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PREFERENCE CONGRUENCE, INFORMATION
ACCURACY AND EMPLOYEE PERFORMANCE:
A FIELD STUDY

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The problem of motivating members of an organization to make decisions and to take actions that are congruent with the goals set by their superiors has been studied extensively. With costless incentive and information systems, the objective is to create incentives for subordinates to act in the best interests of those who determine the goals for the organization (e.g. owners, managers). However, with costly information and incentive systems, it may not always be optimal for an organization to remove goal conflicts.¹

In this paper, we report some results about the relation between the existence of conflicts and employee performance in a setting where information systems are both costly and incomplete. Specifically, we address the question:

Are conflicts lower for employees who are regarded as performing well in achieving organizational goals by their superiors than for those who are regarded as not performing as well?

¹Goal congruence need not be interpreted literally. Goal congruence in the strict sense requires that preferences of members of the organization and organizational goal setters be the same. Goal congruence in a weaker sense requires only that the subordinate's behavior be congruent with the preferences of organizational goal setters. For discussion of this point in the context of goal congruence under uncertainty see Itami (1975, 1977) and Maher (1978b).

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As discussed in the first section of this paper, "Sources of Conflict," previous work, particularly in the theory of principal-agent relationships, has set forth conditions under which conflicts may be expected to occur. However, empirical work relating these conflicts to employee performance is limited. In this study, we examine the association between employee performance and conflicts under conditions where information about the employee's output, ability, and the environment is costly and incomplete.

As reported in section two, "Methodology," we obtained data from the professional employees at the partner, manager and staff levels of CPA firms using questionnaire and interview methods. The findings of this research, as reported in section three, "Findings," indicate that performance is associated in varying degrees to each of the sources of conflict studied. In section four, "Summary and Conclusions," we conclude that, in the context of this study, resolution of certain preference conflicts and information inaccuracies may be a factor in inducing employees to perform in a manner that is consistent with the preferences of employers.

SOURCES OF CONFLICT

Nature of the Problem

In this section, we discuss sources of conflict which may prevent employees from performing to achieve organizational goals. The possibility of conflict arises whenever authority is delegated from a principal (e.g., superior, employer) to an agent (e.g., subordinate, employee). The principal's problem is to assure that the agent performs in the best interests of the principal. However, divergent preferences, coupled with incomplete information, creates the possibility that agents will not perform in the best interests of principals.

One approach in analyzing the multi-person decision process is to assume that members of the organization constitute a team, sharing a common reward as the result of their actions (Marschak, 1955; Marschak and Radner, 1972). In standard team theory formulation, there is no conflict of interest and no behavioral congruence problem among members of the team. However, this approach is limited by the assumption that all members of the team have common interests and beliefs (Marschak, 1955, p. 137).

Wilson (1968a, 1968b) addresses the problem of multi-person decisions when the group is not a team. He sets forth the conditions under which the preferences and beliefs of heterogeneous individuals can be compounded into a surrogate probability function and utility function for the group, and they will behave as a team. Ross (1973) has extended this analysis to consider the characteristics of payoff rules that provide an optimal sharing of risk among superiors and subordinates. These analyses are limited by the

requirement that members of the group have identical risk tolerances about, or identical probability assessments of, uncertain events affecting the payoff to the group. Further, nonpecuniary outcomes, such as aversion to effort by employees, are not incorporated in the analyses.²

When members of the organization do not constitute or behave as a team, incomplete information and conflicting preferences create the potential for agents' behavior to be incongruent with principals' preferences. This creates the need for establishing management controls to ensure employees perform to achieve organizational objectives, as acknowledged in the accounting and behavioral literature.³ Designing these systems requires an understanding of the relationship between the sources of conflict and employee performance. However, the empirical evidence which assesses whether the existence of conflicting preferences and incomplete information is related to employee performance in achieving organizational objectives is limited.⁴

² Aversion to effort has been incorporated into a number of works, including Harris and Raviv (1978) and Demski and Feltham (1978), who analyze contracting arrangements, and Hurwicz and Shapiro (1978), who investigate incentive schemes when workers are effort averse.

³ For example, see Argyris (1952), March and Simon (1958), Stedry (1960), Becker and Green (1962), Cyert and March (1963), Anthony (1965), Hofstede (1967), Kriebel and Lave (1969), and Itami (1975, 1977).

⁴ Swalm (1966) and Zimmerman (1976) find some evidence that risk averse employees may be induced by control systems to take actions that are suboptimal for attaining organizational objectives. Conflicting employee perceptions of, and preferences for, control systems were investigated by Todd, Thompson and Dalton (1974) and Ramanathan, Peterson and Maher (1976). Harrell (1977) finds some evidence that conflicting signals about organizational policy could affect decision making behavior.

In the remainder of this section, we discuss conditions under which sources of conflict due to (1) incomplete information and (2) diverse preferences are expected to occur. We then develop the hypothesized relationship between a subset of those potential sources of conflict and employee performance.

Incomplete Information

An important limitation acknowledged in the literature on multi-person decision making under uncertainty is the potential, but unknown, dysfunctional behavioral consequences due to incomplete information. This point has been examined extensively in the literature on incentives, insurance and agency. Wilson (1967) demonstrates the relative strength of the party having better information in competitive bidding. Williamson, Wachter and Harris (1975), and Mirrlees (1976) investigate problems of incentives and organizational structure when management has imperfect information about employees' skills and/or efforts. Spence and Zeckhauser (1971) show that, in the context of insurance contracts, incomplete information about nature, even when insured individuals' actions are monitored, results in neither complete risk spreading nor appropriate incentives for individuals' actions. In short, when uncertainty is present, optimal allocation of resources can be obtained with complete competitive insurance markets, in the absence of moral hazard.⁵ But with incomplete information about the agent and moral hazard, alternative

⁵The concept of "moral hazard" has been used in the insurance literature to describe the behavior of insured individuals who have some control over the event being insured. Specifically, by lowering the marginal cost of the insured event to the insured person, insurance may increase the number of events. For example, auto insurance may increase the number of auto accidents.

principal-agent, or superior-subordinate, relationships are developed to permit cooperation and risk sharing (Pauly [1968], Arrow [1968]). Thus, "nonmarket controls, whether internalized as moral principals or externally imposed are to some extent essential for efficiency" (Arrow, 1968, p. 538).

Introducing aversion to effort, as well as risk, on the part of employees (or employers) leads us to expect them to "shirk" when incomplete monitoring of their output, ability, effort or the task environment is obtained (Alchian and Demsetz [1972], Demski and Feltham [1978], and Harris and Raviv [1978]). One can easily imagine this to be a particular problem when employees, or other agents, perform nonroutine activities.⁶ In particular, it is difficult to know whether agents failed to exploit some alternative.

In summary, with incomplete information and effort aversion, there is no guarantee that employees will take the actions preferred by their employers. The employers' problem is to develop cost-justified monitoring and incentive systems which induce employees to take desired actions. In the CPA firms we studied, the monitoring systems were designed to assess employee output, or performance, according to such performance criteria as "quantity of technical work, including meeting time estimates," and "quality of technical work." As shown in Figure 1, matching observed employee performance with the actual performance criteria formed the basis for incentives

⁶Monitoring "shirking" in research activity is a well-known administrative problem in academia. An example of shirking in CPA firms arises because of incomplete monitoring of audit procedures that were not performed. Some evidence of shirking in this situation is suggested by Rhode (1977).

provided in the form of "extrinsic rewards" (i.e., those provided by the organization).

