was normal.

In addition, in the same manner as in the first organization, the immediate superiors provided a ranking of the managers' effectiveness as part of the firm's annual performance appraisal system. Five top managers in the headquarters offices provided the rankings of the 29 managers. Each of the five force-ranked only his own subordinate managers, and the obtained rankings were converted to standard scores for data analysis. To arrive at a score for each manager on the managerial effectiveness instrument, approximately equal groups of peers and subordinates anonymously completed the scale for a particular manager. An average of six associates rated each manager, and the final score for each of the 29 managers was the simple arithmetic mean for the group of evaluators. A modification of the procedure described by Winer (1971, p. 287) was used to calculate the interrater reliability, based on the total performance scores, that is, the

TABLE 3
Correlations Between Standardized Superiors' Rankings of Managers and Overall Scores on the Effectiveness Instrument

<i>Office</i>	<i>Correlation Between Rankings and Instrument Scores</i>
1 ($n = 40$)	.59*
2 ($n = 39$)	.62*
3 ($n = 40$)	.41*
4 ($n = 36$)	.61*
5 ($n = 37$)	.53*
6 ($n = 39$)	.65*
Total sample ($n = 231$)	.61*

* $p < .01$

sum of factor scores.² The reliability of measurement yielded $r = .73$. The Pearson correlation coefficient between managers' economic-based scores and the overall mean score (again the sum of factor scores) on the effectiveness instrument was .68 ($p < .01$), and the correlation between superiors' standardized rankings and the instrument was .83 ($p < .01$). All these data seem to provide additional support for the validity of the instrument.

Internal Consistency and Reliability

The internal consistency of the managerial effectiveness scale is partially demonstrated from the intercorrelations of the six factors comprising it (Table 1). Further evidence of reliability resulted from computing a Kuder-Richardson coefficient for the data from the sample used in developing the original factor analysis ($n = 406$). The obtained reliability was .91. Finally, an adequate test-retest coefficient of .78 over a six-week period was obtained from the sample of 29 managers in the headquarters of the manufacturing firm.

A SITUATIONAL APPROACH TO MANAGERIAL EFFECTIVENESS

Although the work of all managers may be usefully described by the behavior and activities incorporated in the instrument, it may be expected that different managers in different managerial jobs (or a particular manager at different points in time or in different situations) will place more or less attention on specific behavior associated with particular roles to perform effectively. This was suggested by the somewhat different results of the original factor analysis and the replication factor analysis. To test further this situational approach to managerial effectiveness, multiple regression analysis was employed on the data from the two organizations used to support the concurrent validity of the instrument. This was done to identify the relative significance of the six different factors in determining managerial effectiveness.

In the first organization ($n = 231$), the correlation between superiors' standardized rankings and the six separate factor scores in the six offices and for the sample as a whole ranged from a low of .26 to a high of .70, all significant at $p < .05$. The six separate factor scores from the total sample were regressed against superiors' rankings of the managers' effectiveness. The findings from the regression analysis, shown in Table 4, are that the significant factors associated with managerial effectiveness are factor III, information handling ($F = 6.84$), and factor VI, strategic problem solving

² The difference between the interrater reliability design used in this study and the example given in Winer is that Winer's is based on a within-subject design (that is, each judge rates all targets), while the analysis in this study is based on a between-subject design (that is, different sets of judges rate different targets). An estimate of Winer's formula was obtained by treating the 29 rated managers (the targets) as the experimental factor, or conditions, in a simple one-way ANOVA design. The scores from the various sets of judges were treated as the criterion variable in the ANOVA.

TABLE 4
Regression of Factor Scores Against
Standardized Rankings of Managers' Effectiveness^a

	<i>Beta</i>	<i>F</i>	<i>Simple r</i>
Factor I	-.11	1.06	-.29
Factor II	.12	.90	.31
Factor III	.27	6.84*	.37
Factor IV	.05	.10	.26
Factor V	.24	1.27	.35
Factor VI	.30	19.91*	.38

^a $R^2 = .38$; $F = 20.48$ ($p < .01$); $df = 6/224$.

* $p < .01$

($F = 19.91$). The amount of variance explained by this solution is 38 percent. The organization is a large data processing firm whose success depends on how well clients' financial and accounting problems are managed. The generation, evaluation, and reporting of accounting and financial information are the principal activities managers engage in within each of the six separate offices. The managers, to be effective, must process and handle information to solve or manage clients' financial and accounting problems. Therefore, that factor III, information handling, and factor VI, strategic problem solving, were those factors most associated with superiors' rankings of managerial effectiveness appears appropriate to this organization.

