Faculty Perceptions of Problems with Merit Pay Plans in Institutions of Higher Education

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The purpose of this study was to provide some much needed empirical data regarding problems associated with the design and implementation of merit pay plans in higher education institutions. The sample consisted of approximately five hundred faculty members drawn from different academic disciplines from four-year universities in the U.S. This study identified four significant problems typically associated with merit pay plans. The current study also revealed that some individual-level and organizational-level variables moderated or influenced faculty members' perceptions of problems with their merit pay plans. The implications of the current findings are discussed, and some recommendations are offered.

The current research study investigates faculty members' perceptions of problems with merit pay plans in higher education institutions. While a good deal of empirical research has been conducted on merit pay plans in the private sector, very few studies have focused specifically on the problems of faculty merit pay plans in four-year colleges and universities. It is likely that the use of merit pay plans in academia is associated with some rather unique design and implementation problems not common to the private sector.

Perceived problems with merit pay plans may lead to feelings of inequity and unfairness among faculty members, which, in turn, may lead to negative organizational outcomes such as low performance, dissatisfaction, high turnover rates, grievances, and pay-related litigation. The current study will attempt to provide some much needed empirical data regarding perceived problems with the design and implementation of merit pay plans in higher education institutions. The identification of such problems may eventually lead to the use of more equitable and effective merit pay plans that are able to positively affect faculty performance, satisfaction, and retention.

Brief Literature Review

The Influence of Merit Pay on Important Organizational Outcomes

Within the private sector, a sufficient amount of empirical evidence exists that indicates that merit pay plans generally have a positive impact on employee performance and organizational productivity (Heneman, 2002; Heneman, 1992; Huselid, 1995; Jenkins, Mitra, Gupta, & Shaw, 1998; Locke, Feren, McCaleb, Shaw, & Denny, 1980). Very little empirical research has been conducted regarding the influence of merit pay plans on faculty performance in four-year colleges and universities. However, one recent study found that faculty perceived their merit pay plans to have a somewhat positive effect on teaching effectiveness, service levels, and research quantity and quality (Terpstra & Honoree, in press).

Despite the empirical evidence that shows that merit pay can positively impact performance, these plans remain somewhat controversial. Problems with the design or implementation of merit plans may interfere with employees' perceptions of either distributive equity or procedural equity (Folger & Konovsky, 1989; Terpstra & Honoree, 2003). Perceived pay inequity may lead to decreased motivation and performance, lower overall job satisfaction, higher absenteeism and turnover, and more pay-related grievances and lawsuits (Milkovich & Newman, 2005).

Potential Problems with Merit Pay Plans

Negative perceptions of pay equity may occur if an employee feels that the amount of merit pay he or she received is trivial or too small in relativity to his or her effort and performance. One recent study in the private sector found that the average merit pay increase for white-collar workers was only 3.5 percent ("Pay Increases," 2003). Compensation scholars generally agree that larger percentage increases in pay are required to positively influence equity perceptions, and to motivate employees to perform at a higher level (Heneman, 2002; Milkovich & Newman, 2005; Mitra, Gupta & Jenkins, 1995).

The size of merit pay distinctions between varying levels of performance may also be important in shaping perceptions of equity. Merit plans that make small pay distinctions between varying levels of performance may lead to negative equity perceptions, whereas merit plans that make larger pay distinctions between their low, average, and high performers should lead to more positive equity perceptions and higher motivation and performance (Gerhart & Milkovich, 1992; Milkovich &

Newman, 2005; Mitra, Gupta & Jenkins, 1995).

Whether or not a merit system makes adjustments for past appraisal periods, when little or no money is available for merit distribution, may influence perceptions of equity. No empirical research has investigated the above-mentioned issue; however, the first author's experiences in academia suggest that this merit system feature may be an important influence upon perceptions of equity and fairness. For example, a faculty member with a high performance rating based upon several publications or 'hits' in a lean budget year may not receive any merit money that year. In the next appraisal period, the budget may be healthier (allowing for larger merit pay distributions), but that same faculty member may have a lower appraisal based on fewer publications or 'hits.' For most faculty members, the number of publications typically fluctuates from one year to the next. Merit systems that make adjustments for past appraisal periods may minimize the potential problem of the 'lottery effect' that can operate in universities with fluctuating annual budgets.