Of course, conflicting signals about appropriate performance may be received by employees. This problem has been termed "information incongruence" in the context of conflicting signals about the environment in which tasks are performed (Itami, 1975). The signals we are concerned with are those sent from top management (principals) to employees (agents).⁷ Our effort is to understand the association, if any, between such conflicts and employee performance. In short, we focus on one dimension of information incompleteness: inaccurate employee perceptions of the relative importance of performance criteria used in the organization's performance monitoring system.

If an association is found, top management may be able to reduce the residual loss of the agency relationship through improved employee performance.⁸ Of course, this is only a partial analysis, as we don't determine the cost of removing information inaccuracies. Management's problem is to balance the cost of removing information conflicts and asymmetries against the benefit of improved employee performance (Williamson, Wachter and Harris [1975] and Jensen and Meckling [1976]).

⁷In contrast to our study of top-down signaling is the bottom-up signaling of employee skills analyzed by Spence (1973, 1974), among others.

⁸Total agency costs have been defined as the sum of monitoring expenditures by principals, bonding expenditures by agents and any remaining residual loss due to the divergence between agents' decisions and those decisions that would maximize the welfare of the principal (Jensen and Meckling, 1976).

We partitioned our study of information accuracy into two categories: the accuracy with which criteria for evaluating individual employee performance are perceived, and the accuracy with which criteria for evaluating the performance of the organization (i.e., the total group of employees) are perceived. The hypotheses are:

- H. 1: There is an association between employee performance in achieving organizational goals and the accuracy with which organizational performance criteria are perceived. This is indicated by the linkages between (b), (c) and (h) in Figure 1.
- H. 2: There is an association between employee performance in achieving organizational goals and the accuracy with which employee performance criteria are perceived. This is indicated by the linkages between (d), (e) and (h) in Figure 1.

Of course the first hypothesis is the direct problem of the individuals who determine and communicate organizational goals (e.g., owners). In this study, these individuals are the partners, in general, and the managing partners, in particular. We expect subordinates to be concerned with employee performance criteria, not organizational performance criteria. However, it is logical to expect that criteria for evaluating the performance of individuals would be derived from organizational performance criteria, as shown in Figure 1. By partitioning the accuracy of perceptions about performance criteria into organizational and individual levels, an additional source of information conflict about organizational objectives and the employees' role in achieving those objectives could be uncovered. Finally, the nature of public accounting firms suggests the need to explore potential conflicts at the organizational level

because many members of the organization are, or hope to become, owner-managers (i.e., partners).⁹ In this setting, the potential impact of conflict at the organizational level would seem to have more importance than in a corporation where relatively fewer members expect to become directly involved in setting organizational goals.

Diverse Preferences

Disparity between preferences and perceptions will not necessarily result in poor employee performance. Performance may be also a function of employee skills and the environment (e.g., state), as shown in Figure 1, as well as other factors not shown. Thus, good performance may occur even when employees take actions that are not in the best interests of top management. Further, conflicting preferences do not necessarily result in actions that are not in the best interests of top management. Employees can be induced to act in the best interests of top management with appropriate incentive systems, even if certain employee preferences (e.g., the employee should consume leisure) are in conflict with those of top management (e.g., the employee should put out effort). This is an example of the previously noted difference between congruence in the strict sense, which is goal or preference congruence, and congruence in the weak sense, which is behavioral or

⁹ We assume a multi-period setting in which performance evaluation is important for identifying employment errors and for promoting employees.

performance congruence. While behavioral congruence is sufficient for employees to act in the best interests of top management, the existence of goal, or preference, congruence could reduce incentive and monitoring costs.¹⁰

Thus, we assume that the existence of preference conflicts may be costly to the organization because they could increase incentive costs and costs of suboptimal employee performance (Kriebel and Lave [1969]; Jensen and Meckling [1976]). In this study, we attempt to determine whether there is any association between preference conflicts and employee performance. As previously discussed, if such association is found, top management's problem is to balance the cost of removing preference conflicts against the benefits of improved employee performance.¹¹

¹⁰ For example, suppose factory workers on a routine assembly line have a high preference for challenging intellectual work relative to a low preference for money. They are rewarded only on a piece-work basis. Assuming their utility functions are an increasing function of their pay, an incentive scheme could be developed which would motivate the workers to perform well by increasing their piece-rate, but the cost to the organization may exceed the payoff from the increased output of the workers. An increased payoff to the organization might also be obtained if other workers with a relatively strong preference for financial rewards replaced the workers with intellectual preferences. Alternatively, efforts to enlarge the original workers' jobs, making them more intellectually challenging, could be made. These, and other alternatives, would have to be explored by top management to determine how to balance the gains from increased output against incentive costs and/or the costs of hiring workers who have preferences for job rewards congruent with the rewards provided by top management.

¹¹ Removal of preference conflicts may take the form of altering the performance evaluation system and/or changing the reward structure. Alternatively, it may take the form of replacing current employees whose preferences for rewards or performance criteria are not congruent with the rewards provided, or with the performance criteria used, by employers. This could be a partial explanation of employee turnover in CPA firms.

Congruence of Perceptions with Preferences. . Previously, we indicated that one source of conflict is incomplete information about the relative importance of performance criteria. For example, a faculty member who emphasizes research rather than teaching may perform "poorly" because the system weights classroom performance relatively highly. This source of conflict could result from an inaccurate perception of the relative importance of teaching. On the other hand, this faculty member may have a correct perception of the weights applied to teaching and research, but still prefer a greater emphasis on research. This is an example of an incongruent preference for, rather than an inaccurate perception of, the relative importance of teaching and research in performance evaluation.

In this study, we examine two sources of such divergence between preferences for, and perceptions of, the importance placed on performance criteria by employers:

- H. 3: There is an association between employee performance in achieving organizational goals and the congruity of perceived and preferred organizational performance criteria. This is indicated by the linkage between (c), (i) and (h) in Figure 1.
- H. 4: There is an association between employee performance in achieving organizational goals and the congruity of perceived and preferred employee performance criteria. This is indicated by the linkage between (e), (i) and (h) in Figure 1.

Hypotheses 3 and 4 are extensions of H. 1 and H. 2. Where H. 1 and H. 2 hypothesize the association between employee performance and conflict due to inaccurate information about perceived performance criteria, H. 3 and H. 4 hypothesize the association between employee

performance and conflict due to diverse preferences for the relative weights attached to performance criteria.

Reward Congruence. Reward congruence is related to the notion of "valence," or the relative attractiveness, of an outcome (reward) as defined by Vroom (1964) and to the concept of utility which has been incorporated into various subjective utility theory and decision models (e.g., Edwards, 1961). Differences between preferred and actual rewards from the job are the fifth potential source of conflict studied in testing H. 5:

- H. 5: There is an association between employee performance in achieving organizational goals and the closeness with which desired rewards from the job are perceived to be provided by the job. This is indicated by the linkage between (g), (i) and (h) in Figure 1.

