

ABSTRACT

Title of Dissertation: Merit Pay Incentive Plans and Faculty Motivation at Liberal Arts Colleges

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This study examined faculty behavior under merit pay plans at four liberal arts colleges to determine whether there was a relationship between faculty motivation (effort) and the degree to which institutional pay plans and individual expectancies conformed to Lawler's theory of the conditions necessary for an effective monetary incentive structure (Lawler 1971, 1981, 1990). These conditions are: 1) A perception that performance and merit awards are linked; 2) Monetary rewards are highly valued; 3) Award size is large enough to make an impact; and 4) Information about rewards are publicly disclosed. The study proposed the question: Is there an association between motivation levels among faculty subject to merit pay plans and the presence of the theory conditions, or do other factors relate to faculty motivation? Using questionnaires to faculty,

statistical correlation techniques tested for associations between reported faculty behavior and Lawler's four theory conditions.

Lawler's theory did not apply to this group of faculty. The reward size condition showed the expected positive association, however, contrary to theory hypothesis, the perception of the pay-performance link was negatively related. Of the faculty characteristics examined, faculty with higher salaries and those with tenure reported less willingness to give additional effort to most activities.

The faculty had highly inaccurate perceptions of the actual merit payments awarded to others at their institutions. The perception of the strength of the pay-performance link indicated that faculty believe the determination of reward recipients is unpredictable with respect to one's performance. These faculty members valued monetary rewards, yet responses to merit pay in the form of greater effort was weak. The stronger response to merit pay by the faculty at the non-merit pay institution suggests that familiarity with a merit pay system in practice breeds a more skeptical attitude because it has not proven as equitable or fruitful in operation as the faculty expect in the abstract.

The findings suggest a need to look more closely at the role of intrinsic rewards, the perceived pay-performance relationship factor, and the process of determining rewards.

MERIT PAY INCENTIVE PLANS AND
FACULTY MOTIVATION AT
LIBERAL ARTS COLLEGES

by

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Dissertation submitted to the Faculty of the Graduate
School of The University of Maryland in partial
fulfillment of the requirements of
Doctor of Philosophy
1993

cc MD Dept. of Education Policy, Planning and
Administration

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Chapter 1

INTRODUCTION

NATURE OF THE PROBLEM

Money is important to most people and therefore has the potential to influence behavior. Many organizations, relying on this assumption, attempt to link pay to performance in an effort to motivate employees to increase work quality and productivity or to influence the direction of work. The fundamental concept behind merit pay, or pay-for-performance, is that by rewarding an individual with additional income, the organization encourages and recognizes success while highlighting exemplary behavior to be emulated by others in the organization. Little or no merit increment also sends a message to employees about organizational priorities, and provides an incentive for individuals to improve (Miller 1988). Merit pay also has a broader purpose as part of an institution's overall compensation scheme that can attract, develop, and retain high performing employees (Hansen 1988).

Although merit pay for faculty is a relatively common reward mechanism at colleges and universities, the forms merit pay plans take and the results of such plans vary widely, depending on the goals of the plan, the environment in which it operates, and the nature of

the group covered by the plan. Common objectives behind merit pay are to improve the quality and level of output of faculty performance in general, and to influence, through the terms of the reward system, the choices faculty make about the mix of time and effort they allocate among research, teaching, and service. In short, the fundamental purpose of merit pay is to motivate faculty to behave in a certain way.

This study examined faculty behavior under merit pay plans at specific institutions to see whether the faculty exhibited the characteristics of motivation as suggested by Lawler's theory of effective incentive pay plans (Lawler 1971, 1981, 1990). Lawler prescribed four conditions that must prevail for merit pay to motivate performance. A long history of research in motivation has produced numerous theories to explain employee behavior. Lawler's theory is based on a widely accepted body of research that attempts to understand the process that creates motivation. This so-called "expectancy theory" is built around how people are motivated.

The mere implementation of a merit pay plan does not necessarily result in the desired behavior. Numerous considerations regarding the implementation of merit pay plans and the organizational environment

affect the degree to which employees will respond to the incentive. Organizations often do not implement merit pay systems according to established theory or adapt the plan to function under the unique characteristics of the institution. Pay practices are usually implemented, not as a result of research, but based on the personal preferences or opinions of a few people and are heavily influenced by chance and circumstance as well as by the policies of other organizations (Lawler 1971). Because many institutions already have merit pay plans and others frequently contemplate implementing one, an important question is not simply whether these incentives motivate or are effective, but rather under what conditions are they effective?

Faculty offer a unique case to study the conditions of merit pay incentives. Their motivations are tied more to the intellectual rewards of their profession than to the monetary goals that drive workers in other sectors (Tuckman 1976). Faculty members tend to be more motivated by intrinsic rewards, such as the intellectual stimulation of research and satisfaction from interaction with students (McKeachie 1979). Some skeptics question whether merit pay is even appropriate or effective for faculty because, in

addition to their presumed preference for intrinsic rewards, monetary incentives might divert faculty from what is considered important in academia--the pursuit and advancement of knowledge (McKeachie 1979). This does not necessarily mean, however, that faculty are not or should not be motivated by monetary rewards. Pay is only one of many avenues for motivating college faculty, and under some circumstances, not always the most powerful. It may be true that faculty do not respond as strongly to monetary rewards as people in other professions, but that does not mean that the prospect of additional monetary compensation will not change behavior.

Despite the ideals behind the goals of merit pay, there is widespread dissatisfaction with merit pay plans for several reasons. Merit pay assumes that supervisors can make valid, objective evaluations (Meyer 1975). Because evaluations of faculty activities are highly subjective, significant differences of opinion about whether achievement and performance are actually rewarded are commonplace. The lack of clearly stated criteria that define merit may send mixed signals to faculty, and create confusion about institutional priorities. Under these conditions merit pay could become counterproductive as an

incentive. Those faculty who do not receive merit awards may view the pay plan as punishment, especially when (as is often the case for financially strapped institutions today) basic cost of living increases have not been provided for everyone. For some, the psychological impact of being denied merit could create insecurities and a sense of limitations placed on freedom of job behavior.

Some theorists argue that individuals overestimate their overall performance, as well as their overvaluation of those performance criteria at which they excel. Consequently, people will typically think that they deserve more than they received and thus they feel "cheated" and unmotivated by the raises they do receive (Meyer 1975). Thus, perceptions of unfairness and feelings of mistrust in the allocation of merit pay may lead to the erosion of collegiality and morale. For these reasons, an understanding of the conditions under which merit pay plans are implemented can contribute to more effective and acceptable pay plans that avoid the perceptions that lead to these types of problems.

While monetary incentive systems can be difficult and time-consuming to implement, and their effects on behavior are often uncertain, they can offer important benefits. Incentives such as merit pay, rather than a restrictive system of rules and regulations, can provide a more flexible approach to encourage desired behavior. Due to the complexity of evaluating the direct effect of incentives on behavior and the lack of objective measures of faculty performance, it is difficult for college administrators to determine whether the incentives being offered are actually achieving the desired behavior from faculty (Tuckman 1976). Despite the claims that merit reward systems are misplaced in faculty settings (McKeachie 1979, Meyer 1975), it can be argued that academics should be evaluated for purposes of accountability. Recognizing superior performance is as much a legitimate part of higher education as it is in other professions (Hansen 1988).