Negative perceptions of pay equity may also occur if the performance criteria that are chosen and used in the appraisal process are inappropriate. The performance appraisal literature stresses that the performance criteria employed should reflect all of the relevant and important aspects of the job. Important aspects of the job should not be omitted ('criterion deficiency'). Conversely, the criteria should not include job factors that are irrelevant, unimportant, or not under the control of the employees ('criterion contamination') (Bernardin & Beatty, 1984; Kleiman, 2007). For example, if faculty are rewarded primarily for research activity even though teaching effectiveness is formally touted as being the most critical faculty activity, some faculty may deem the criteria to be inappropriate. Another example might relate to the operational definition of research performance. If the performance criteria reflect research quantity rather than research quality, some faculty may feel that the criteria are inappropriate.

Negative perceptions of pay equity may occur if the performance criteria that are chosen do not lend themselves to accurate measurement (Bernardin & Beatty, 1984; Milkovich & Newman, 2005). If the performance criteria are difficult to operationalize and difficult to accurately measure, subjectivity and bias are more likely to distort the merit ratings. Teaching effectiveness, for example, is notoriously difficult to operationalize and measure. Typically, student evaluations are used to assess teaching effectiveness (Bates & Frohlich, 2000); however, students are not in a position to discern the quality or validity of the lecture content. Student evaluations are usually influenced more by the style of delivery than by the quality of the content. Peer evaluations of teaching are also problematic. In practice, these evaluations typically involve one or two faculty colleagues sitting in on and observing one or two classes. However, a large sample of teaching behavior is required before an accurate and valid evaluation can be made. For peer evaluations of classroom teaching to be valid, a number of knowledgeable peers (with the same disciplinary background) would have to observe the individual faculty member in the classroom over an extended period of time (Latham & Wexley, 1981).

Another example of the potential difficulty in accurately measuring criteria involves research quality. Measuring research quality in terms of whether or not an

article is published in a peer-reviewed journal ignores the fact that there is a tremendous amount of variability in the quality of peer-reviewed journals. Judging research quality with the use of published surveys that rank journals into tiers of varying worth could be done; however, good surveys are not always available for all academic disciplines. Counting the number of times articles are cited in the literature may also be an inaccurate measure of quality, at times. For instance, an article may be frequently cited as a bad example of some aspect of research.

Even if the performance criteria that have been chosen are appropriate and can be accurately measured, negative perceptions of pay equity may occur if there are problems with the standards that are used to represent varying levels of performance. Ideally, the performance standards that are employed as rating scale anchors should be as concrete and behaviorally specific as possible. Those standards should also be clearly communicated to the employees (Milkovich & Newman, 2005). For a merit pay plan to function effectively, the employees should know precisely what performance is expected of them in order to achieve rewards. If, for example, the most important performance criterion is research quality as measured by the number of articles published in "tier-one" journals, the faculty members need to know exactly how many publications per year in those journals will lead to an excellent appraisal and the highest possible merit pay increase.

Negative perceptions of pay equity could also occur if the performance standards vary from one year to the next. When merit or incentive plans begin to result in general increases in performance over time, some organizations may decide to raise the standards, making it more difficult for employees to earn the same amount of merit or incentive pay that they did in past years (Belcher, 1974; Bergmann & Scarpello, 2001). For example, if the initial standard for "excellent" research performance was one tier-one publication per year, that standard may be raised to two publications per year if a greater percentage of faculty members begin to publish at the rate of one tier-one article per year. Raising the standards (because the merit plan is working) inevitably lessens the potential of the merit plan to positively influence performance in the future.

Negative perceptions of pay equity may also be a function of the type of performance appraisal method or format that is used. A variety of appraisal methods exist, including employee comparison or ranking methods, standard or graphic rating scales, behavioral rating scale methods (such as "behaviorally anchored rating scales" or "behavior observation scales"), objectives-based methods (e.g., "management-by-objectives" or other "goal-setting" methods), or written essay methods. Some of these methods are generally more prone to rating errors and biases than others (Kleiman, 2007; Milkovich & Newman, 2005). Even some of the more popular methods such as management-by-objectives (MBO), however, may lead to perceived inequity in the appraisal process (Kleiman, 2007; Terpstra, Olson, & Lockeman, 1982). A basic tenet of MBO holds that individual employees should have some input into the type and difficulty level of the goals that they set. Thus, with MBO, no common yardstick is available for making relative decisions about performance. Who, for example, should receive the higher appraisal rating? The employee who achieved his moderately difficult goals or the employee who narrowly missed achieving her extremely difficult goals?