In exploring this potential source of conflict, we specifically identify preferences for multiple rewards, including nonfinancial rewards. As previously indicated, it may be less costly to reduce preference conflicts in organizations by providing nonfinancial, rather than financial, rewards. Further, as argued by Kriebel and Lave (1969), suboptimal outcomes may result if the reward system fails to explicitly recognize nonfinancial preferences of employees.

Summary

This paper addresses the problem of noncooperative behavior between principals, who are the top management in the offices of CPA firms, and their agents, who are the professional employees of these firms. In particular, we are concerned with the possible impact of incomplete information and diverse preferences upon employee performance.

The combined effects of these sources of conflict on performance can be expressed symbolically as:

$$(1) P = f(OC^a, IC^a, OC^c, IC^c, R);$$

where

P = the performance of employees in achieving organizational goals (behavioral congruence);

OC^a = the accuracy with which employees perceive the importance of criteria for evaluating organizational effectiveness (H. 1);

IC^a = the accuracy with which employees perceive the importance of criteria for evaluating their own individual performance (H. 2);

OC^c = the congruence between employees' preferences for, and their perceptions of, criteria for evaluating organizational effectiveness (H. 3);

IC^c = the congruence between employees' preferences for, and perceptions of, criteria for evaluating their own individual performance (H. 4);

R = the congruence between preferred and actual rewards perceived to be provided by the organization (H. 5).

METHODOLOGY¹²

Research Setting

Certified Public Accounting firms were selected for this study because, as professional organizations, they offer the following advantages. First, the individuals in CPA firms are professionals who usually have similar educational backgrounds, career objectives, and professional interests. Thus, compared to the staff of an industrial organization, the professional staff of a CPA firm represents a relatively homogeneous group. Second, these firms provide a unique setting because the firm's top managers (partners) are also the firm's equity holders. Therefore, such firms provide a research setting in which conflicts between management and owners in establishing organizational objectives are minimized.¹³ The offices of eight CPA firms (two local, two regional, and four national firms) were selected to participate in the study.

Procedure

An extensive questionnaire was administered to each member of the professional staff in the eight offices. Although portions of the questionnaire were based on prior research instruments, the major part of the questionnaire was designed especially for this study to provide operational measures of variables appropriate in CPA firms.

¹²For a more detailed description of the research methodology, see Maher (1975).

¹³See Monsen and Downs (1965), Jensen and Meckling (1976), and McKean and Kania (1978) for studies of the impact of manager and owner goal conflict on the operations of the organization.

Measures of information accuracy (OC^a and IC^a) and preference congruence for performance criteria (OC^c and IC^c) were based on the performance criteria presented in Table 1. These performance criteria

were developed from "inhouse" documents provided by a number of CPA firms, including those participating in the study.

Measures of preference congruence for rewards (R) were based on items and format similar to those used by the Pelz and Andrews (1966) study of the motivation of scientists in organizations (see Table 2).

These rewards were reviewed by the managing partners in the participating offices and revised so that they were appropriate for CPA firms.

After developing the questionnaire based on the items shown in Tables 1 and 2, it was reviewed by academicians familiar with motivational theory and by partners of various nonparticipating CPA firms to ensure that the questionnaire items "made sense" in our research setting. Next, a pilot test of the questionnaire was made in a CPA firm not participating in the study. After incorporating the revisions suggested by the above pretests, the questionnaire was administered to the professional employees (excluding the managing partner(s), who are the standard setters) at each level in the eight participating firms. A separate questionnaire was administered to

the managing partner(s) at each office to determine the actual importance of the criteria used to evaluate employee and organizational performance.¹⁴

Tests for reliability and validity were incorporated directly into the questionnaire. Respondents were requested to complete two separate sets of questions for all measures. One set of questions used a seven-point Likert-type scale while the other asked the respondent to rank-order the same list of criteria. These separate evaluations of the same measures were correlated to determine the degree of association.¹⁵

As part of our tests for reliability and validity, follow-up interviews were held with twenty-four of the respondents to ascertain whether they had difficulty in perceiving the meaning of questions accurately. On the basis of these tests for reliability and validity, along with prior tests of measures taken from extant literature, we were satisfied as to the reliability and validity of our research instruments, subject to the qualification that some measurement error must be assumed in this type of empirical research.

¹⁴ Although all partners are "owners," we are considering the managing partner(s) of the office to be the employer and the other partners to be employees. This is because the managing partner(s) is (are) the standard setter(s) in each case. As one partner explained in an interview, "All partners are equal, but some are more equal than others."

¹⁵ The 80 measures used in this study were correlated in this fashion. 71 measures were significantly correlated at the .001 level and six more were significantly correlated at the .10 level. See Maher (1975) for further reliability and validity data.

Measures of the Dependent Variable (P)

Two separate, dichotomous measures of the independent variable, P (performance in achieving organizational goals), were obtained. Each dichotomy between employees designated as high performers (hereafter designated P") and employees not designated as high performers (hereafter designated P') provided a measure of behavioral congruence.

The first performance measure was objectively determined on the basis of the employee's present level in the firm. Presumably, promotion in the organization is an indication of performance; thus, we assumed that individuals at higher levels in the organization (i.e., manager and partners) achieved that level as a result of their past (higher) performance. This group was designated P". In contrast, those of entry-level professionals (junior staff) should represent a cross-section with respect to performance (i.e., some high, some average, some low performers), and they were designated P'.

The second measure of performance was obtained from the managing partner(s) in each office. Based on the firm's evaluation system they were asked to identify the top 25 to 30 percent of their staff (i.e., P") at each of the following levels in the firm: (1) junior/senior staff, (2) supervisor/manager and (3) partner. By appropriate coding, we could identify the responses of the high performing members (P") from those of the remaining staff (P'). The participants were not told who had been identified by the managing partner(s) as a high performer. Respondents were assured of confidentiality in their responses because nobody could identify any response with a particular individual.

These two classification schemes were used to measure behavioral congruence; that is, how congruent the behavior of members of the organization were with the desires of the individuals who determined organizational goals.¹⁶ The findings for both performance classifications are presented in this study. The dichotomous performance grouping does not provide as great a differentiation between high and low performers as might a more refined measure of performance (e.g., comparing perceptions of high and low performers using a three-way grouping--high performer, average performer, low performer). This may reduce the power of our tests to accept the hypotheses. A more refined measure of performance could not be obtained, however, because the managing partner(s) were unable or unwilling to identify particular individuals as "low performers," and we were not allowed access to salary or other internal information that might have provided a more refined ranking.

Measures of the Independent Variables (OC^a, IC^a, OC^c, IC^c, R)

As previously indicated, the independent variables are measures of conflict. To measure the accuracy of perceptions of the importance of criteria used to evaluate group, or organizational performance (OC^a), and individual employee performance (IC^a), a comparison of the "actual" importance according to the managing partner(s) in each office and the perceived importance according to each employee was made. Both managing partners and employees were asked to assess the importance of each of

¹⁶It is important to recognize a potential circularity if the managing partners select as high performers those individuals whose preferences are most congruent with theirs. A number of factors tend to prevent this, including variation in levels of skill, effort, personal characteristics and role perceptions, which can affect performance without affecting goal congruence. See Lawler and Porter (1967), Porter and Lawler (1968), Lawler and Suttle (1973) and Maher (1975) for evidence of associations between these variables and performance. Further, while managing partners were able to observe behavioral congruence, it would be quite difficult for them to assess preference congruence.

the ten performance criteria in Table 1 on a seven-point scale, with anchors of "little importance" and "considerable importance." Also, they were asked to rank the criteria in order of importance from one to ten. As previously indicated, we found a high degree of correlation between these two measures.