OBJECTIVE OF THE STUDY

This study used one theory of pay and motivation to examine faculty behavior under merit pay systems at institutions of higher education. The theoretical basis for the study was research conducted by Lawler (1971, 1981, 1990). His theory was selected because it is widely accepted by the large body of motivational research, and has been confirmed in Beer et al. (1984). Lawler suggested that in order for a merit pay system to motivate employees, four conditions must prevail in an organization:

1. Individuals must believe that there is actually a link between merit pay and good performance.
2. Individuals must place a high level of importance on monetary compensation.
3. The size of the awards must be large enough to make a difference in behavior.
4. If the pay system does in fact reward good performance and is perceived as such by employees (#1), the recipients of awards and award size should be disclosed to the relevant members of the workforce.

Since there are important differences among faculty at different types of institutions, the study focused on institutions of similar organizational characteristics and mission. The pool for this study included independent liberal arts colleges that responded to a large survey of merit pay and market place differentials conducted by the National Center for Postsecondary Governance and Finance (NCPGF).¹ Within this group, the specific institutions investigated to test the theory were selected so as to include institutions that conformed to the theory to varying degrees. Three institutions selected for in-depth study had faculty merit pay plans and one did not. Within each college, specific departments were selected to obtain a sample size of approximately 30 percent of the institution's faculty.

¹In the summer of 1990, the National Center for Postsecondary Governance and Finance (NCPGF) surveyed by mail the chief academic officers (CAOs) at 500 randomly selected institutions (100 from each of five Carnegie categories--Research I&II, Doctoral Granting I&II, Comprehensive I&II, Liberal Arts I&II, and Two Year) on merit pay and salary differentials caused by market place pressures. After one follow-up, CAOs returned 320 surveys. Ten of the original sample were disqualified (N=490) bringing the overall response rate to 65%. Additionally, nine surveys were unusable, so the total included in the analysis included 311 completed questionnaires. In the survey, 54% of the colleges and universities were state supported. The sample was about equally divided among the five Carnegie classifications.

The major questions the study sought to answer were:

1. Is there a correlation between motivation levels among faculty subject to merit pay plans and the presence or absence of the conditions required to motivate as stated in Lawler's theory?
2. Are there other factors beyond Lawler's theory that relate to motivation levels among faculty under various pay plans?

IMPORTANCE AND CONTRIBUTION OF THE RESEARCH

The financial resources devoted to salaries represent two-thirds or more of annual university budgets (Keller 1983). Given that significant claim on institutional resources, the pay system's effectiveness should be a high priority for administrators. Although higher education espouses a long tradition of awarding pay for good performance, the discussion has intensified as salaries, institutional reputations, productivity, and faculty retention and recruitment have become increasingly important to the maintenance of financial health and academic quality of

institutions. Merit pay has become one instrument for meeting these challenges.

It is significant that this study investigated merit pay with relation to faculty motivation rather than general compensation levels. In theory, it is the changes in compensation that merit pay awards produce, rather than total pay levels, that motivate employees (Lawler 1990). This study investigated whether the specific conditions under which a merit pay plan operates are related to faculty behavior in terms of the level and direction of effort as self-reported by faculty.

Pay and motivation have been widely studied in the industrial sector, but merit pay and its motivational powers have not been extensively addressed in higher education. Certainly, faculty exhibit a different set of values and motivations than the typical business organization, the most common environment for pay and motivation studies.

Faculty present particular challenges for studies of compensation because of the nature of their output. The quality of knowledge and intellectual output are not easily evaluated to determine merit. Measures of good teaching have long been elusive and subjective (Seldin 1984). Of all faculty activity, research is

probably the most straightforward to evaluate in quantitative terms such as output level, grants procured, and publications. Yet even here, gauging quality is far more difficult than gauging quantity. Other factors besides research productivity contribute to the complexity of making equitable evaluations. The differences among disciplines in research opportunities, grant availability, and the quality of research make uniform approaches to evaluation inappropriate. Some fields are more adaptable to clear measures of output than are others where potentially equally meritorious research takes place. The results of research in the hard sciences, for example, may be more often objectively measured and evaluated than the research produced by social scientists.

The objective of this study, however, was not to address the problems of evaluating faculty performance; rather it was to determine whether self-reported faculty effort relates in any way to the type of merit pay plan in operation. This study was based largely on expectancy theory because expectations are what dictate motivation. The university can exert some influence over faculty expectations about monetary rewards through its incentive plan and the message the plan sends to faculty about expected behavior. In addition

to the way institutions implement their merit pay plans, a primary basis of the study was faculty perceptions of merit pay rewards at their institutions. These perceptions are important in determining the success of such systems. Individuals' interpretations of situations affect behavior, and faculty misinterpretation of the administration's objectives behind merit pay plans can cause the reward system to fail (McKeachie 1979).

Examining the external rewards, those tangible rewards conferred by the institution, can help determine whether particular merit pay plan conditions affect faculty behavior.

STATUS OF MERIT PAY IN COLLEGES AND UNIVERSITIES

The NCPGF survey of academic officers revealed that most agree that issues of merit pay are more difficult to resolve than other governance matters. The survey investigated faculty compensation through COLA's (cost-of-living adjustments), merit pay, and bonuses during 1989-90. The results showed that merit pay is widely used among colleges and universities (59%), but that the limited availability of funds for merit awards and faculty dissatisfaction with the

distribution of awards may be lessening the desired impact of the incentive.

Public institutions of all types, and independent research universities and doctoral-granting institutions are the predominant users of merit pay. The amount of money allocated to merit by the surveyed institutions was not, however, a significant percentage of the total salary pool. At over 70% of the institutions 5% or less of the total increase in compensation was set aside for merit pay. Over half earmarked 3% or less for merit.

Whether the more effective approach to motivation is to make large awards to few people (as suggested by Lawler) or smaller sums to many, can be debated, but the dominant practice among the surveyed institutions was the latter. The average merit increase in 1989-90 was 2-4% of base salary and fully two-thirds of the faculty received some level of merit pay. The overall range of merit increments awarded to faculty members, though less than 1% in many cases to higher than 25% in rare instances, tended to be quite narrow at most institutions, which would, according to Lawler's theory, weaken the motivational impact of merit pay. One-fifth of the surveyed institutions reported that the highest merit award was 5% or less. Nearly an

equal number of institutions, however, reported that the highest merit award was over 20%.

Lawler contends that under a pay-for-performance system where employees see a clear link between good performance and merit pay, public disclosure of salary information can positively influence motivation. Both the potential to gain positive public recognition for one's performance and the model for exemplary behavior revealed can act as motivators. It appeared from the survey that the trend among colleges and universities is toward limited disclosure. During 1989-90, 45% of the surveyed administrators disclosed the average COLA increment to faculty, and only 32% revealed the average COLA plus merit increment. Aside from public institutions legally required to report salaries, only a small minority of the institutions surveyed disclosed information such as the highest and lowest merit awards, or the actual salaries and identities of merit recipients.

The survey revealed that chief academic officers (CAO's) were generally supportive of merit pay plans for faculty. Eighty-two percent of the respondents agreed that faculty should have a merit pay plan. Many of the respondents appeared uncertain, however, about the power of faculty incentives to improve

productivity. Most CAOs (57%), primarily from large research and doctoral granting institutions, believed that merit pay makes faculty more productive, but nearly one-third had no opinion. About one-third of the respondents agreed that release time would be a better stimulant for productivity than merit pay or bonuses, but again, a significant portion (29%) neither agreed nor disagreed with that view.

While faculty input to the merit distribution process was strongly supported by the CAOs, fewer agreed that such information should be publicly disclosed to faculty colleagues. Although 53% of CAOs felt that faculty should have a voice in determining who gets merit pay once the overall merit pool is established, only 29% of respondents said that their faculty always have a say in the distribution of merit. Over half of the respondents believed that institutions should not disclose individual salaries to the faculty, though this belief was expressed predominantly by CAOs from independent institutions.

