

FACTORS INFLUENCING EMPLOYEE BELIEFS THAT PAY IS TIED TO PERFORMANCE

Michael J. Vest

The University of Southern Mississippi

K. Dow Scott

Loyola University Chicago

Jusanne M. Vest

The University of Southern Mississippi

Steven E. Markham

Virginia Polytechnic Institute & State University

ABSTRACT: The unique relationship of perceived pay level equity, perceived appraisal accuracy, merit increase satisfaction, trust in supervisor, and trust in top management to employee beliefs that pay is tied to performance was investigated in a sample of 658 managerial, professional, and clerical employees. Pay level equity, merit increase satisfaction, and trust in top management exhibited a significant unique relationship. Post hoc analysis found appraisal accuracy exhibited a significant unique relationship with belief that pay is tied to performance among employees receiving a lower or higher than expected performance appraisal, but not among employees receiving the expected performance appraisal.

Merit pay programs are designed to increase motivation and ultimately productivity by making pay increases contingent upon performance. For merit pay programs to be successful, employees must believe that pay is tied to performance. Despite the importance placed on employee beliefs that pay is tied to performance in the conceptual literature on merit pay, a review of the literature indicates there is little empirical research with respect to what factors may actually influence such beliefs. The purpose of this research is to identify factors that may influence

employee beliefs that pay is tied to performance. This issue is particularly relevant in today's environment where budget cuts have resulted in concern over productivity and costs.

Research and theory suggest that affective reactions to pay level, performance appraisals, and merit pay increases are likely influences on employee beliefs that pay is tied to performance. Merit pay increases are typically allocated as a percentage of pay level based on performance appraisal score. Thus, determining pay level and performance appraisal score are a critical part of the process of allocating merit pay increases based on employee performance. From a procedural justice perspective, the argument can be made that individuals who do not believe the process is fair will be less likely to believe outcomes of the process are fair. With respect to this research, the argument is then made that individuals who believe they are not paid fairly to begin with (perceived pay level equity) and/or individuals who believe their appraisals are not accurate (perceived appraisal accuracy) will be less likely to be satisfied with outcomes of the process (merit increase satisfaction) and ultimately less likely to believe that pay is tied to performance.

Mixed support is present in the literature for a relationship between employee beliefs that pay is tied to performance and perceived pay level equity. Limited research supports a positive relationship between belief that pay is tied to performance and pay level equity (Finn & Lee, 1972). However, Miceli, Jung, Near, and Greenberger (1991) found a small but significant negative relationship between perceived relative pay and effort-reward consonance (belief that pay is tied to performance) among middle managers but not among executives. With respect to merit increase satisfaction, empirical support is present for a positive relationship between the belief that pay is tied to performance and merit increase satisfaction (Folger & Konovsky, 1989; Heneman, Greenberger, & Strasser, 1988).

Conceptual support was found for a positive relationship between perceived appraisal accuracy and employee beliefs that pay is tied to performance (Winstanley, 1975). If individuals do not perceive the performance evaluation system as fair and accurate, it is unlikely they will feel that pay is tied to performance. However, while conceptual support was found for a positive relationship between perceived appraisal accuracy and belief that pay is tied to performance, only two studies were identified which investigated this relationship. Research by Vest, Scott, and Tarnoff (1995) supports a positive relationship between perceived appraisal accuracy and employee belief that pay is tied to performance. They found that the correlation between perceived appraisal accuracy and the belief that pay is tied to performance was significantly larger among individuals who believed appraisals were used in making pay related decisions than among individuals who believed appraisals were not utilized. However, Miceli

et al. (1991) found no significant relationship between perceptions of inaccurate performance ratings and effort-reward consonance (belief that pay is tied to performance).

There is also evidence to suggest that level of trust in supervisors and top management may influence employee beliefs that pay is tied to performance. Trust as used here suggests reliance on or confidence in some event, process, or person and reflects expectations about outcomes based on perceptions and past experiences (Butler, 1991). The conceptual literature on merit pay strongly argues that high levels of trust are required if merit pay programs are to be accepted by employees and have the intended motivational effects (Lawler, 1971).

It is argued here that trust can impact on the merit pay process in at least two ways. First, trust in supervisors is important in the formal performance appraisal process (Fulk, Brief, & Barr, 1985). Second, trust is also important in the pay increase allocation process. For example, employees must trust supervisors to rate their performance fairly and they must also trust top management to allocate sufficient merit budgets or to implement policies where pay increases are based on performance. This discussion suggests situationally specific measures of trust (i.e., separate measures of trust for supervisors and top management) may be more appropriate than some global measure of trust as used by Goodman and Moore (1976). For example, individuals may trust their supervisors to evaluate their performance, but not trust top management to allocate sufficient funds to the merit budget.