Finally, even when a good merit system has been designed and developed (i.e., the

criteria and the standards are sound, and an appropriate appraisal format has been selected for use), negative perceptions of pay equity may still occur if the performance appraisal ratings used for merit pay decisions are biased and unfair. Personal bias and politics can operate to undermine the best of merit pay systems. Some compensation scholars have argued that the raters must be motivated to conduct fair and unbiased appraisals. One suggestion involves 'rating the raters' or formally evaluating the raters in terms of the quality and accuracy of their performance ratings of their subordinates (Milkovich & Newman, 2005). Top management also needs to stress the importance of fair and unbiased performance ratings in the appraisal process.

Potential moderators of perceived problems with merit pay plans

It is possible that some individual-level variables and some organizational-level variables may moderate or influence employees' perceptions of problems with merit pay plans. Some types of individuals may be more sensitive to perceived inequity-related to pay. Similarly, some organizational features may heighten employees' perceptions of inequity. Little empirical research has been conducted on the potential influence of individual-level and organizational-level variables on perceived problems with merit plans in institutions of higher education. Some research, however, has suggested that individual-level variables such as sex, age, seniority, and tenure status may influence university faculty members' perceptions of pay inequity and their responses to pay inequity (Terpstra & Honoree, 2003; Terpstra & Honoree, 2005). Additionally, this research has suggested that organizational-level variables such as institutional size and the general salary level (market pay level) of the university can influence faculty members' perceptions of and responses to pay inequity (Terpstra & Honoree, 2003; Terpstra & Honoree, 2005).

Research Objectives

The primary objective of the current study was to identify some of the problems associated with merit pay plans in higher education institutions. Potential problems related to the design and implementation of merit pay plans may lead to negative perceptions of pay equity among faculty members; and these negative perceptions may, in turn, lead to serious organizational consequences including lower faculty performance and satisfaction, and more turnover, grievances, and pay-related litigation.

A secondary objective of this study was to investigate the potential moderating influence of selected individual-level (sex or gender, age, seniority, and tenure status) and organizational-level variables (institutional size and general faculty salary level). It is possible that some of these variables may influence faculty members' perceptions of problems with merit pay plans.

Method

Sample and Data Collection

A list of 1400 four-year colleges and universities in the U.S. was initially developed, and then a random sample of 600 institutions was selected from the original list. The administrators of these selected organizations were contacted and asked if they would

be willing to participate in this study, and 219 of the 600 agreed to participate (for a response rate of 37 percent at this stage). Of the 219 institutions, 135 (62 percent) employed merit or pay-for-performance systems for their faculty. Only the 135 institutions that used merit plans provided data for the proposed study. The e-mail addresses of 20 faculty members across all academic disciplines were randomly selected from each of the 135 institutions, and e-mails (which included a web-link to the on-line survey) were then sent to these 2700 individuals. Two weeks after the initial contact, a follow-up e-mail was sent to encourage their participation and completion of the survey. The faculty was assured of the anonymity of their responses. Of the faculty contacted, 490 individuals eventually completed and returned the survey. All of the respondents were full-time faculty members at their institutions. Sixty five percent of the respondents were male and 35 percent were female. The average age of the respondents was 50.37, and the respondents had an average of 14.77 years of seniority at their institutions. While a web-based survey may lead to possible sampling bias in some situations, this is not a concern in this particular study because all academic faculty have access to personal computers with e-mail capabilities. Prior to administering the survey, the actual questionnaire was pilot-tested by sending it to 20 faculty members. Minor changes were made to the survey instrument, based upon comments from those participating in the pilot-test.

Measures

Potential Problems with Merit Pay Plans.

The nine potential problems with the design or implementation of merit pay plans were assessed through the use of the following nine statements: 1) the merit pay increases that are given out are too small to motivate faculty, 2) the merit pay distinctions between poor, average, and high performers are not large enough, 3) no adjustments are made for appraisal years when little or no money is available, 4) the performance criteria used for determining merit pay are not appropriate, 5) the performance criteria are difficult to accurately measure, 6) the performance standards do not communicate specifically what is expected to achieve rewards, 7) the performance standards vary from year to year, 8) the performance appraisal method that is used is poor, and 9) the performance appraisal decisions are biased and unfair. For each of the nine problem statements described above, the respondents were asked to indicate the extent to which it was a problem with their specific merit pay plan. Five-point Likert scales were used for these nine statements, where 1 = "very much agree," 2 = "agree," 3 = "neutral," 4 = "disagree," and 5 = "very much disagree."