Given the high level of concern about merit pay issues expressed by the academic officers, approaches to dealing with faculty salary incentives are likely to remain a major focus of administrative concerns. This study addressed some of the conditions under which

merit pay plans function that theory suggests can improve the implementation and results of monetary incentives.

Chapter 2

DESIGN OF THE RESEARCH

This study examined whether faculty at selected colleges with merit pay plans that conform with varying degree to Lawler's theory of motivational reward systems exhibit the behavioral characteristics suggested by the theory. The levels of faculty motivation at three institutions with merit pay plans were tested for association to the four conditions Lawler's theory deems necessary for pay to motivate. The assessment of faculty motivation was inferred from faculty perceptions provided in response to a survey questionnaire. The findings addressed the validity of the theory and whether faculty behavior differed among institutions that conformed in varying degrees to Lawler's theory. Additionally, an institution without a merit pay plan was studied to examine whether faculty behavior responses to incentives differed from faculty subject to merit pay.

LOGIC OF THE RESEARCH DESIGN

Lawler's theory of pay and motivation was tested in specific cases. The case study approach is a research tool that involves an intensive investigation

of one or more specific cases of an event, program, process, or individual. The scope of this study limited the testing of the theory to a few cases because of the need to examine closely the self-reported behavior of specific faculty groups. The selection of a non-merit pay institution along with cases which represented differences among the merit pay plans provided a sharper analysis of the impact of the theory conditions.

Often the objective of a case study is to generalize about a particular phenomenon to a larger population beyond the particular case study. The case study may also be used, as in this instance, for the specific application and test of a theory (Yin 1984). Yin described the advantages of using case studies to generalize to a theory rather than a population; the data are analyzed to see if it reveals what one would expect from the theory (Yin 1984). Examining specific cases not only tests Lawler's theory, but the case study approach also allows for the discovery of other conditions or attributes of pay plans that motivate faculty.

Critical to valid case study results is "instance" selection (U.S. GAO 1987). The initial population from which cases (instances) were selected for study

required a group of institutions similar in mission and organization in order to minimize the differences in factors other than merit pay and faculty work preferences that may affect faculty behavior. This consistency permitted more meaningful comparisons of faculty behavior between institutions.

The Carnegie classification system of colleges and universities provides an appropriate categorization of institutions by type. The classifications include Research Universities (Level I and Level II), Doctoral-Granting Universities (I and II), Comprehensive Colleges and Universities (I and II), Liberal Arts Colleges (I and II) and Two-Year Institutions. For purposes of this study the population selected was Liberal Arts I and II institutions.² Their relatively small size, the homogeneity across institutions, and the balance in their emphasis on teaching, research and service made for a cleaner application of the tested theory. Equally important, independent colleges have more direct control over pay policy than do many public institutions.

²The Carnegie Commission on Higher Education defines Liberal Arts I and II institutions as primarily undergraduate colleges that award more than half of baccalaureate degrees in the arts and sciences fields. Liberal Arts I and Liberal Arts II differ in their degree of selectivity.

The targeted population of liberal arts institutions with merit pay plans was derived from the responses to the NCPGF compensation survey. In addition, the choice of institutions with pay plans that had been in place for several years ensured that faculty members were accustomed to the plan. Four institutions (three with merit pay plans, one without) were ultimately selected for study using a purposive sampling approach (U.S. GAO 1987). (Probability, or random sampling, is rarely used in case study approaches.) Purposive sampling allows the researcher to select units that appear to be representative of the population (Nachmias and Nachmias 1987). To address the study's research question, it was appropriate to examine two institutions, one with a relatively broad and one with a relatively narrow range of merit increment sizes (one of the theory conditions). The theory holds that this approach produces the greatest outcome (behavior) differences, absent any other intervening factors. A third institution that represented a level of conformance to theory at a point between the wide and narrow ranges was selected to examine whether faculty behavior followed a pattern that paralleled the degree of conformity to the theory. The award range criteria used to select an

initial sample pool was extracted from the NCPGF survey.

Finally, a fourth institution, one without any merit pay plan, was included in order to compare that faculty's motivational characteristics with their counterparts at colleges with merit pay. In this way, the study would analyze whether other motivational factors might be at work if, despite the absence of any merit pay, faculty on this campus were highly motivated.

In order to select the four study institutions, letters of inquiry to participate in the study were sent to 25 Liberal Arts colleges that had indicated in their response to the NCPGF survey that they had a faculty merit pay plan. This group of colleges was selected on the basis of the size of the range of merit awards that were granted as reported in the NCPGF survey. In order to test Lawler's theory in a way that permitted varying degrees of conformancy to the theory, the size of the merit pay range was one condition that could be initially determined. Thus, approximately equal numbers of institutions with relatively wide and narrow merit award ranges, and those somewhere in between were sent letters of inquiry to participate. Of the Liberal Arts colleges that indicated no merit

pay plans in the NCPGE survey, ten were chosen at random to inquire about study participation.

Of the 25 institutions with merit pay, eight colleges responded positively to participating in the study. The institution with the widest range of merit awards and the one with narrowest range were selected as cases for this study. A third institution was selected whose merit pay range fell between these two. Of the ten institutions without merit pay plans that were approached for study participation, three responded positively. The college with the most faculty members was chosen for this study in order to increase the probability of a larger sample size.

The faculty targeted for study within each selected institution were confined to three specific departments (English, Mathematics, and History) in order to limit the sample size and to provide an element of consistency to the analysis. Fenker (1977) suggested that a robust response from smaller units (e.g., academic departments) is preferable to modest responses across an entire institution in order to resolve response bias problems. The departments for this study were selected because they tend to be the larger departments in most colleges. In one case, two additional departments were used to achieve the desired

sample size. In another, an alternative department was used because the requested department for study consisted primarily of new faculty who had yet to be exposed to the merit pay plan. The relevant data on faculty behavior were gathered from a questionnaire designed for this study (see Appendix II) and distributed to faculty at the four selected institutions. The measurement of faculty behavior (motivation) required in this study was obviously not accessible to the researcher's direct observation, so the data had to be collected by self-reported responses from the faculty. The departmental questionnaire responses constituted the data used to answer the research questions.

Surveys and questionnaires are used for descriptive, explanatory and exploratory purposes, chiefly in studies that have individuals as the units of analysis (Babbie 1983). An investigation of the population of faculty in all colleges and universities would be far beyond the scope of this study. The case approach at a few institutions, along with questionnaires to the respective faculties, provided the best method to obtain original data on a population too large to observe directly.

In addition to the obvious advantages of cost and time, written questionnaires allowed assurances of anonymity for faculty, an especially important consideration on an issue as sensitive as compensation. Additionally, the types of questions asked were more conducive to written responses, both because of the greater level of comfort in responding anonymously to specific questions about personal behavior and the opportunity to provide more thoughtful and considered, rather than immediate, answers (Nachmias and Nachmias 1987). While the inability to obtain observed or experimental data is often viewed as a weakness of surveys, for the purposes of this study, the reliance on expectancy-based data made the questionnaire approach preferable as it was the best way to obtain faculty perceptions about the merit pay systems and the respondents' self-reported behavior. A key element of Lawler's theory is how workers perceive the pay plan.