There is limited and inconsistent support for the relationship of trust to the belief that pay is tied to performance. Goodman and Moore (1976) found a significant positive relationship between organizational trust and the belief that pay is tied to performance among blue collar employees but not among managerial employees. In the only other study identified that investigated the relationship of trust to belief that pay is tied to performance, researchers found a significant positive relationship between trust in supervisor and employee belief that pay is tied to performance (Folger & Konovsky, 1989). No studies were identified which investigated the relationship between trust in top management and belief that pay is tied to performance.

This study examines the relationship of perceived pay level equity, perceived appraisal accuracy, merit increase satisfaction, trust in supervisor, and trust in top management to employee beliefs that pay is tied to performance. More specifically, this research investigates the "usefulness" of these variables in predicting and explaining employee beliefs that pay is tied to performance. A usefulness analysis examines the significant unique contribution in variance explained by a predictor beyond that accounted for by another predictor (Folger & Konovsky, 1989). The variables investigated in this study represent unique critical aspects of the

process of awarding merit pay increases as well as the climate in which the merit system operates. As a consequence, each variable should provide a unique contribution to explaining beliefs that pay is tied to performance. In addition, controlling for shared variance provides a more rigorous test of the relationship between variables.

A better understanding of the influence of these variables on the belief that pay is tied to performance is necessary if organizations are to successfully use merit pay to motivate employee improved job performance. The limited number of studies identified in the literature review suggests that more empirical research on employee attitudes toward pay systems is needed. With respect to these existing studies, care must often be taken interpreting results due to factors such as inconsistent findings or methodological problems such as failure to control for employee characteristics and variables such as pay level or pay increase. The current study attempts to address these issues as well as providing a more comprehensive study of employee beliefs that pay is tied to performance.

While not the focus of this study, individual difference variables including gender, education level, and tenure have been found to be related, either directly or indirectly, to the belief that pay is tied to performance. For example, research supports a relationship between gender and pay satisfaction which has in turn been related to the belief that pay is tied to performance (for example, see Heneman et al., 1988). Similarly, the importance of controlling for pay and appraisal system outcome variables such as pay level, performance appraisal, and merit pay increase in research on pay-related attitudes is well established in the literature (for example, see Miceli & Lane, 1991). Gender, education level, tenure, monthly salary, performance appraisal score, and percent merit pay increase are utilized as control variables in this research due to their potential influence on belief that pay is tied to performance.

Based on the discussion above, it is hypothesized that perceived pay level equity (Hypothesis 1), perceived appraisal accuracy (Hypothesis 2), merit increase satisfaction (Hypothesis 3), trust in supervisor (Hypothesis 4), and trust in top management (Hypothesis 5) will each exhibit a significant unique positive relationship with belief that pay is tied to performance beyond that accounted for by all other independent and control variables.

METHOD

Setting and Sample

The research site is a large transit authority with a merit pay system located on the west coast. Guidecharts were utilized in the merit pay

system to determine size of merit pay increases. Survey instruments were administered during work hours to employees participating in the merit pay plan in a conference room at the organization's main offices. Study participants were informed that the study was being conducted as part of an Urban Mass Transit Authority grant to investigate the use of financial incentives in transit authorities. Researchers stressed that participation in the study was not mandatory and that responses would be kept strictly confidential. Subjects were not required to identify themselves on the questionnaire. Of the 900 managerial, professional, and clerical employees eligible to participate in the study, 658 (73%) completed a usable survey instrument. Average age of respondents was 43.7 years, average tenure was 11.4 years, and 511 respondents (77.7%) were male. A diverse ethnic mix was present as 362 (55%) respondents were white, 167 (25%) were black, 86 (13%) were Hispanic, and 43 (7%) were Asian or Pacific Islanders. Fifty-seven (8.7%) respondents had at least a high school education, 283 (43%) had some college or trade school, 138 (21%) had a college degree, 72 (10.9%) had some graduate work, and 99 (15%) had a master's degree or higher.