Measures of accuracy could have been obtained by comparing managing partner and employee responses to either the assessment of importance on the seven-point scale or the ranking in order of importance. In comparing responses on both scales, we frequently found cases where respondents had assessed three or four criteria as having the same importance (e.g., a "seven" on the seven-point scale), but had ranked them as untied (e.g., "first," "second," "third," etc.). Based on follow-up interviews with respondents, we believe that respondents may have forced a ranking when, in fact, there was virtually no difference in importance among the criteria.¹⁷ Consequently, we report the findings from our analysis using the seven-point scale measure which, we believe, minimizes the Type I error of reporting differences in importance of performance criteria which really don't exist. Of course, the trade-off is that we may err on the side of conservatism by not reporting differences which do exist.

Our hypothesized associations were between the existence of conflict and employee performance. As we did not hypothesize the direction of conflict (i.e., perception of greater or less importance than actual), we were interested in a simple measure of accuracy

¹⁷ Maher (1978a) investigates information inaccuracies in more detail than shown here using both ranking and seven-point scale responses. The results appear to have little sensitivity to response scales.

which could be provided by taking the absolute value of differences between perceived and actual performance criteria. To summarize, the measure of accuracy for each employee is

$$(2) C_i^a = \left| MP_{c_i} - E_{c_i} \right|, i = 1, \dots, 10;$$

where

- C_i^a = the measure of accuracy (larger values indicate less accuracy, smaller values indicate greater accuracy) for the i th performance criterion for each employee;
- MP_{c_i} = the actual importance of the i th performance criterion according to the employee's managing partner(s);
- E_{c_i} = the perceived importance of the i th performance criterion according to each employee.

The hypothesized association between employee performance and accuracy is tested according to (3),

$$(3) C_i^{aP''} < C_i^{aP'}$$

where $C_i^{aP''} = \left| MP_{c_i} - E_{c_i}^{P''} \right|$ = the measure of accuracy for each employee designated as a high performer;

$C_i^{aP'} = \left| MP_{c_i} - E_{c_i}^{P'} \right|$ = the measure of accuracy for each employee not designated as a high performer;

< = a smaller difference, or greater accuracy.

As we are comparing each employee's assessment of the importance of performance criteria with that of his/her managing partner(s), the size of C_i^a could be caused by response scale bias. For example, if

the managing partner(s) consistently weighted all of the performance criteria as more important (i.e., higher on the scale) than their employee did, a difference in importance would be indicated by our results, i.e., $C_i^a > 0$. However, it is the comparison of $C_i^{aP''}$ to $C_i^{aP'}$, not the absolute size of C_i^a , that is the basis for hypothesis testing. As can be seen from (3), response scale bias in MP_{C_i} has the same effect on both $C_i^{aP''}$ and $C_i^{aP'}$, assuming no response scale bias on the part of employees. Further investigation revealed a modest upward bias (heavier weighting) for all employees. However, no difference in this bias was detected between the high performer (P'') and non-high performer (P') groups.

While the measures of accuracy (C^a) described above are based on the difference between the "actual" and the perceived importance of performance criteria, the measures of congruence between the preferred and perceived importance of organizational performance criteria (OC^C) and individual performance criteria (IC^C) are based on differences between each employee's perceived and preferred weighting of importance. For the reasons noted earlier, absolute values of the differences obtained from the seven-point scale are used. Thus, the measure of congruence between employee perceptions and preferences is

$$(4) \quad C_i^C = \left| E_{C_i} - E_{C_i^*} \right|, \quad i = 1, \dots, 10;$$

where C_i^C = the measure of congruence (larger values indicate less congruence, smaller values indicate more congruence) for the ith performance criterion for each employee;
 E_{C_i} = the perceived importance of the ith performance criterion according to each employee;

$E_{C_i^*}$ = the preferred importance of the ith performance criterion according to each employee.

The hypothesized association between employee performance and congruence is tested according to (5).

$$(5) C_i^{CP''} < C_i^{CP'};$$

where $C_i^{CP''} = \left| E_{C_i}^{P''} - E_{C_i^*}^{P''} \right|$ = the measure of congruence for each employee designated as a high performer;

$C_i^{CP'} = \left| E_{C_i}^{P'} - E_{C_i^*}^{P'} \right|$ = the measure of congruence for each employee not designated as a high performer;

< = a smaller difference, or more congruence.

In this case, the effect of response scale bias is minimized if an employee has the same bias when (s)he answers questions pertaining to perceptions as when (s)he answers questions pertaining to preferences.

Finally, measures of reward congruence are similar to measures of performance criteria congruence. Absolute values of differences, obtained from the seven-point scale, between preferred and "actual" (as seen by the employees) opportunities for rewards from the job are used to measure reward congruence, as follows:

$$(6) R_i = \left| E_{R_i} - E_{R_i^*} \right|, i = 1, \dots, 10;$$

where R_i = the measure of congruence for the ith reward for each employee (larger values indicate less congruence, smaller values indicate more congruence);

E_{R_i} = the actual opportunity for the ith reward according to each employee;

$E_{R_i^*}$ = the preferred opportunity for the ith reward according to each employee.

The hypothesized association between employee performance and congruence is tested according to (7).

$$(7) \quad R_i^{P''} < R_i^{P'} ;$$

where $R_i^{P''} = \left| E_{R_i^{P''}} - E_{R_i^*}^{P''} \right|$ = the measure of reward congruence for each employee designated as a high performer;

$R_i^{P'} = \left| E_{R_i^{P'}} - E_{R_i^*}^{P'} \right|$ = the measure of reward congruence for each employee not designated as a high performer;

< = a smaller difference, or more congruence.

Statistical Treatment

A dichotomous measure of the dependent variable suggests the use of discriminant analysis. Discriminant analysis, however, has strict data requirements (e.g., equality of the covariance matrices and normal frequency distributions) and, as a result, it performs poorly with departures from normality (Marks and Dunn, 1974). Our tests for closeness of fit, skewness and kurtosis rejected the null hypothesis that the distributions were normal in several instances. Thus, we abandoned testing with parametric statistics and used the Mann-Whitney (one-tail) test as recommended by Siegel (1956) for samples of our size.

FINDINGS

Virtually all of the professionals in the eight offices, including employees in audit, tax, management services, and small business services, participated in the study. In all, 297 participants provided 234 (79%) usable responses. The findings from these responses are presented in Tables 3 through 9. Each set of findings is presented together with the operationalized hypotheses tested which, in turn, are keyed to the general hypotheses previously set forth.

The numbers reported in the tables are the medians of the respective distributions of the independent variable measures. The medians are presented to indicate whether differences between groups are as predicted. However, the significance tests are based on differences between the total distributions, not between the medians (or means).

Organizational Performance Criteria: Accuracy of Perceptions (OC^a)

As previously indicated, the measure of information accuracy is provided by the absolute value of differences between the "actual" importance, or weighting, of organizational performance criteria as indicated by the managing partner(s) in each office and the importance perceived by each employee. The absolute values of differences closer to zero represent more accurate perceptions, while those farther from zero represent less accurate perceptions, of organizational performance criteria. Accordingly, general Hypothesis 1 is operationalized as follows:

The absolute value of differences between perceived and actual organizational performance criteria is smaller for P" (employees designated as high performers) than for P'.