Because the research questions focused on relationships between faculty motivation to behave and conditions of the merit pay plans, a method of testing whether such a relationship existed was required. The faculty members' perceptions of behavior had to be scored in quantitative terms and such measures were therefore developed. The hypotheses of the study were

then tested through statistical association measures. The analysis did not require that a causal relationship exist, since the goal was to test the existence of certain behavioral patterns under a theoretical assumption. A correlation analysis was adequate and appropriate for investigating the relationship.

Correlation design (or cross-sectional study), a common design employed in the social sciences, is often identified with survey research (Nachmias and Nachmias 1987). Cross-tabulation techniques allowed further association tests beyond the motivation variables (e.g., demographics) to be examined by showing the cases where similar behavior patterns were associated with individual faculty characteristics, such as rank and salary level.

The descriptive associations provided by the correlation and cross-tabulation analyses did not attempt to show causation because of the absence of enough conclusive information that one event preceded another (i.e., that the particular merit pay plan produced the expressed level of motivation). The purpose of this study was to determine whether there was a systematic pattern of association between conformance to Lawler's theory and motivation. If such patterns exist, it could suggest that merit pay and

motivation are systematically associated, though not necessarily causally related. Determinations of causality might represent an area of future psychological research.

RESEARCH QUESTIONS

This study addressed the following questions:

1) Is there an association between motivation levels among faculty subject to merit pay plans and the presence or absence of the four conditions required to motivate as stated in Lawler's theory?

2) If an institution's merit pay practices fit Lawler's theory, yet the faculty do not exhibit the expected motivation relative to other faculty groups examined, are certain factors evident that might thwart the incentive plan? Likewise, if institutions in the study have motivated faculty despite minimal conformance to, or even the absence of, any of the conditions in Lawler's theory, are there other forces that appear to motivate?

THE ROLE OF THEORY

Motivation-Reward Theory

Several psychological theories have been developed to explain motivation behavior as related to pay and other external rewards. While this study relied on expectancy theory, research in motivation has produced several other theories and approaches to explain human motivational behavior. These alternative theories are briefly described.

Drive theory was one of the earliest explanations posited by psychologists. Drive theory rests on the basic assumption that people will always select from alternative courses of action the one alternative which they think will maximize their pleasure and minimize their pain. This theory relies on past events as a key influence on current behavior. It is an explanation of why people behaved in a particular way that cannot, however, predict future behavior (Lawler 1971). Later research in drive theory introduced the concepts of learning and stimulus-response as explanations of behavior directed toward satisfying events. Along with the strength of individual drive, Hull (1943) expanded the theory to include habit strength which is determined from one's previous experiences, or how often a particular behavior has been associated with rewards. Later refinements to drive theory accounted for changes in predicted behavior as a result of changes in incentives, whereas previously the theory's orientation had been only to the past (Lawler 1971).

One group of motivational theories has been classified as content theories, focusing on what motivates people. Another set of theories, termed process theories, focusing on how people are motivated (Henderson 1979). Among the content theories,

MacGregor's (1960) Theory X and Theory Y originated in studies that examined the reasons that certain people achieve success. Based on Maslow's hierarchy of needs, MacGregor's research identified the need for power, achievement and affiliation as forces that drive people to achieve (Atkinson 1957). Theory X and Theory Y distinguish between the different levels of human needs, with the former recognizing only basic biological needs and the latter assuming that higher level needs such as mental challenge, self-control, and opportunities to exercise initiative are equally important means to affect behavior.

Herzberg's theory of motivation identified one set of factors that provide high levels of job satisfaction and another set that prevent dissatisfaction. The "satisfiers," such as achievement, recognition and responsibility can motivate improved performance. The "hygiene" factors, primarily extrinsic rewards, such as pay, can prevent dissatisfaction if provided in sufficient amounts. The satisfiers, or motivators, are primarily intrinsic rewards which Herzberg regarded as the key factors that lead to effective performance. According to Herzberg's theory, motivators, which are internally generated, must be in the work environment in order to have an effect on long-run behavior. By

contrast, extrinsic rewards such as pay have only a short-term impact (Herzberg 1959). Herzberg's theory does not address the importance of relating rewards to performance.

Among the process theories of motivation, Festinger (1957) focused on human reaction to inequities, a theory later applied to work behavior by Adams (1963). This theory reflects the important effects of human values and attitudes on behavior. The theory suggests that an individual's motivation is a reaction to perceived inequities. That is, individuals will be motivated to act in order to eliminate inequities in such factors as pay and hours worked. In a work situation, employees generally accomplish this equilibrium by requesting greater rewards or by reducing work and making fewer contributions (Henderson 1979).

Luthans and Kreitner (1975) took an approach to motivational theory that differs from the content and process approaches. They focused on operant behavior, which sees drives as a reaction to a need--a stimulus-response approach--where consequences are the important factor for the individual. The controls, reinforcements, and environmental limits that signal

individuals that certain consequences will occur, therefore become the catalysts in affecting behavior.

Expectancy Theory

Expectancy theory, the basis of this study, was introduced into motivation-reward research by Vroom (1964). It is a widely accepted and utilized process theory of motivation which states that individuals believe (or expect) that if they behave in a certain way, they will get certain things. The model of expectancy theory evolved from earlier theories of expectations and the valence, or attractiveness, of outcomes. These theories converged, with the expectancy measures weighted by the valence of rewards to determine behavior. Theorists maintained that an individual's behavior is influenced by the strength of the person's belief (expectancy) that the performance of a specific behavior will be followed by a given reward (outcome) and by the value of that outcome for the particular individual (Lawler 1973).

The expectancy model consists of three interrelated elements that induce a level of effort that in turn achieves a particular outcome. First, the performance-outcome expectancy is an individual's belief that by behaving in a particular way certain

things will occur. Namely, that outcomes or rewards will result. For faculty, these expectancies come from their perception of the institution's policies, their own past experiences, and indications from deans or department chairs. A second element of the model, which moderates the performance-outcome expectancy, is the "valence" of rewards, or the attractiveness an individual places on particular outcomes. For example, the value attached to compensation, praise, or courseload reductions. Third, the effort-performance expectancy is the individual's perception of how difficult and how probable it will be to achieve the level of behavior that will generate the outcome. As with performance-outcome expectancies, one's perception of the effort required to achieve a given level of performance is influenced by past experiences, communications from others, as well as one's self-esteem.

Expectancy theory maintains that in order for a person to be motivated to behave in a particular way, an individual must hold all three of these conditions in the expectancy model positively: first, a belief that good performance is achievable through effort, that is, that the individual can control the quality of his or her performance; second, a belief that good

performance results in a positive outcome; and third, that the particular outcome is valued highly by the individual (Lawler 1971). Lawler prefers expectancy theory because it considers a multiplicity of attitudes that affect motivation to perform. The assumption about the model as it relates to motivational forces is that the higher the effort-performance expectancy and the more closely performance is seen to be related to valued outcomes, the greater the motivation will be.

Theoretical Approach of this Study

This study focused on the portion of the expectancy model that involves motivation to perform and the attitudes and beliefs that produce the level of motivation, rather than on the outcomes or performance aspect of the model. Specifically, effort was the key variable in assessing faculty motivation under different merit pay plans. There are important differences between effort and performance (or quality of performance) that make effort the more appropriate variable to study. For this study, the level of motivation (as measured by effort) that leads to a particular performance, rather than the performance per se was crucial because financial incentives are meant to act directly on motivation to behave; a particular

performance or outcome may or may not occur as a result of effort. Conceptually, how hard a person works (effort) is different from how well one works (proficiency). Merit pay works to affect effort, and not ability, which would be measured by performance results. Campbell et al. (1970) identified four dependent motivational variables: effort, choice of behavior, performance, and satisfaction. Of these four, effort and choice of behavior were cited as the variables for which motivational theories have the most direct implications. In the case of faculty, potential reaction to financial incentives are likely to be increased overall effort, and the choice of activities to which time and effort are allocated.