Potential Moderators of Perceived Problems with Merit Pay Plans.

Four potential individual-level moderators (sex or gender, age, seniority, and tenure status) and two potential organizational-level moderators (institutional size and general faculty salary level) of faculty members' perceptions of problems were also assessed in the current study. Regarding the individual-level variables, the respondents were asked to indicate their gender, age, seniority ("How many years have you been a faculty member at this institution?"), and tenure status ("Are you tenured?"). The

organizational-level variable of institutional size was measured by asking the respondents the following question: "Please indicate the approximate student enrollment of your institution." The organizational-level variable of general faculty salary level was assessed by asking the respondents the question: "How would you characterize your college or university's overall salary level (market pay level)?" A five-point Likert scale was used for this question, where 1 = "much above average," 2 = "above average," 3 = "average," 4 = "below average," and 5 = "much below average."

Results

Potential Problems with Merit Pay Plans

Table 1 shows the nine potential problem statements ranked on the basis of the degree to which the faculty perceived them to be problems with their institutions' merit pay plans.

Table 1: *Problems with Merit Pay Plans in Higher Education Institutions*

	Type of Problem	M[a]	SD	Rank[b]
1.	Merit pay increases are too small to motivate faculty	2.25	1.17	1
2.	Merit pay distinctions between poor, average, and high performers are not large enough	2.61	1.08	4
3.	No adjustments are made for years when little or no money is available	2.32	1.14	2
4.	The performance criteria used for determining merit pay are not appropriate	3.01	1.22	8
5.	The performance criteria are difficult to accurately measure	2.32	1.12	2
6.	Performance standards do not communicate specifically what is expected to achieve rewards	2.98	1.30	6
7.	The performance standards vary from year to year	2.99	1.25	7
8.	The performance appraisal method that is used is poor	2.87	1.19	5
9.	The performance appraisal decisions are biased and unfair	3.09	1.20	9

[a] The faculty respondents were asked to rate the extent to which each of the statements was a problem with their merit pay plan, where "1" equaled "very much agree" and "5" equaled "very much disagree."

[b] The problems are ranked according to their significance, with "1" being the most significant problem and "9" being the least significant problem.

The analyses of the mean ratings of potential problems with merit pay plans indicated that the most significant problem was that the amount of the merit pay increase typically given out was too small to motivate faculty (M = 2.25). Two other significant problems with merit plans involved not making adjustments for past appraisal years when little or no money was available (M = 2.32), and the use of performance criteria that are difficult to accurately measure (M = 2.32). Another problem of note involved plans in which the merit pay distinctions between poor, average, and high performers were not large enough (M = 2.61). The means of the remaining potential problems (those ranked fifth through ninth) ranged from 2.87 to

3.09; thus, the respondents did not perceive them to be significant problems associated with their merit pay plans.

Potential Moderators of Perceived Problems with Merit Pay Plans

Analyses were also conducted to explore the potential moderating influence of four individual-level (sex or gender, age, seniority, and tenure status) and two organizational-level variables (institutional size and general salary level) on faculty members' perceptions of problems with merit pay plans. Table 2 shows the correlations between the six moderator variables and the nine types of problems with merit pay plans.

Table 2: *Descriptive Statistics and Correlations between the Types of Problems and the Moderator Variables*