The findings in Table 3 provide considerable support for Hypothesis 1 when the measure of performance is based on prior promotion to present level in the firm. Differences between groups are as predicted by H. 1 for nine of the ten performance criteria; further, these differences are significant ($p < .05$) for six criteria. Some support for H. 1 is also shown for the performance classification provided by managing partners, especially for one performance criterion: "developing new clients" ($p < .05$).

These results clearly indicate greater information accuracy at higher levels in the firm than at lower levels. Of more significance, however, is the question whether (a) a relatively accurate perception of organizational performance criteria is required for promotion to higher levels in the firm or (b) the employee develops a more accurate perception of organizational performance criteria the longer he or she stays with the firm. Our results suggest that the latter is more likely, because differences between P" and P' were less pronounced when the high performers were selected at each level by the managing partners.

These findings are consistent with the notion that management information and control systems should not focus on communication of the organization's performance criteria to employees; rather, weighting criteria for organizational performance is the owners'

(partners') problem. This is so despite the professional nature of the organization in which we presume many managers and staff aspire to be partners. The one exception is the accuracy with which the employee perceives the importance of "developing new clients," which consistently differentiates P" from P' regardless of the performance classification method used.

Organizational Performance Criteria: Congruence with Preferences (OC^C)

The degree of preference congruence is measured by the absolute value of the difference between the perceived and preferred importance of each performance criterion, with smaller numbers representing greater congruence than larger numbers. Accordingly, general Hypothesis 2 is operationalized as follows:

The absolute value of differences between perceived and preferred organizational performance criteria is smaller for P" than for P'.

As Table 4 shows, findings pertaining to H.2 are similar to the results for H.1. They strongly support the hypothesis in terms of the performance classification according to level in the firm. Differences between groups are in the direction predicted by H.2 for eight of the ten criteria. These differences are significant ($p < .10$) for four criteria. Mixed results are shown for H.2 for the performance classification according to managing partners. For one criterion, "quality of supervision," the difference between groups is significant ($p < .10$) in the direction predicted by H.2.

Discussion of Results Pertaining to Organizational Performance Criteria

The results pertaining to organizational performance criteria indicate that the accuracy with which the importance of organizational goals are perceived (OC^a) and the congruence of those perceptions with preferences (OC^c) are weakly associated with performance, when performance is measured by the managing partners' classification of employees at each level. However, the results disclosed a strong association between the independent variables, OC^a and OC^c , and employee performance in the direction predicted when performance was measured by past promotion to present level in the organization.

These results support the view that the longer individuals remain with an organization, the more accurately they perceive, influence, and identify with its goals.¹⁸ Self-selection indicates that individuals with goal conflicts probably have resolved those conflicts by the time they achieve higher levels in the firm, or they have left the organization. These findings are also consistent with the argument that firms can protect themselves against low productivity employees by restricting entry to lower level positions in the firm (Williamson, Wachter and Harris [1975]). Thus employers can promote employees to permanent positions (partners) after a lengthy period of evaluation to determine whether employees "fit" in terms of ability and personal characteristics.

Viewed in this fashion, the "problem" of turnover in CPA firms could be viewed as one of minimizing the net cost of employment, which

¹⁸ Similar findings with respect to personal characteristics have been found by DeCoster and Rhode (1971) and Rhode, Sorensen and Lawler (1976).

includes the net costs of (a) initial screening, (b) employment in lower level positions and (c) Type II error in hiring/promoting "poor" employees into permanent positions.¹⁹ From the employer's perspective, it may not be optimal to reduce employee turnover. Observation of high turnover may reflect employers' strategies to reduce initial screening costs at the expense of additional costs of employment in lower level positions.²⁰

An extension of these findings is presented in Tables 5 and 6, which show the comparison of P" to P' by level in the firm, with P" based only on the managing partner's classification. In general we see a modest gradual improvement in information accuracy and preference congruence at each successively higher level in the organization until the partner level is reached. Further, it is only at the partner (owner) level that the hypothesized associations between performance and information accuracy, and between performance and preference congruence, are clearly demonstrated. Partners designated as high performers are significantly more accurate than those not designated as high performers in their perception of the importance of quantity of work, staff training, new client development and public relations. In terms of preference congruence, significantly greater congruence for the high performing partners is shown for selling additional services to clients and for public relations.

¹⁹An employee in a lower level position may generate benefits from his/her output that exceed employment costs. We assume that "poor" employees generate lower benefits (or greater costs) than "good" employees; thus, it is costly to employ a poor employee instead of a good employee.

²⁰Of course, there are many other possible explanations for turnover in CPA firms, including certification requirements.

In summary, the results appear to reflect a self-selection bias by employees and a strategy by employers to use lower level positions for screening. These findings are consistent with the notion that information accuracy and preference congruence for organizational goals is, at most, weakly associated with performance for employees below the level of partner. They also imply that employee self selection, if it occurs, may be done without a full understanding of, or agreement with, organizational goals.

Individual Performance Criteria: Accuracy of Perceptions (IC^a)

The findings pertaining to information accuracy for the importance of criteria used to evaluate individual performance (IC^a) are presented in Table 7. As before, smaller numbers indicate more accurate perceptions of individual performance criteria, larger numbers represent less accurate perceptions. Accordingly, general Hypothesis 3 is operationalized as follows:

The absolute value of differences between perceived and actual individual performance criteria for (a) merit pay increases and (b) promotions is smaller for P" than for P'.

The results shown in Table 7 generally support H. 3. For the performance classification by level in the firm, eight of the twenty differences are significant ($p < .05$) in the direction predicted.

Although eight of the twenty differences are in the opposite direction, none are significant. For the performance classification according to managing partner, thirteen differences are in the direction predicted by H. 3 with four being significant ($p < .10$). Of the differences in the opposite direction, one is significant ($p < .10$). In general, information accuracy about the importance of client relations, whether present clients or new ones, is the most consistent factor discriminating high performers from the other employees.

Two payoffs to the employee from information accuracy are merit pay raises and promotions. The findings reported in Table 7 indicate that the associations between employee performance and the accuracy of perceptions about criteria for merit pay raises and about criteria for promotions are not symmetric. Rather, performance is more highly associated with information accuracy leading to merit pay raises. These findings are consistent with the view that an accurate reading of performance criteria may be instrumental for obtaining merit pay raises, while promotion may be more related to other factors, such as seniority.

Individual Performance Criteria: Congruence with Preferences (IC^C)

The findings pertaining to preference congruence for the importance of criteria used to evaluate individual performance (IC^C) are presented in Table 8. Smaller numbers represent greater congruence, larger numbers represent less congruence. Accordingly, general Hypothesis 4 is operationalized as follows:

The absolute value of differences between perceived and preferred individual performance criteria for (a) merit pay increases and (b) promotions is smaller for P" than for P'.