Effort can be measured more straightforwardly than performance because it is difficult to separate the part of performance output due to organizational climate variables and the part due to individual variables (Schneider and Olson 1970). Terborg and Miller (1978) cited a number of problems with performance outcomes as substitutes for behavioral indices of motivation. The primary problem is that the complexity of the performance variable can easily make it an incomplete measure because the relationships between many behavioral variables and the influence of

additional factors, such as ability and opportunity, on performance make an accurate measure of performance nearly impossible. For faculty, this dilemma is illustrated by differences among the disciplines in the uneven availability of grants and other funded support for research.

Because organizations are ultimately interested in outcomes, however, it is important that measures of effort and motivation have some relevance to an individual's performance. Effort and motivation as measured by expectancy type perceptions have consistently been found to be significantly related to performance (Lawler and Suttle 1973). Numerous studies have found measures of motivation, as related to performance, to be highly predictive (Katerberg and Blau 1983, Porter and Lawler 1968, Mitchell and Albright 1972, Terborg and Miller 1978, Wofford 1982). Predicting actual performance on the job, however, becomes highly complex, and motivation is only one of many factors that must be considered.

Thus, effort was the most appropriate measure for gauging motivation in this study. Besides being measurable, effort is considered a reliable indicator of motivation, and has frequently directly related to actual performance.

Study's Use of Lawler's Four Theory Conditions

Before making the assessments about the motivation of the faculty in this study, the merit pay plans at each institution were characterized in terms of conformity to Lawler's theory. It is important, therefore, to discuss each of the conditions in the theory.

1. Pay-Performance Relationship. When an individual believes he or she receives a financial reward for performing well, it strengthens his or her belief in the connection between pay and performance and reinforces the motivational power of pay. When workers do not receive financial rewards that they believe are due them for effective performance, then these beliefs are weakened and the employee will be less motivated (Lawler 1971). Often administrators implement reward systems under the assumption that the system inherently motivates employee performance, without considering whether employees perceive that the rewards are actually determined by performance. Lawler theorized that in order for pay to motivate performance, employees must believe that good performance leads to high pay. This is the foundation of the expectancy theory: that individuals believe or expect that certain behaviors will lead to certain

rewards (or sanctions). The greater an individual's expectancy about the positive consequences of a particular action, the greater the motivation will be.

Other studies have reached similar conclusions about the importance of the employees' perception of a pay-performance link. McGeoch and Irion (1952) provided evidence that rewards are maximally effective when employees perceive a direct connection between the behavior and the reward. They concluded that the key to the success of an incentive pay plan is the employees' perception of how their pay is determined.

The pay-for-performance link is more easily established in jobs where objective measures are used to evaluate employees because the measures are clear to the public, and to the workers the relationship between pay and performance is plainly visible (Lawler 1971). The actual number of products made by factory workers or the number and dollar value of sales can be readily quantified as the objective basis for performance rewards. By contrast, evaluations of faculty activities are largely subjective, which makes the reward-performance link more difficult to demonstrate.

An environment of trust must exist between employees and employers in order for incentive pay to

motivate successfully. Employees must believe that the reward system, however well-designed, functions properly in practice. The dissatisfaction associated with many merit pay plans results from flawed implementation of the plans which lead employees to doubt that rewards are related to performance, despite the administration's claims to the contrary. Most studies have shown that people prefer to be paid for performance, but a large gap often exists between the perception of supervisors and subordinates about the extent to which merit pay plans actually are performance based (Hackman 1970). Employee beliefs in the connection between good performance and rewards is closely linked to the other conditions of the theory.

2. Value of Pay. If an individual believes that superior performance will be rewarded with additional pay, the reward will make a difference in behavior only if the employee places significant value on monetary compensation. This is the second condition that Lawler contends must prevail in order for pay to motivate performance. Research has shown that the more importance employees attach to pay, the more motivated they will be to perform in a way that will enable them to earn more money (Lawler 1971). The value of pay is not just limited to the pay itself, but includes the

benefits that the money leads to, such as acquisitions, happiness, and security. Pay also symbolizes status, recognition, and a reflection upon the quality of one's work. Lawler refers to the "instrumentality" of need, which implies that pay can be used to satisfy a wide variety of needs, including esteem, physiological needs, autonomy, security, social needs, and self-actualization (Lawler 1973).

How important pay is, why it is important, and the ways in which people respond to it, however, differ from person to person. These values are not fixed or constant, and they can be expected to change over time in response to both individual and organizational developments. Some faculty members may view the primary value of teaching and research activities as the intrinsic rewards associated with conveying and expanding the knowledge of their discipline, while others place greater value on the monetary rewards associated with good teaching and research performance. In a study of university incentive structures (Fenker 1977) faculty ranked a variety of incentives, both monetary and nonmonetary. While the study revealed that faculty generally valued monetary rewards highly, the degree to which these rewards were valued varied

among disciplines and according to the faculty members' academic rank.

An organization cannot control most of the elements that affect the value individuals assign to pay because that factor is influenced in large part by personal background and experience. The organization can influence the importance employees place on pay to the extent that it portrays monetary rewards as symbols of recognition and success (Beer et al. 1984). The more public and the more trumpeted the merit pay awards, the more the symbolic value of pay becomes added to the value individuals attach to monetary rewards.

3. Size of Merit Increment. Even where individuals place a high value on money, that does not necessarily mean that modest monetary rewards will motivate employees. To be effective as rewards, merit pay increases should be large enough to be meaningful, but how large is large enough? Merit pay increases in industry during relatively healthy economic periods have averaged 5-15% of salary. This may not be a large enough increment to have a motivational impact (Beer et al. 1984). Current economic conditions generate even smaller merit salary increases for workers. Lawler contends that large amounts of money must be given to

the superior performers if employees are to place a high value on performance and the raises to which it leads. Lawler suggests that two times the size of the average COLA may be the effective minimum for merit to motivate (Lawler 1971).

Many factors contribute to determining the size of a meaningful pay increase (Krefting and Mahoney 1977). In addition to one's current pay, the size of pay increases given to others in the organization and the impact of the pay increase on one's standard of living are factors that affect the meaningfulness of a merit pay increase. Individual or group values would determine which factors most affect the meaning of a pay increase, whether it is the recognition or the money itself that is valued about the pay.

The relative size of the increment is also important. The impact of a merit award is diluted if there is not a large enough differential in pay increases to reflect large differences in performance (Lawler 1990). The organization must be willing to grant very large and very small increases when performance so warrants. The number of faculty members awarded merit pay and the range of those awards can affect the motivational effectiveness of the pay system. A broader range of awards strongly emphasizes

the linkage between performance levels and pay raises. A narrow range does not provide employees with the perception that significant differences in performance result in significantly different rewards.

The size of the merit increase is related to other conditions of the reward environment described by Lawler. Augmenting the dollar value of the wage increase will strengthen a person's motivation to perform only if the employee perceives that pay is tied to performance, the first condition discussed. Rewarding nearly everyone with pay increases, even sizeable increments, will not have a powerful motivating effect since most employees assume that not all workers perform equally well. There will not be the range of rewards employees would expect given the perceived range of performance. In addition to affecting the importance employees place on monetary rewards, as suggested previously, a high level of public recognition associated with receiving merit awards constitutes part of the reward. Thus, the monetary portion of the reward does not have to be as large as if pay were kept secret, wherein much of the motivational value of recognition is lost (Lawler 1971). Under a policy of pay secrecy, the dollar amount becomes the full measure of the award. Without

public recognition as a means of motivation a larger increase may be required to make an impact.