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Size of increase	2.25	1.17	—														
2. Size of distinctions	2.61	1.08	.55**	—													
3. Adjustments for past	2.32	1.14	.20**	.16**	—												
4. Criteria inappropriate	3.01	1.22	.23**	.17**	.28**	—											
5. Criteria difficult to measure	2.32	1.12	.23**	.15**	.26**	.54**	—										
6. Standards unclear	2.98	1.30	.29**	.18**	.26**	.49**	.53**	—									
7. Standards vary yearly	2.99	1.25	.18**	.08	.26**	.53**	.58**	.64**	—								
8. Poor appraisal method	2.87	1.19	.26**	.19**	.33**	.70**	.58**	.58**	.61**	—							
9. Decisions biased	3.09	1.20	.05	-.01	.02	.02	.07	-.01	.13**	.01	—						
10. Faculty sex	1.35	.48	-.01	-.04	.00	-.07	-.04	-.11*	-.06	-.02	-.13**	—					
11. Faculty age	50.37	9.40	.07	.10*	.03	.08	.07	.12**	.03	.04	.01	-.23**	—				
12. Faculty seniority	14.77	10.26	.05	.12**	.06	.14**	.09*	.19**	.12**	.11*	.02	-.23**	.69**	—			
13. Tenure status	1.28	.45	-.06	-.02	.02	-.06	-.06	-.10*	-.04	-.01	-.03	.18**	-.47**	-.50**	—		
14. Institutional size	14,505.54	12,050.64	.16**	.11*	.14**	.03	.10*	.21**	.10*	.06	.01	-.06	.03	.13**	-.03	—	
15. General salary level	3.59	.88	-.27**	-.14**	-.17**	-.17**	-.14**	-.17**	-.11**	-.22**	-.06	.01	-.04	-.04	-.08	-.15**	—

* $p \leq .05$. ** $p \leq .01$.

General salary level (market pay level) emerged as an important moderator variable, as it significantly influenced faculty perceptions of eight of the nine potential problems associated with merit pay plans. Institutional size and seniority were also found to be important moderator variables, as each of these two variables significantly influenced the perceptions of six of the nine potential problems. Each of the two individual-level variables of sex and age were found to significantly influence faculty perceptions of two of the nine potential problems with merit pay plans. Faculty tenure-status was found to significantly influence the perceptions of only one of the nine potential problems. The specific findings regarding each of the six moderator variables are described below.

Correlation analyses indicated that sex was significantly related to the perceptions of the following two types of problems at the .05 level of significance: "the performance standards do not communicate specifically what is expected to achieve rewards" (r=-.11), and "the performance appraisal decisions are biased and unfair" (r=-.13). Female faculty were significantly more likely than male faculty to perceive these two types of problems as problems associated with their merit plans.

The analyses indicated that age was significantly correlated with the following two types of problems at the .05 significance level: "the merit pay distinctions between poor, average, and high performers are not large enough" (r=.10), and "the performance standards do not communicate specifically what is expected to achieve rewards" (r=.12). Younger faculty were significantly more likely than older faculty to perceive these two types of problems as problems associated with their merit plans.

The correlation analyses also revealed that seniority was significantly related to six of the nine types of potential problems with merit plans at the .05 level of significance. The six problems that were significantly influenced by faculty seniority were as follows: "The merit pay distinctions between poor, average, and high performers are not large enough" (r=.12), "the performance criteria used for determining merit pay are not appropriate" (r=.14), "the performance criteria are difficult to accurately measure" (r=.09), "the performance standards do not communicate specifically what is expected to achieve rewards" (r=.19), "the performance standards vary from year to year" (r=.12), and "the performance appraisal method that is used is poor" (r=.11). Faculty with less seniority were significantly more likely than faculty with more seniority to perceive these six types of problems as problems associated with their merit plans.

The analyses indicated that tenure status was significantly correlated with only one type of problem at the .05 significance level: "the performance standards do not communicate specifically what is expected to achieve rewards" (r=-.10). Non-tenured faculty were significantly more likely than tenured faculty to perceive this type of problem as a problem associated with their merit plans.

The correlation analyses revealed that the organizational-level variable of institutional size was significantly related to six of the nine types of potential problems with merit plans at the .05 level of significance. The six problems that were significantly influenced by institutional size were as follows: "Merit pay increases are too small to motivate faculty" (r=.16), "the merit pay distinctions between poor, average, and high performers are not large enough" (r=.11), "no adjustments are made

for years when little or no money is available" (r=.14), "the performance criteria are difficult to accurately measure" (r=.10), "the performance standards do not communicate specifically what is expected to achieve rewards" (r=.21), and "the performance standards vary from year to year" (r=.10). Faculty in smaller institutions were significantly more likely than those in larger institutions to perceive these six types of problems as problems associated with their merit plans.

The analyses indicated that the organizational-level variable of general salary level was significantly related to eight of the nine types of potential problems with merit plans at the .05 level of significance. The eight problems that were significantly influenced by general salary level are shown in Table 2. The only one of the nine problems that was not significantly influenced by general salary level was "the performance appraisal decisions are biased and unfair." Faculty in organizations with lower general faculty salary levels were significantly more likely than those in organizations with higher general faculty salary levels to perceive these eight types of problems as problems associated with their merit plans.