Hypothesis 4 is generally supported by the results shown in Table 8. For the performance classification according to level in the firm, differences are in the direction predicted for eighteen of the criteria; ten of these differences are significant ($p < .10$). For the performance classification according to managing partner(s), differences are in the direction predicted by H. 4 for fourteen of the twenty criteria; five of these are significant ($p < .10$). One of the differences in the opposite direction is significant ($p < .05$). In general, the quality of work and relationships with clients are the most consistent variables discriminating high performers from the other staff with respect to preference congruence.

Discussion of Results Pertaining to Individual Performance Criteria

As noted above, the results in Table 7 showed performance to be more highly associated with information accuracy (IC^a) for performance criteria used to give merit pay raises than for those used in the promotion process. Top management's communication of the importance of performance criteria used for merit pay raises might have a greater impact on performance than their communication of the importance of performance criteria used for promotions. However, congruence between preferences and perceptions appears to be about equally associated with performance for both outcomes.

The findings under H. 3 and H. 4 indicate several interesting patterns among the criteria we used to operationalize IC^a and IC^c .

The accuracy with which the importance of "quality of technical work" is perceived appears more closely associated with performance than the "quantity of technical work." Three criteria which intuitively seem linked, "relationships with present clients," "selling additional services to present clients" and "developing new clients," are also relatively highly associated with performance. These results support the view that a correct assessment of the importance of relatively long-run objectives that are harder to measure, such as the quality of output and firm growth, are more associated with employee performance than a correct assessment of a quantifiable short-term performance indicator like quantity of output.

In summary, discussions of the congruence problem in organizations typically focus on differences between organizational goals and individual goals. By partitioning the linkage between organizational goals and individual preferences into an organizational component (OC^a and OC^c) and an individual component (IC^a and IC^c), we find that it is the individual component which appears to be more associated with performance. Viewing the diagram in Figure 1, management control systems designed to resolve conflicts among the linkages (d), (e), and (i) appear to have greater potential impact on performance than focusing on linkages (b), (c) and (i), in the setting of our study.

Reward Congruence (R)

The findings pertaining to reward congruence are presented in Table 9. As before, smaller numbers represent greater congruence, larger numbers represent less congruence. Accordingly, general Hypothesis 5 is operationalized as follows:

The absolute value of differences between desired rewards and those perceived to be provided by the job is smaller for P" than for P'.

Considerable support is shown for Hypothesis 5 by the findings shown in Table 9. Differences between P" and P' are in the direction predicted for nine of the ten rewards specified (six significant at $p < .10$) for the performance classification based on past promotion to current level in the firm. For the performance classification according to managing partner, differences between P" and P' are in the direction predicted for seven rewards (three are significant at $p < .10$). One of the differences in the opposite direction is significant ($p < .10$). Differences between groups are generally as predicted for nonfinancial internal-oriented rewards (e.g., "working with highly competent colleagues and supervisors," "having freedom to carry out own ideas," "working on problems of value to the nation's well-being"). For such financial external-oriented rewards as "earning a very good salary" and "gaining promotions," however, the findings are not as supportive of H.5.

As we previously indicated, monetary compensation schemes can be a costly incentive mechanism relative to nonmonetary compensation in cases where participants in the organization have preferences for nonmonetary rewards. Our findings that internal-oriented, nonmonetary rewards are more directly associated with employee performance than are external-oriented financial rewards support the notion that multidimensional reward schemes may be instrumental to behavioral

congruence and high performance.²¹ However, further analysis into both the costs and benefits of multidimensional reward schemes is needed before drawing conclusions about the relative merits of non-monetary incentive systems.

²¹ Kriebel and Lave (1969) demonstrate a potential negative impact on profits of ignoring nonfinancial rewards in the incentive system. Jensen and Meckling (1976) show some implications of incorporating non-pecuniary benefits into theory of the firm analysis.

SUMMARY AND CONCLUSIONS

This study was performed to develop and test a partial model of management control that describes the interaction of organizational goals and the goal-related actions of individuals within these organizations. While the problem of motivating and coordinating members of organizations to act in a manner consistent with the goals set for the organization has been studied extensively, we have little empirical evidence about potential dysfunctional consequences of limited information systems and diverse preferences. This problem is aggravated when the employee's output is difficult to measure, as in the case of service industries.

The present study was conducted to provide some initial closure to this gap with descriptive research of the association between each of five potential sources of conflict and the performance of professional employees in the offices of eight CPA firms. In general, we found that performance was associated with each of these sources of conflict, but in varying degrees as summarized below.

1. Criteria for Evaluating Organizational Performance. Performance was weakly associated with the accuracy of perceptions (OC^a), and congruence with preferences (OC^c).
2. Criteria for Evaluating Individual Performance. Performance was relatively highly associated with accuracy of perceptions (IC^a) and congruence with preferences (IC^c).

Together, these findings suggest a stronger linkage between performance and criteria used to evaluate individual employee performance than criteria used to measure organizational success. One possible implication is that greater effectiveness of management control systems could result from better specification and communication

of performance criteria used to measure individual performance than similar efforts on criteria used to measure organizational success. This conclusion may not be generalizable to all organizations, however, because the match between organizational and employee performance criteria may be different in CPA firms than in many other organizations (e.g., industrial firms).

3. Reward Congruence. Performance was highly associated with preference congruence for internal-oriented rewards. Further, it is much more related to congruence for internal-oriented rewards than for external-oriented rewards.

This finding might be reflective of the professional character of a CPA firm. Typically, such firms are characterized by high selection and promotion standards and above average financial remuneration. Their very nature tends to emphasize professional competence and recognition as the means to personal growth and professional advancement. Further, accountants choosing to join CPA firms might, as a group, be more concerned with the "work itself" than accountants working in industrial or governmental organizations. Further research is needed in these organizations to determine the generalizability of our results.

The associative relationships found in the specific setting of public accounting firms moderately support the notion that resolution of preference and information conflicts can improve performance. Whether it is cost-benefit effective to remove these conflicts remains the subject of further research. Extensions of the research to different settings (e.g., industrial and governmental organizations), use of different methodologies, improvements in measurement and inclusion

of left-out variables is needed to refine the relationships established here and to determine the impact of limited agent monitoring systems in a variety of organizational settings.

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Figure 1

Management Control: Interaction Between Organizational Goals and the Goal-related Performance of Employees