4. Disclosure of Pay Information. Lawler contends that under certain circumstances organizational secrecy about pay increases and salaries leads to employee dissatisfaction and lower motivation. On the other hand, public disclosure may encourage motivation if pay is truly tied to good performance (Lawler 1990). These conclusions by Lawler are based on studies conducted in corporations and government agencies that do not disclose salary data. The usual argument for secrecy with respect to salaries holds that without the data, peers cannot make the unfavorable comparisons that inevitably lead to dissatisfaction. Even where secrecy exists, however, people make comparisons based on guesses, rumors, fragments of information, and perceptions (Lawler 1971). Lawler found that, absent disclosure, managers do not have an accurate picture of what others in the organization earn; they generally believe that those above them make less than they really do and that those below them in rank make more than they actually do. Dissatisfaction results from a perception of overly narrow pay differences based on what they know they earn and what they think others earn.

Vroom's (1964) research demonstrated that performance improves when employees have feedback on how they are doing compared to some standard (one of which is pay). By extension, not knowing the salaries of other employees can weaken motivation. If, for instance, some employees think they have a low salary compared to others, this misperception sends a false signal that they are not doing well. Likewise, if they think that improving their work performance will not be as highly rewarded as it really is, they may not have as much incentive to improve.

Lawler links openness of pay information to the ability of employees to discern whether pay is actually based on performance (Lawler 1971). Misperceptions about others' pay cancel or reduce the motivational force of differential reward systems. This is a particular problem among top performers. They believe they are doing well, yet they do not think they are being adequately rewarded, so they do not believe that pay is based on merit. If employees cannot actually see hard evidence that pay and performance are linked, pay will not motivate because merit rewards will not be seen as obtainable through good performance.

Public disclosure of pay information is a necessary but not sufficient condition to establish the

pay-performance link. As important, the data disclosed must confirm the linkage. Among the advantages cited by Lawler, publicizing salaries and pay increases:

- Establishes the credibility of performance-based pay by showing that pay varies with performance.
- Can establish role models to emulate by revealing the recipients of the highest performance payments (Lawler 1971).

Communicating information about who earned how much, Lawler contended, can develop the employees' trust that the pay-performance link exists.

These four conditions are, according to Lawler, those necessary for pay to motivate employees. The power of pay to motivate is related to individuals' expectancies about how closely they believe their performance is related to monetary rewards and the value they assign to money, coupled with the organization's implementation of the pay plan in regard to the size of awards made and public recognition. The existence of this relationship in an academic setting will be examined using the approach discussed below.

RESEARCH METHODOLOGY

The data required to address the research questions were: 1) the institution's degree of

conformance to Lawler's theory, and 2) faculty motivational behavior (the level and direction of effort). The three merit pay institutions selected for this study were first examined in terms of conformance to the four elements in Lawler's theory. In making determinations about faculty behavior, the collection of such data required a survey of attitudes. Questionnaires were distributed to the faculty members at the four selected study institutions. Appendix II reproduces the questionnaire that was distributed to faculty and to provosts to determine the degree of theory conformance (at the three merit pay institutions) and to ascertain faculty effort as a means of assessing motivation levels used to answer the study's research questions. The questionnaire was designed specifically for this study, pre-tested and revised before distribution to the four institutions.

The development of a single question that adequately taps the respondent's degree of effort was unlikely. Rather, several questions and hypothetical situations were presented, some based on expectancy theory, each of which provided some indication of effort or motivation. The responses to the questionnaires provided the data that constituted the motivational behavior characteristics of the faculty

and revealed the merit pay plan's degree of conformity to Lawler's theory. These data created the variables for analysis to test the association between faculty motivation and the theory's conditions.

The following discussion describes how the questionnaire was designed to evaluate theory conformance and faculty motivation.

Belief that Reward is Linked to Good Performance

Fenker (1977) used a matrix to ascertain actual and perceived associations between various incentives and particular faculty behavior. The matrix concept was adapted for this study to determine faculty perceptions regarding the basis upon which merit pay is awarded. Faculty surveyed in this study expressed, on a scale of 1 to 5 in level of importance, what they perceived to be the strength of the association between receiving certain rewards, including merit pay, and the performance of various professional activities. This exercise revealed the strength of the faculty belief in the pay-performance link (theory condition #1).

Value of Pay

Because of the importance Lawler places on employees' valuation of pay (theory condition #2), it

was essential to know the relative importance faculty assigned to merit pay among other rewards. Therefore, faculty were asked to designate reward preferences by distributing 100 points among various potential rewards according to their value to the individual. The list included both extrinsic and intrinsic rewards. Respondents were also asked to do a similar exercise with a list of job attributes such as workplace freedom and collegiality, as well as financial security, which is directly connected to pay.

Size of Merit Increments

The size, range, and distribution of awards for a given year at institutions were revealed in the NCPGF survey (see page 1 of Appendix I). For the purposes of this study, the goal was to select an institution that had a relatively wide range of merit award sizes and one with a narrow range, and an institution that fell in between that range in terms of award sizes. Thus, this theory condition was predetermined in the sample selection process from information provided from the NCPGF survey. In the analysis of the data, the actual size of the range between the smallest and largest percentage merit awards granted determined the value for this variable.

Level of Disclosure

Conformity with theory condition #4, disclosure, was determined from the questionnaire given to the provosts of the three merit pay institutions used in this study. For purposes of analysis, rankings were assigned according to the extent to which the institution publicized merit pay information: 1 point = no disclosure; 2 points = disclosure of award size only or the names of recipients only; and 3 points = disclosure of both the size of the rewards and the recipients.

Determining Motivation Levels

Effort as a Measure of Motivation. As explained in the previous discussion of expectancy theory, effort is an important indicator of level of motivation. Vroom defined motivation for effective performance in terms of the forces on an individual to exert different levels of effort (Vroom 1964). Expectancy theory suggests that the strength of a person's efforts directly reflect that individual's motivation to perform. Numerous studies have relied on individual effort to measure motivation because effort has been viewed as the variable that most directly reflects motivation (Lawler 1970).

Terborg and Miller (1978) claimed that, while motivation cannot be measured directly, it is "inferred from the arousal, amplitude, persistence, and direction of behavior." In their experimental study, they emphasized the need to operationalize and measure motivation. To demonstrate that performance could be predicted through manipulation of motivation the authors used measures of effort, which was used to gauge motivation.

Mitchell and Albright (1972) equated effort with motivation in a model that examined the ability of expectancy theory to predict satisfaction, performance, retention, and effort of naval officers. Effort was determined by the expectancies regarding effort, performance, and rewards, and by the value of rewards suggested by expectancy theory. Hackman and Porter (1968) also relied on expectancy theory to predict how hard people work or their level of effort. Their study, using expectancy theory, implied that by identifying those perceptions that cause employees to work harder, appropriate changes could be made to improve motivation.

Measures of Effort. While effort has been used commonly as an indicator of motivation, the methods of determining a measure of effort have varied among

studies. These approaches represent both direct computations of effort as well as measures of indicators of effort, using expectancy theory concepts of individual perceptions of effort-performance and performance-outcome probabilities.³ These perceptions have generally been ascertained through questions that ask individuals to rate the strength of the link between effort, performance, and outcomes (Porter and Lawler 1968, Pearce and Perry 1983, Mitchell and Albright 1972, Lawler and Suttle 1973, Hackman and Porter 1968, Avery and Neel 1974). These are the linkages that Lawler cited as a necessary condition for merit pay plans to motivate employee behavior.