Discussion

Problems with Merit Pay Plans in Institutions of Higher Education

The primary objective of this study was to identify the problems associated with merit pay plans in higher education institutions. To date, little empirical research has centered on potential problems with merit pay plans in four-year colleges and universities, and it is likely that the nature of 'academic work' may lead to some unique problems associated with the design and implementation of merit plans. If problems with merit systems lead to faculty members' perceptions of inequity and unfairness, these negative perceptions may, in turn, lead to problems with faculty performance, satisfaction, retention, grievances, and pay-related litigation.

The results of our study indicated that the most significant problem with merit pay plans in higher education institutions was that the amount of the merit pay increase given out was too small to motivate faculty. Most compensation scholars believe that merit plans will not be effective if employees perceive the merit pay increases as trivial (Heneman, 2002; Lawler, 1990; Milkovich & Newman, 2005). Merit pay increases should be perceived as psychologically meaningful or significant in order to reinforce good performance in the past, and motivate workers to perform at a high level in the future (Krefting & Mahoney, 1977). For example, some compensation texts recommend merit pay increases of 4-6% for average performers, and merit pay increases of up to 10% for superior performers (Milkovich & Newman, 2005).

Very little information exists regarding the typical size or amount of merit pay increases in academia; however, it is likely that most merit pay increases in four-year colleges and universities are much less than the increases recommended by compensation texts. If institutions of higher education would increase the amount of merit pay distributed to faculty, it should result in enhanced teaching effectiveness and research productivity. Larger merit pay increases should also lead to higher pay and job satisfaction, and should reduce the significant monetary costs typically associated with faculty turnover and replacement.

Our analyses revealed two additional significant problems with merit pay plans in higher education institutions. One problem involved not making merit pay adjustments for past appraisal years when little or no money was available, and the second problem involved the use of performance criteria that are difficult to accurately measure. It is not surprising that merit plans that do not make adjustments for past appraisal periods when little or no money was available may be perceived as unfair by faculty members. In many higher education institutions, merit pay is primarily based on the number of research publications or "hits" per academic year. However, the number of research hits for faculty typically varies from one year to the next. For example, a faculty member may have had several research hits in a year when no money was available for merit distribution, but that same faculty member may have had no hits during the next year when there was a good deal of merit money available for distribution. This situation would surely be perceived as being unfair by that faculty member.

Institutions that have fluctuating annual budgets could minimize the problem of this potential "lottery effect" by making equitable adjustments for past years when little or no money was available for merit pay distribution. Such adjustments should help to preserve the motivating potential of the merit pay system, and should also serve to minimize the negative outcomes associated with perceptions of inequity.

Another significant problem involved the use of performance criteria that are difficult to accurately measure. This problem may be difficult to remedy, given the nature of academic work. Two primary faculty activities (teaching effectiveness and research quality) are notoriously difficult to conceptualize, operationalize, and measure. For example, teaching effectiveness is most commonly assessed by using student evaluations (Bates & Frolich, 2000). However, students are not fully aware of the faculty member's teaching objectives. Furthermore, student evaluations are more heavily influenced by the professor's style of delivery than by the quality and validity of the lecture content. Peer evaluations are also problematic. For peer evaluations of teaching effectiveness to be reliable and valid, a large number of faculty (with the same disciplinary background as the faculty member being evaluated) would have to observe the individual faculty member over an extended period of time in order to gather a large and representative sample of behavior. Supervisory evaluations (e.g., evaluations by the department chair) suffer from many of the same problems as do peer evaluations (Grant, 1998; Latham & Wexley, 1981; Milkovich & Newman, 2005).

The measurement of research quality is also difficult and controversial. For example, judging research quality by whether or not an article was published in a 'peer-reviewed' journal is problematic given the tremendous variability in the quality of existing peer-reviewed journal outlets. In fact, some editorially-reviewed journals are superior to many peer-related journals. Assessing research quality with the help of journal rankings based on discipline-wide surveys of faculty opinions could be done; however, good surveys are not always available for all academic disciplines. Even counting the number of times an article is cited in the literature may, at times, be a poor measure of research quality.