Measures

Attitudinal measures utilized in this research include belief that pay is tied to performance, pay level equity, perceived appraisal accuracy, merit increase satisfaction, trust in supervisor, and trust in top management. The 24 items comprising the six attitudinal measures (six items for pay level equity, five items for the belief that pay is tied to performance, two items for appraisal accuracy, three items for merit increase satisfaction, four items for trust in supervisor, and four items for trust in top management) were subjected to principal components factor analysis with both varimax and oblique rotations. Principal components analysis with both varimax and oblique rotations each yield five factors with the 24 items loading on the same factor in both the varimax and oblique rotations.

All items loaded as anticipated except the two items measuring perceived appraisal accuracy. These two items loaded with the three items comprising merit increase satisfaction. It is not surprising that respondents associate these two measures because performance appraisals were a major determinant of the size of merit pay increases given to transit authority employees. However, perceived appraisal accuracy and merit increase satisfaction are conceptually very different. In addition, specifying six factors in the factor analysis results in the two appraisal accuracy items loading as a separate factor. As a result, appraisal accuracy is treated as a separate construct. Affective reaction and trust measures are summarized below.

Belief That Pay Is Tied to Performance. The belief that pay is tied to performance is measured with five Likert-type items (Cronbach $\alpha = .84$). Scale items were adapted in part from Perry and Pearce (1983). A sample scale item is: "Merit increases accurately reflect an individual's job performance." Response categories range from strongly agree (scored 1) to strongly disagree (scored 6) and are the same for all attitudinal variables except perceived appraisal accuracy which is discussed below. Scale scores for all attitudinal measures were obtained by taking the average of the scale items.

Pay Level Equity. Pay level equity was measured with six Likert-type items (Cronbach $\alpha = .90$). This measure addresses both internal and external comparisons of pay. A sample scale item is: "I am fairly paid compared to other employees who do similar jobs in this organization."

Merit Increase Satisfaction. Merit increase satisfaction was measured with three Likert-type items (Cronbach $\alpha = .93$). A sample scale item is: "I am very satisfied with the last merit increase I received."

Perceived Appraisal Accuracy. Two items were used to measure perceived performance appraisal accuracy (Cronbach $\alpha = 0.84$). Individuals were first asked: "If you had rated your performance at the last review, the evaluation would have been:". Response categories included: much higher (scored 0), higher (1), about the same (2), lower (1), or much lower (0). For the second item, individuals were asked: "Compared to your actual level of performance, do you believe your performance rating was:". Response categories included: much too high (scored 0), too high (1), about right (2), too low (1) or much too low (0). This results in a continuum of responses from 0 (inaccurate) to 2 (accurate).

Trust in Supervisor. Trust in supervisor was measured with four Likert-type items (Cronbach $\alpha = .89$). Scale items were adapted from Scott (1980). A sample scale item is: "I trust my supervisor to treat me fairly."

Trust in Top Management. Trust in top management was also measured using four Likert-type items (Cronbach $\alpha = .81$). Scale items were also adapted from Scott (1980). A sample scale item is: "I trust top management to treat me fairly."

Control Variables. Control variables include gender, level of education, tenure, monthly salary, performance appraisal score, and percent merit pay increase.

Analysis

Multiple regression analysis was used to investigate the usefulness or unique contribution of each independent variable (perceived pay level

equity, perceived appraisal accuracy, merit increase satisfaction, trust in supervisor, and trust in top management) in predicting employee beliefs that pay is tied to performance. A partial F -test indicating the significant unique contribution (R^2 Change) of each independent variable beyond that of all other independent variables was generated. A significant R^2 Change indicates support for the proposed hypothesis.

RESULTS

Qualified support was found for Hypothesis 1. Pay level equity exhibited a significant unique relationship (at .10 level only) with the belief that pay is tied to performance (R^2 Change = .0030, $F = 2.48$, Sig $F = .0761$). No support was found for Hypotheses 2 and 4. Neither perceived appraisal accuracy ($R^2 = .0020$, $F = 2.04$, Sig $F = .1541$) nor trust in supervisor ($R^2 = .0018$, $F = 1.86$, Sig $F = .1732$) exhibited a significant unique relationship with belief that pay is tied to performance. Support was found for Hypotheses 3 and 5. Both merit increase satisfaction ($R^2 = .0461$, $F = 47.77$, Sig $F = .0000$) and trust in top management ($R^2 = .0830$, $F = 86.04$, Sig $F = .0000$) exhibited a significant unique relationship with belief that pay is tied to performance. It is also noteworthy that control variables exhibited a significant unique relationship ($R^2 = .0167$, $F = 2.48$, Sig $F = .0162$) with belief that pay is tied to performance.