Supervisory evaluations and self-ratings of an individual's level of work effort have been a common approach to determine effort levels as measures of motivation (Schneider and Olson 1970, Schuster et al. 1971, Mitchell and Albright 1972, Hackman and Porter 1968, Porter and Lawler 1968). Hackman and Porter (1968) used various attitudinal measurement techniques

³*Effort-performance* probabilities are the individual's perception of how difficult and how probable it will be to achieve the level of behavior that will generate a particular outcome (reward). *Performance-outcome* probabilities are the individual's belief that by behaving in a particular way certain things will occur, namely, that outcomes or rewards will result.

to predict effort and performance. Specifically, they developed an instrument for supervisors to measure the effort of subordinates and then analyzed the responses to test the accuracy of the expectancy theory predictions. The supervisors were asked to rate each employee in terms of how much of one's self each person put into their work, rather than on how well they performed their jobs. Schneider and Olson (1970) used this same instrument to study two groups of nurses, one with a pay-for-performance plan, to assess the relationship between effort level, value of rewards, and pay satisfaction.

Self-rating questionnaires ask individuals to evaluate themselves on a numerical scale, relative to others in similar positions or ranks, on the basis of how much effort they expend on their jobs. Terborg and Miller (1988) used self-ratings and supervisor ratings to assess worker effort to support their conclusion that motivation and performance were affected by the method of payment as well as by the form and extent of goal-setting.

Self-ratings may also include perceptions of work quality and productivity. Mitchell and Albright (1972) used a self-rating instrument to develop a measure of effort, and to obtain a self-evaluation of quality of

performance, productivity and job effort. Job effort level could range from the minimum required to maintain the work role to working "extremely hard." Similarly, tests by Schuster et al. (1971) of the hypotheses derived from the expectancy model utilized self-ratings of perceived work quality, productivity and effort, and supervisor ratings of employee effort. These measures were examined, along with the importance of pay to individuals, to determine whether relationships exist among expectancy perceptions and measures of effort and performance.

In a study of the relationship between effort and performance of a group of engineers, Williams and Seiler (1973) viewed effort, or how hard one works, as a measure of work motivation. They relied on both supervisory and self-assessment of effort. Among the measures of job behavior obtained by Porter and Lawler (1968), were two self-rated criteria, one of which was the manager's rating of himself as to the amount of effort put forth on the job in relation to others with similar duties. Self-assessments of performance often have been found to be somewhat inaccurate due to individuals' need to protect egos and self-esteem, and to the ambiguous performance feedback from the work environment, which forces individuals to rely more on

their own judgements (Ashford 1989). Yet self-ratings are directly related to an individual's commitment to work, to feelings about the adequacy of pay, and to how hard people work. Supervisors are the only other source of reporting worker effort, but they are unable to gauge as well individual perceptions of effort. Despite some self-rater bias that results due to a "halo effect" of viewing one's self in higher regard than others might, individuals should provide the best indication of their effort (Mitchell 1974).

Other Factors Influencing Motivation. In addition to effort, other factors influence individual motivation to perform. While numerous motivation studies have focused on effort level, the directional component of effort also has been found to be a factor influenced by work incentives (Katerburg and Blau 1983). In contrast to the intensity or amplitude measure of effort, the directional component further assesses how efforts are allocated among the many possible activities individuals might pursue at work.

In jobs with a relatively high level of latitude in behavior, the choices individuals make about allocating time to specific activities assumes increased importance. Irrespective of the incentive system, faculty, as a rule, have significantly more

latitude to determine the direction of effort, whether to teaching, service, or research. A faculty member who invests a high level of effort in teaching, when the reward system is based largely on research success, will probably not receive the expected rewards, despite the intense effort.

Demographic characteristics of faculty, such as tenure, years in a faculty position, age, salary history, discipline, and rank may also be important considerations in evaluating faculty behavior. These factors may influence the level of effort an individual puts into his or her job (Fenker 1977).

Though not included in the actual determination of motivation, environmental factors often explain some of the phenomena observed (Pearce and Perry 1983). Factors such as level of funds budgeted for merit pay, design or modifications made in the appraisal ratings, and administrative or legislative influences may affect implementation, and, therefore, affect employee perceptions of merit pay plans and their desire to exert effort.

Motivation Measurement Used in this Study.

Faculty members were asked on a questionnaire (Appendix II) to indicate their performance-reward expectancies, the value they placed on pay, and their assumptions

about their effort and work habits under various proposed incentive schemes. The measure of current faculty effort level (Question #3) was the number of hours per week the respondent spent "fully engaged" in his or her work. That is, the time one spent on all professional work, including teaching and research activities, campus and professional service, and grant applications. The directional aspect of effort was determined by the allocation of time among teaching, research, and service activities (Question #5).

The influence of financial rewards on the level and direction of effort was determined by whether the respondent would change the amount of time devoted to work and/or the allocation of that time among certain activities if, as a result, there would be a merit pay increment. The faculty in this study were presented with hypothetical situations where specified amounts of merit pay would be awarded for specified activities. For both effort level and direction, faculty were asked, "Given the prospect of the monetary award, would you change your behavior?" (Questions #4 and #6.)

The faculty members' responses to these questions, indicated the potential impact of financial rewards on activity choices and a sense of the power of extrinsic rewards to influence the level of faculty effort. For

some faculty the intrinsic rewards gained from their current activities may be more valued than extrinsic rewards and thus their behavior would not change, despite the prospect of greater financial remuneration. While the responses to the questions constitute intentions on the part of faculty, Lawler (1970) reported that intentions are often good predictors of actual performance.

METHODS FOR ANALYZING DATA

The data collected to answer research question #1 of this study can be grouped into two categories: 1) Data that characterized the merit pay plan in terms of Lawler's theory (independent variables), and; 2) measures of faculty effort and motivation (dependent variables). Since the objective of the study was to relate Lawler's theory to faculty motivation, the analytical tool used to analyze the data was statistical association. Such an approach determines whether a systematic relationship exists between the two variables and, if so, the strength of the relationship. The main goal of this analysis was to establish whether or not the variables were related, not to make estimates or predictions about the effects

of one on the other. Any associations that result do not reveal causality.

The hypothesis, or expected outcome of the relationship test between level of conformity to theory and faculty motivation, was that the more closely the institution's merit pay plan conformed to the conditions of Lawler's theory, the greater the degree of motivation or effort that would be displayed by the faculty. Variables created from the elements of Lawler's theory were tested against the faculty motivation indicators gleaned from the questionnaire responses.

To create the independent variables, the institutions were characterized and scored as described in Table 1 below, in accordance with their degree of conformity to Lawler's theory. Two independent variables were created comprising the theory's four conditions. One independent variable summed the individual's pay-performance relationship ratings with the value assigned to money (the points assigned to merit pay and financial security). The second independent variable summed the size of the merit pay award range at the institution and the points associated with the institution's level of disclosure of merit pay information.

TABLE 1. CREATION OF TWO INDEPENDENT (THEORY) VARIABLES USING THEORY CONDITIONS

<u>Independent Variable #1:</u>	<u>Measure</u>
a. Strength of pay-performance relationship	Sum of scores (Q. 1a) indicating importance of work activities to receiving merit award
b. Value of pay	Points assigned by faculty to merit pay and financial security (Q. 2) indicating importance to job

THEORY VARIABLE #1 = SUM OF a AND b (Individual Expectancy)

Independent Variable #2

c. Size of awards	Percentage point spread between lowest and highest merit awards granted
d. Disclosure policy	1 point = no disclosure 2 points = size of awards <u>or</u> recipient names 3 points = <u>both</u> reward size and recipient names

THEORY VARIABLE #2 = SUM OF c AND d (Pay plan factors)

increments are associated with greater expenditure of effort and greater redirection of effort toward rewarded activities.