The problem involving the use of performance criteria that are difficult to accurately measure may be difficult, if not impossible, to remedy. Perhaps the best that

organizations can hope for is to achieve some degree of acceptance of the chosen methods of measuring teaching effectiveness and research quality. Allowing faculty to fully participate in the process of choosing and operationally defining the performance criteria might help to gain acceptance. New faculty members who had not participated in the original process might benefit from communication, explanation, and 'sales' of the existing system.

The final significant problem associated with merit pay plans in higher education institutions was that the merit pay distinctions between poor, average, and high performers were not large enough. Small merit pay distinctions across performance levels may lead to negative perceptions of equity, and they may have a truly deleterious effect on motivation and performance. For example, if a high-performing employee who received a five percent increase compares himself or herself with an average employee who received a three percent increase, that high-performing employee might feel justifiably upset, and might decide to expend less effort in the future or begin to look for another job.

Compensation scholars generally agree that large merit pay distinctions across different performance levels are critical to the success of merit plans (Gerhart & Milkovich, 1992; Milkovich & Newman, 2005; Mitra, Gupta, & Jenkins, 1995). Ideally, the high-performing employee should perceive his or her merit pay increase to be meaningfully larger than the merit pay increase received by the average performer, and the average performer should perceive his or her merit pay increase to be meaningfully larger than the merit pay increase received by the low-performing employee. The low-performing employee, in fact, should not receive any merit pay increase. The lack of a merit pay increase should signal to the low-performing employee that his or her performance needs to improve, or that he or she should seek employment elsewhere. A merit plan that makes large pay distinctions should help to motivate and retain the very best workers.

Moderators of Perceived Problems with Merit Pay Plans

A secondary objective of the current study was to investigate the potential moderating influence of selected individual-level (sex or gender, age, seniority, and tenure status) and organizational-level variables (institutional size and general faculty salary level). Some types of individuals may be more sensitive to perceived inequity related to pay. Similarly, some organizational features may heighten employees' perceptions of inequity.

One organizational-level variable, general salary level (market pay level), emerged as the most important moderator, as it significantly influenced faculty perceptions of eight of the nine potential problems associated with merit pay plans. Faculty in organizations with lower general salary levels were significantly more likely than faculty in organizations with higher general salary levels to perceive these eight types of problems as being problems associated with their merit plans.

Some previous research has also found that employees were more likely to react negatively to merit pay inequity when their organizations had lower general salary levels (Terpstra & Honoree, 2005). Relatively low general salary levels seem to heighten employees' perceptions of inequity. Conversely, employees may be more

likely to overlook potential problems with merit pay systems when the general salary level of their organization is relatively high. Perhaps employees who are generally dissatisfied with their work context because of low market pay levels or poor supervision, for example, are unwilling or psychologically unable to respond in a positive fashion to merit pay plans. On the other hand, employees who are relatively satisfied with their work context might respond more positively to merit pay systems.

In line with the above reasoning, organizations that pay salaries that are 'below the market' are likely to find that their merit pay systems are ineffective, and may create more problems than they are worth. Organizations that pay salaries that are 'competitive' or that 'lead the market,' however, are more likely to find that their merit pay systems lead to substantial increases in employee performance and organizational productivity.

A second organizational-level variable, institutional size, was also found to be an important moderator, as it significantly influenced faculty perceptions of six of the nine potential problems associated with merit pay plans. Faculty in smaller institutions were significantly more likely than faculty in larger institutions to perceive these six types of problems as problems associated with their merit plans. Some previous research has also suggested that institutional size can influence university faculty members' perceptions of pay inequity (Terpstra & Honoree, 2003).

It is not clear why faculty members in smaller institutions perceive more problems with their merit plans than faculty in larger institutions. However, it is possible that smaller organizations are actually less likely to properly develop and implement technically sound merit systems than larger institutions. Smaller organizations may lack the resources and the level of expertise required to develop and implement good merit pay plans. For example, research in the area of human resource management has found that larger firms are significantly more likely than smaller firms to use effective and scientifically sound staffing practices (Terpstra & Rozell, 1994).

Smaller institutions that lack the in-house expertise required to develop a sound merit pay plan might consider using the services of reputable consultants with experience in designing merit pay systems in higher education settings. Such an approach may cost more initially, but the significant long-term increases in performance and productivity that are typically associated with a sound merit pay plan should justify the initial financial outlay.