DISCUSSION

As noted above, only perceived pay level equity, merit increase satisfaction, and trust in top management exhibited a significant unique relationship with employee beliefs that pay is tied to performance. Contrary to what was expected, neither perceived appraisal accuracy nor trust in supervisor explained a significant unique amount of variance in employee beliefs that pay is tied to performance. One possible explanation for the findings with respect to perceived appraisal accuracy is that perceived appraisal accuracy is predictive of employee beliefs that pay is tied to performance only for certain groups of employees. For example, the relationship of perceived appraisal accuracy to beliefs that pay is tied to performance has been found to be higher among individuals who believe appraisals are used in making pay related decisions (Vest, Scott, & Tar-noff, 1995).

It is also possible that individuals whose expectations with respect to appraisals are met or exceeded may be more likely to believe that pay is tied to performance than individuals who receive a lower than expected performance appraisal. This could result from the fact that individuals

whose expectations are met or exceeded receive the expected (or possibly larger than expected) merit pay increase while individuals who receive a lower than expected appraisal receive a lower than expected merit pay increase. Although no studies were identified which specifically addressed this issue, there is evidence to suggest that individuals tend to rate their performance higher than their supervisors rate it and that supervisor feedback which deviates from what is expected result in perceptions that appraisals are inaccurate (for example, see Smircich & Chesser, 1981).

To further investigate the relationship of perceived appraisal accuracy to employee beliefs that pay is tied to performance, a post hoc analysis was conducted in which respondents were first classified according to whether they received supervisor ratings that were higher than self-ratings, the same as self ratings, or lower than self-ratings. Self-ratings of performance were compared to supervisor ratings of performance in order to obtain an indicator of the degree to which a respondent's expectations were met. Results indicate that 387 or 58.9% received a lower than expected appraisal, 245 or 37.3% received the expected appraisal, and only 25 or 3.8% received a higher than expected appraisal.

A separate regression analysis similar to that described in the analysis section was then run for each of the three groups of employees. Results of the regression runs indicate a significant unique relationship between perceived appraisal accuracy and belief that pay is tied to performance in both the group that received a lower than expected appraisal ($R^2 = .0106$, $F = 6.15$, Sig $F = .0136$) and the group that received a higher than expected appraisal ($R^2 = .107$, $F = 5.16$, Sig $F = .0423$). No significant unique relationship ($R^2 = .0048$, $F = 1.93$, Sig $F = .1662$) was found for the group that received the expected appraisal.

Findings provide support for the argument that trust may be situationally specific with respect to level of management. Factor analysis results yielded two trust dimensions, one for supervisors and one for top management. The Pearson correlation between trust in supervisor and trust in top management was $r = .43$ ($p < .001$) indicating only an 18.5% shared variance. In addition, trust in top management exhibited a much stronger relationship with belief that pay is tied to performance than did trust in supervisor. While trust in supervisor exhibited a significant bivariate relationship ($r = .32$, $p < .001$) with belief that pay is tied to performance, it did not provide a unique contribution in explaining belief that pay is tied to performance. It is possible that trust in supervisor acts in part through perceived appraisal accuracy to influence belief that pay is tied to performance. This explanation is plausible in situations where "top management" develops policies, procedures, merit budgets, and guidecharts that specify size of merit pay increase. Where guidecharts are used, the supervisor's role in the merit process is then largely performance appraisal. This was the situation in the research organization.

These findings should be viewed in the context of two potential limitations. First, the nature of the research method employed and data obtained do not allow us to establish causality. While inferences can be made with respect to what variables may influence employee beliefs that pay is tied to performance, no definitive statements can be made with respect to causality. Second, it is noted that common method variance is a potential problem associated with research of this type. Harman's one-factor test is one possible indicator of common methods variance (Podsakoff & Organ, 1986). According to this approach, common method variance is present if a single factor emerges or one "general" factor emerges that accounts for a majority of the variance. As discussed in the measures section, neither of these conditions emerged. Thus, the argument is made that study results are due to the nature of the pay and appraisal systems studied and not the research method employed.

In conclusion, study results provide valuable insights for managers implementing a new merit pay program or diagnosing a merit pay program which is not working as anticipated. Of particular note, study findings suggest that trust, particularly trust in top management, is an important factor affecting employee beliefs that pay is tied to performance and ultimately the success of merit pay programs. Findings further suggest employee expectations with respect to performance appraisals may influence employee beliefs that pay is tied to performance. Future research should investigate the role of both trust and employee expectations in merit pay programs.

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