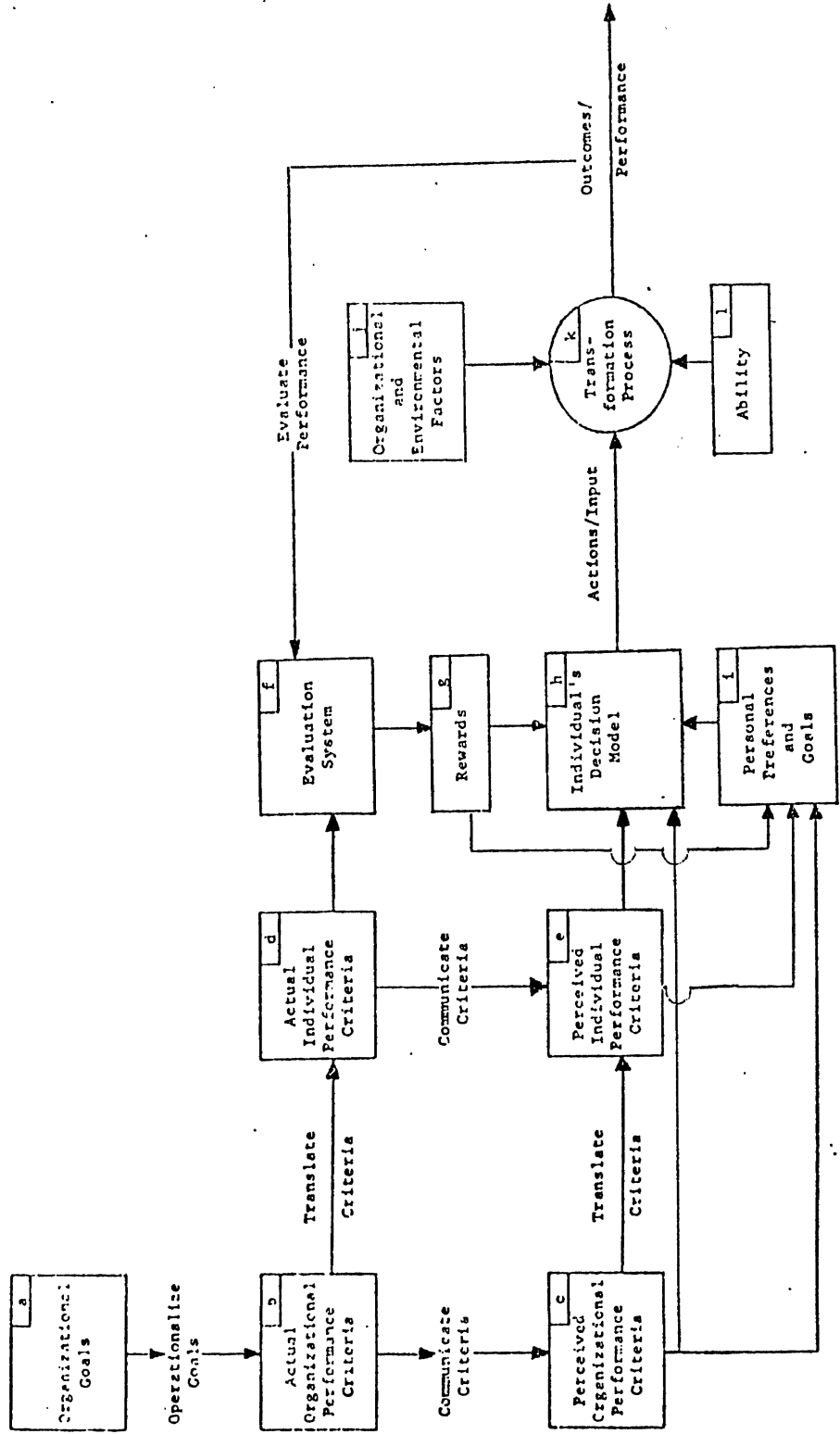


Table 1

CRITERIA USED FOR PERFORMANCE EVALUATION

1. Quantity of technical work, as measured in billable hours (including meeting time estimates)
2. Quality of technical work
3. Personal professional development (e.g., self-study, seminars, courses, etc.)
4. Quality of supervision of others
5. Quality of staff training and development
6. Relationships with other members of the firm, including communication and work cooperation
7. Relationships with present clients
8. Selling additional services to present clients
9. Developing new clients
10. Public relations

Table 2

REWARD CONGRUENCE MEASURES

1. Earning a very good salary
2. Enhancing my learning and technical skills
3. Gaining promotions
4. Providing a chance to work with colleagues and supervisors having a high level of competence
5. Associating with partners or top executives in the organization
6. Building a professional reputation in the field
7. Working on difficult or challenging problems
8. Providing an opportunity to work on problems of value to the nation's well-being
9. Having the freedom to carry out my own ideas
10. Providing security and longevity

Table 3

ACCURACY WITH WHICH CRITERIA ARE PERCEIVED FOR EVALUATING ORGANIZATIONAL PERFORMANCE (OC^a)

Criterion	Medians of Differences			
	<u>PERFORMANCE CLASSIFICATION</u>			
	According to Level in Firm P" P'	According to Managing Partner P" P'	N = 77	N = 160
Quantity of technical work	1.00	1.10	1.02	1.08
Quality of technical work	.61 **	.99	.75	.87
Staff's personal professional development	1.02 **	1.25	1.15	1.09
Quality of supervision	1.03 **	1.32	1.26	1.25
Quality of staff training	.94 ***	1.66	1.21	1.34
Relationships among staff in the firm	1.18	1.16	1.11	1.44
Relationships with present clients	.64 **	1.00	.84	.82
Selling additional services to present clients	1.01	1.07	1.19	1.09
Developing new clients	.81 **	1.00	.67 **	.94
Public relations	1.25	1.26	1.17	1.18

*Difference between groups is significant at $p < .10$.**Difference between groups is significant at $p < .05$.***Difference between groups is significant at $p < .01$.

P" = higher performance group.

P' = lower performance group.

Table 4

CONGRUENCE BETWEEN PERCEIVED AND PREFERRED CRITERIA FOR EVALUATING ORGANIZATIONAL PERFORMANCE (OC^c)

Criterion	Medians of Differences			
	<u>PERFORMANCE CLASSIFICATIONS</u>			
	According to Level in Firm	According to Managing Partner		
P''	P'	P''	P'	
	N = 77	N = 78	N = 70	N = 160
Quantity of technical work	.65 *	.90	.78	.71
Quality of technical work	.31 *	.49	.41	.41
Staff's personal professional development	.81	.81	.88	.77
Quality of supervision	.87	1.01	.87 *	1.08
Quality of staff training	.75	.71	.84	.73
Relationships among staff in the firm	.53 ***	.96	.76	.88
Relationships with present clients	.37	.44	.46	.44
Selling additional services to present clients	.59	.70	.60	.79
Developing new clients	.42 **	.84	.60	.72
Public relations	.73	.86	.81	.87

*Difference between groups is significant at $p < .10$.**Difference between groups is significant at $p < .05$.***Difference between groups is significant at $p < .01$.

P'' = higher performance group.

P' = lower performance group.

Table 5

ACCURACY WITH WHICH CRITERIA ARE PERCEIVED FOR EVALUATING ORGANIZATIONAL PERFORMANCE (OC³) FOR EACH LEVEL IN THE FIRM (Performance Classification According to Managing Partner)

Criterion	Medians of Differences											
	Junior Staff		Senior Staff		Managers		Partners					
	P"	P'	P"	P'	P"	P'	P"	P'	P"	P'	N = 17	N = 23
Quantity of technical work	1.25	1.04	.93	1.09	1.08	.94	.75	**	1.25			
Quality of technical work	.43	* 1.07	.75	.93	1.25	** .57	.44		.38			
Personal professional development	1.31	1.25	1.04	1.06	1.58	* .91	.80		1.00			
Quality of supervision	1.92	* 1.25	1.54	1.28	1.25	1.05	.86		1.00			
Quality of staff training	2.00	* 1.58	1.20	1.33	1.13	.94	.44	*	1.11			
Relationships with peers in the firm	.58	* 1.36	1.14	* 1.70	1.25	1.44	1.00		.92			
Relationships with present clients	1.33	.94	.95	.82	.88	.67	.44		.69			
Selling additional services to present clients	1.25	1.02	1.50	1.21	1.06	1.00	1.00		1.00			
Developing new clients	1.25	.99	.59	* .95	.95	.75	.44	*	1.00			
Public relations	1.40	1.25	1.06	1.06	1.29	1.06	1.14	*	1.45			

*Difference between groups is significant at $p < .10$.