In the second organization, the manufacturing firm ($n = 29$), management is primarily involved in the expansion of the firm's production capacity and the marketing of its consumer products in the external environment to improve the firm's share of the market. These 29 particular managers were participating in an in-house workshop to improve organizational effectiveness. Two of the issues surfacing in the workshop were: (a) the need to reorganize the firm's basic structure; and (b) the need to interface more productively with lower levels in the organization. In this firm, the six factor scores were regressed against: (a) top management's scores of the managers' performance based on economic end result data; and (b) immediate superiors' standardized rankings of the managers' effectiveness. The results of the regressions are in Table 5. Those factors significantly related to economic-based scores are factor I, managing the organization's environment and its resources ($F = 12.40$); factor II, organizing and coordinating ($F = 4.85$); and factor V, motivating and conflict handling ($F = 5.97$). This solution explains 68 percent of the variance. Those factors significantly related to immediate superiors' rankings are again factor I ($F = 8.79$) and again factor V ($F = 6.34$). Fifty-five percent of the variance is accounted for by this solution.

Comparing the results of the regression analyses in the two organizations above suggests that managerial behavior resulting in effective performance varied in the two situations based on the differences in managerial situations. This means that, because organizations differ and because managerial jobs

TABLE 5
Regression of Factor Scores Against Economic-Based Scores and Standardized Superiors' Rankings of Managers' Effectiveness

	<i>Economic-Based Ratings^a</i>			<i>Superior Rankings^b</i>		
	<i>Beta</i>	<i>F</i>	<i>Simple r</i>	<i>Beta</i>	<i>F</i>	<i>Simple r</i>
Factor I	.55	12.40**	.52	.45	8.79**	.46
Factor II	.48	4.85*	.39	.17	1.25	.30
Factor III	.08	.11	.34	.14	.93	.15
Factor IV	-.21	1.22	.47	-.03	.47	.50
Factor V	.52	5.97*	.45	.48	6.34*	.51
Factor VI	.17	.80	.22	.17	1.37	.22

^a $R^2 = .68$; $F = 5.06$ ($p < .01$); $df = 6/22$.

^b $R^2 = .55$; $F = 4.51$ ($p < .01$); $df = 6/22$.

* $p < .05$

** $p < .01$

and situations differ, managers who are effective may have to behave and act in ways which reflect these differences. Within this situational or contingency approach to managerial effectiveness, some speculations are possible. For example, one of the most widely agreed upon differences among organizations is the degree of uncertainty characterizing their external environments (Lawrence & Lorsch, 1967; Lorsch & Morse, 1974). It might be expected that managers in industries and organizations coping with rapidly changing, uncertain, external environments and markets would pay special attention to "controlling the organization's environment and its resources" and "information handling," while managers in stable, certain environments and markets would be somewhat less concerned with that behavior and more concerned with "strategic problem solving" behavior.

Regarding managerial positions in the organization, top-level and middle-level managers might probably be more concerned with the activities associated with "controlling the organization's environment and its resources" than low-level managers. And, the more the managerial position requires working through and with people in the organization, the more a manager in that position might have to attend to "motivating and conflict handling" activities. Concerning specific situational variables, managers facing a temporary crisis may give extra attention to activities involving "strategic problem solving" and less attention to activities involving, say, "providing for growth and development" until the crisis is resolved. In other words, if managers are to be effective, they rank the roles they engage in within the contingencies of the situation. Finally, it must be recognized that the manager himself is an important variable to consider in this approach to managerial effectiveness. Based on differences in personality predispositions, managerial style, skills, and abilities, managers may choose to emphasize particular roles and pay less attention to others.

An effective manager is one who is aware of the kinds of behavior and actions which lead to organizational results and who then chooses to engage in those appropriate to the environment, the particular managerial

job, the situation, and his own personal preferences (Mintzberg, 1973; Campbell et al., 1970). A successful manager would not engage in all the behavior and activities in the managerial effectiveness instrument to the same degree. He would be aware of all of them and emphasize those appropriate to his particular circumstance and style. In this way, the instrument is designed to be used to measure and evaluate similarities and differences in managerial work.

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