One individual-level variable, faculty seniority, was found to be an important moderator. This variable significantly influenced faculty perceptions of six of the nine potential problems associated with merit pay plans. Faculty with less seniority were significantly more likely than faculty with more seniority to perceive these six types of problems as problems associated with their merit plans. This finding seems to be consistent with previous research that suggested that employees with less seniority were more likely to quit their jobs or decrease their level of effort and performance in response to perceived merit pay inequity (Terpstra & Honoree, 2005).

Generally speaking, faculty in the earlier stages of their careers tend to be more competitive and achievement-oriented. Since merit pay increases serve as a mark of success and achievement, these individuals may be more focused on the fairness and equity of merit pay systems. Less experienced faculty may also be more idealistic than

more senior faculty members. Conversely, faculty in the later stages of their careers may be somewhat less competitive and achievement-oriented. Additionally, more experienced faculty may have become habituated and desensitized to pay inequities over the years. It is also possible that experienced faculty who were more equity-sensitive may have left the academic field, leaving behind those who are less sensitive to pay inequities. This possibility could also help to explain these findings.

A second individual-level variable, age, was found to significantly influence two types of problems: "the merit pay distinctions between poor, average, and high performers are not large enough," and "the performance standards do not communicate specifically what is expected to achieve rewards." Younger faculty were significantly more likely than older faculty to perceive these two types of problems as problems associated with their merit plans. Previous research has also suggested that age moderates faculty members' perceptions of and responses to pay inequity (Terpstra & Honoree, 2003; Terpstra & Honoree, 2005). It is likely that the explanations for this 'age effect' are similar to the explanations for the 'seniority effect' described previously.

Taken together, the findings regarding seniority and age suggest that less experienced, younger faculty members may be especially sensitive to merit pay inequity. As such, higher educations institutions with poorly designed and implemented merit pay systems are more likely to lose their young, talented faculty members to other institutions. Higher education institutions should strive to design and implement technically sound merit systems in order to retain these valuable young faculty members.

Another individual-level variable, sex, was found to significantly influence perceptions of the following two types of problems: "the performance standards do not communicate specifically what is expected to achieve rewards," and "the performance appraisal decisions are biased and unfair." Female faculty were significantly more likely than male faculty to perceive these two types of problems as problems associated with their merit plans. Perhaps female faculty have experienced more incidents of bias and discrimination over the years than male faculty, and these previous incidents may have sensitized female faculty members to potential pay equity problems. It is also possible that merit pay plans in which "the performance standards do not communicate specifically what is expected to achieve rewards" simply allow for more opportunities for sex bias to unfairly influence merit pay decisions.

One final individual-level variable, tenure status, was found to moderate the following problem: "the performance standards do not communicate specifically what is expected to achieve rewards." Non-tenured faculty were significantly more likely than tenured faculty to perceive this type of problem as a problem associated with their merit pay plans. Previous research has also suggested that tenure status influences faculty members' perceptions of pay inequity and their responses to pay inequity (Terpstra & Honoree, 2003; Terpstra & Honoree, 2005).

Since non-tenured faculty tend to be younger individuals with fewer years of

experience than tenured faculty, the explanations for this finding could be similar to the explanations that were previously offered for the 'seniority effect' and the 'age effect.' Additionally, the performance standards that are used for merit pay decisions are typically similar to the standards that are used for tenure decisions. Thus, it makes sense that non-tenured faculty members might be particularly troubled by a merit system in which "the performance standards do not communicate specifically what is expected to achieve rewards (and tenure)."

General Conclusions

To date, very little empirical research has focused specifically on the problems of faculty merit pay plans in four-year colleges and universities; and merit pay plans in the higher education sector are associated with some unique design and implementation problems not found in the private sector. The current study has attempted to provide some much needed empirical information regarding problems with the design and implementation of merit pay plans in higher education institutions. It is hoped that the initial identification of these problems might stimulate more research, and eventually lead to the development and use of more equitable and effective merit pay plans that are better able to positively affect faculty performance, satisfaction, and retention.

The current study also sought to identify individual-level and organizational-level variables that might moderate employees' perceptions of problems with merit pay plans. It was found that some types of individuals (e.g., less experienced, younger faculty) have a heightened sensitivity to potential merit pay problems. Similarly, some organizational features (such as the general salary level, and institutional size) were found to moderate employees' perceptions of problems with their merit pay plans. Knowledge of these moderating influences could be used to enhance the motivational potential of merit pay plans; and this knowledge could also prove useful in reducing dissatisfaction, turnover, grievances, and pay-related litigation.

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