P" = higher performance group.

**Difference between groups is significant at $p < .05$.

P' = lower performance group.

***Difference between groups is significant at $p < .01$.

Table 6

CONGRUENCE BETWEEN PERCEIVED AND PREFERRED CRITERIA FOR
EVALUATING ORGANIZATIONAL PERFORMANCE (OC^c) FOR EACH LEVEL IN THE FIRM
(Performance Classification According to Managing Partner)

Criterion	Medians of Differences												
	Junior Staff		Senior Staff		Managers		Partners						
	P"	P'	P"	P'	P"	P'	P"	P'	M	N	P"	P'	
Quantity of technical work	.67	.90	.72	.66	.94	.78	.60	.32	.60	17	.60	.32	23
Quality of technical work	.43	.48	.42	.53	.58	.38	.27	.17	.27	17	.27	.17	23
Personal professional development	.75	.82	1.06	* .69	1.57	* .85	.35	.69	.35	17	.35	.69	23
Quality of supervision	.92	1.02	.83	* 1.31	1.00	1.00	.60	.75	.60	17	.60	.75	23
Quality of staff training	.75	.70	.87	.50	1.29	* .65	.58	.56	.58	17	.58	.56	23
Relationships with peers in the firm	.80	1.00	1.08	.94	.71	.78	.35	.38	.35	17	.35	.38	23
Relationships with clients	.31	.48	.58	.63	.60	.31	.44	.27	.44	17	.44	.27	23
Selling additional services to present clients	.75	.71	1.28	* .77	.44	* .82	.15	.88	.15	17	.15	* .88	23
Developing new clients	.75	.85	.79	.88	.67	.65	.21	.32	.21	17	.21	.32	23
Public relations	1.00	.85	.80	1.04	.92	* .45	.58	.95	.58	17	.58	* .95	23

*Difference between groups is significant at $P < .10$.

**Difference between groups is significant at $P < .05$.

***Difference between groups is significant at $P < .01$.

P" = higher performing group.

P' = lower performing group.

Table 7

ACCURACY WITH WHICH CRITERIA ARE PERCEIVED FOR EVALUATING INDIVIDUAL PERFORMANCE

Criterion	MERIT PAY INCREASES (IC ^a)				PROMOTIONS (IC ^a)			
	Medians of Differences							
	PERFORMANCE CLASSIFICATION		PERFORMANCE CLASSIFICATION		PERFORMANCE CLASSIFICATION		PERFORMANCE CLASSIFICATION	
	According to Level in Firm P''	According to Managing Partner P'	According to Managing Partner P''	According to Level in Firm P'	According to Level in Firm P''	According to Managing Partner P'	According to Managing Partner P''	According to Managing Partner P'
	N = 78	N = 79	N = 70	N = 157	N = 39	N = 79	N = 51	N = 132
Quantity of technical work	1.04	.99	1.08	1.02	1.18	1.02	1.02	.95
Quality of technical work	.80 ***	1.48	.98	* 1.26	1.05	1.24	1.09	1.21
Personal professional development	1.79	2.12	2.25	2.10	1.78	1.80	2.20 *	1.72
Quality of supervision	1.22	1.41	1.45	1.33	1.31	1.21	1.54	1.34
Quality of staff training	1.50 **	1.98	1.98	1.95	1.73	1.45	1.63	1.69
Relationships with peers in the firm	1.00	.97	1.11	1.16	.94	.87	.94	.98
Relationships with present clients	.82 ***	1.35	.94 ***	1.33	1.12 **	1.48	1.34	1.46
Selling additional services to present clients	1.09 ***	1.76	1.23 *	1.54	1.00 ***	1.84	1.10 **	1.44
Developing new clients	.92 ***	1.88	1.41	1.66	.81 ***	1.71	1.08	1.22
Public relations	1.38	1.37	1.25	1.35	1.31	1.16	1.00	1.19

*Difference between groups is significant at $p < .10$.**Difference between groups is significant at $p < .05$.***Difference between groups is significant at $p < .01$.

P'' = higher performance group.

P' = lower performance group.

Table 8

CONGRUENCE BETWEEN PERCEIVED AND PREFERRED CRITERIA FOR EVALUATING INDIVIDUAL PERFORMANCE

Criterion	MERIT PAY INCREASES (IC ^c)				PROMOTIONS (IC ^c)			
	Medians of Differences							
	PERFORMANCE CLASSIFICATION		PERFORMANCE CLASSIFICATION		PERFORMANCE CLASSIFICATION		PERFORMANCE CLASSIFICATION	
	According to Level in Firm p"	According to Managing Partner p'	According to Level in Firm p"	According to Managing Partner p'	According to Level in Firm p"	According to Managing Partner p'	According to Level in Firm p"	According to Managing Partner p'
	N = 78	N = 79	N = 71	N = 161	N = 78	N = 79	N = 71	N = 161
Quantity of technical work	.74	.78	.68	.83	.83	.83	.78	.79
Quality of technical work	.50	** .82	.52	** .83	.53	* .98	.40	*** .70
Personal professional development	.80	.90	.67	.87	.53	** .90	.71	.83
Quality of supervision	.77	.96	.84	.84	.54	.65	.80	.70
Quality of staff training	.69	** .98	.86	.90	.86	* 1.05	.93	1.04
Relationships with peers in the firm	.60	* .79	.74	.75	.74	.65	.62	.73
Relationships with clients	.39	*** .84	.43	** .75	.48	*** .89	.57	** .80
Selling additional services to present clients	.73	.80	.86	.79	.50	** .85	.62	* .76
Developing new clients	.58	** .89	.70	.87	.87	.88	.97	.84
Public relations	.79	.94	.85	.78	.83	.85	.97	** .73

*Difference between groups is significant at $p < .10$.**Difference between groups is significant at $p < .05$.***Difference between groups is significant at $p < .01$.

p" = higher performance group.

p' = lower performance group.

Table 9

CONGRUITY OF DESIRED AND ACTUAL REWARDS (R)

Reward	Medians of Differences			
	PERFORMANCE CLASSIFICATION			
	According to Level in Firm P" P'	According to Managing Partner P" P'	N = 71 N = 161	
	N = 78 N = 79			
Earning a very good salary	1.27	1.28	1.22	1.37
Enhancing learning and technical skills	.64	.62	.83	.71
Gaining promotions	1.20	1.28	1.62 *	1.23
Working with highly competent colleagues & supervisors	.66 *	.94	.50 **	.89
Associating with partners or top executives in the organization	1.15 **	1.48	1.24	1.30
Building a professional reputation in the field	.71 ***	1.42	.94	1.15
Working on difficult or challenging problems	.62 ***	1.00	.76	.91
Working on problems of value to the nation's well-being	.98 ***	1.66	1.05 *	1.38
Having freedom to carry out own ideas	.92 ***	1.44	.98 *	1.17
Longevity & security in the job	1.46	1.71	1.39	1.37

*Difference between groups is significant at $p < .10$.**Difference between groups is significant at $p < .05$.***Difference between groups is significant at $p < .01$.

P" = higher performance group.

P' = lower performance group.