Because of the potential influence of individual faculty characteristics on their reaction to

incentives, subgroup comparisons were constructed using the demographic data and tested for associations with faculty motivation. This indicated whether there were certain faculty characteristics that had a particularly strong relationship to motivation, and therefore may partially explain reported motivation levels.

The non-merit pay institution served as a control of sorts to determine whether the faculty responses to incentives differed despite the absence of an existing merit pay plan. Since the non-merit pay institution had no comparable conditions with which to create independent variables to correlate with behavior, the analysis of its faculty's responses were restricted to descriptive.

LIMITS IMPOSED BY DESIGN AND METHODOLOGY

The limited number of subjects examined, the use of questionnaires to assess behavior, and various statistical techniques inherently place some limitations on the use of the data for drawing broad conclusions. This study focused on only one type of institution, the four-year liberal arts college. The variety of missions, sizes, and administrative practices among other classifications of institutions undoubtedly influence the pay environment and faculty

reactions. This makes generalizations from one type of institution to another unreliable. However, for the purposes and scope of this study, as a preliminary test of one theory of pay and motivation, the selection of four similar four-year institutions was most appropriate.

The faculty sample responding to the study represented about 25 percent of the total faculty at each institution. While this exhibits strong representation of the population, the stability of the sample is weaker. The absolute size of the faculty was relatively small in comparison to the number of associations tested in this study. Thus, some statistically significant associations can be expected to result just by chance. By looking at the trends in the significant associations resulting from this data, however, one could reasonably speculate which occurred by chance.

The use of survey questionnaires required a modified test of the theory, which analyzed behavior trends across a group rather than probing each individual's reaction to performing various tasks under specified incentives, thereby creating a within-person estimation of motivation. This depth of analysis to achieve within-rater conclusions could not be

practically accomplished given the sample size and scope of this study. While the approach used in this study is not a true application of within subject testing, and therefore not completely consistent with expectancy theory, it has been an acceptable research method in assessing motivation and rewards (Arvey and Neel 1974, Mitchell and Albright 1972, Pearce and Perry 1983, Schneider and Olson 1970).

Additionally, the use of surveys or questionnaires that attempt to cover complex topics, can most often only do so in a relatively limited manner. A standardized questionnaire typically represents "the least common denominator in assessing peoples' attitudes, orientations, circumstances and experiences" (Babbie 1983). A degree of artificiality results from individual responses since they are self-reported responses to past or hypothetical actions. In addition, perceptions are limited to cognitive factors, such as the hours one is willing to work or the amount of output desired. There are likely other intervening factors that individuals do not consider, such as the effects of the workplace environment or atmosphere, and the inner need for achievement, power, and recognition. Nevertheless, given the difficulties of penetrating beyond cognitive perceptions and the inability of the

researcher to conduct direct observations, the questionnaire, based on similar usage by researchers in the past, appeared to be the most appropriate and most feasible approach. The success of the questionnaire rested in large part on the willingness of institutions and faculty to respond honestly and fully.

The influence of intervening variables, other than those examined in this study, may also affect the relationship between merit pay and motivation. Therefore, the evidence from this study does not necessarily establish that the behaviors and reaction reported result from merit pay plans. This was not the intent of the study. However, recognizing the parameters of the study as a test of the presence of particular behavior characteristics, given the existence of a set of theoretical conditions, the study can contribute to a test of the theory and can delineate implications for practice and further research.

Chapter 3

RESULTS

The data analyses were conducted using the statistical package SPSS-X. The major calculations involved:

- Measures of association between elements of Lawler's theory and the responses to the behavioral questions in order to test the study's central thesis.
- Measures of association between the demographic characteristics of the faculty and responses to the behavioral questions in order to determine any secondary associations that answer the ancillary question of the study.
- Descriptive analysis of the responses to the questions that led to determining the extent of the theory conditions.
- Descriptive analysis of the responses to the behavioral questions regarding levels and direction of effort under various incentives.

For purposes of the analysis of data, the four institutions involved in the study will be referred to as 'MP 1', 'MP 2', 'MP 3', and 'No MP' (MP=merit pay). A total of 70 responses from the faculty at all the merit pay institutions were used in the analysis, 21

from 'MP 1', 29 from 'MP 2', and 21 from 'MP 3'. Nineteen responses were used from 'No MP'. In all cases, the responses represented approximately 25 percent of the institution's faculty. This was an 83 percent return rate of questionnaires sent to approximately 30 percent of faculty at each institution (to targeted departments).

INSTITUTIONAL AND INCENTIVE PLAN CHARACTERISTICS

Table 2 describes the attributes of the pay plans at the three institutions with merit pay plans.

The merit pay plans of all three institutions are well-established. All of the institutions with merit pay plans provided cost of living (COLA) increases too, ranging from 3 to 5.5 percent for 1990-91.

Only the plan at 'MP 2' uses formally defined achievement levels to evaluate faculty for merit pay. At 'MP 1' and 'MP 3' the Provost and/or President determine the criteria for rewarding merit pay as well as the individuals receiving it. At 'MP 2', the faculty determine the criteria, while the Department Chairs and the Provost determine the recipients. None of the institutions place a limit on the number of faculty who may receive merit pay.

TABLE 2. MERIT PAY PLAN CHARACTERISTICS,
BY INSTITUTION

	MERIT PAY 1	MERIT PAY 2	MERIT PAY 3
COLA granted	Yes	Yes	Yes
Amount of COLA	5.5%	3.0%	5.0%
% faculty receiving merit pay	90%	100%	NR
Avg. merit award	2%	4%	NR
Highest award	11%	7%	8%
Lowest award	1.5%	3%	3%
Age of pay plan	12 yrs	>20 yrs	>30 yrs
Public disclosure	None	Award size	None
Who determines: Merit criteria	Provost	Faculty	Pres/Prov
Recipients of merit	Provost	Dept Chair/ Provost	Pres
Formal categories of achievement	No	Yes	No
Limit on number of recipients	No	No	No

NR=not reported; the analysis relied primarily on the size of the range of awards rather than absolute size.

TESTS OF ASSOCIATION

Selection of Measures of Association

The selection of appropriate measures to test for association between variables depends on the nature of the particular variables, whether nominal, ordinal, integer, or ratio (Buchanan 1988).

Most of the variables in the study were ordinal variables, including all the responses to the questions regarding the direction of additional effort under varying incentive levels, and three of the four theory elements--public disclosure, pay-performance relationship, and value of money. For associations involving ordinal variables the Somers' d statistic was selected because it assumes an independent and dependent variable (Norusis 1987). The significance test used for ordinal variables was that which was calculated for the tau statistic, another ordinal measure of association, which is valid since the denominator for all ordinal variables is the same and would produce the same significance outcome (Norusis 1987).

Interval variables in the study included the current effort level and additional effort level under varying sizes of incentives (both measured in hours). Of the demographic variables, while tenure does not have an obviously ordinal orientation, it is considered a dichotomy nominal variable (only two possible answers), which can be treated as a two-level interval (Buchanan 1988). The variables for faculty receiving merit pay (%) and the average merit pay awarded (%) were also treated as interval variables. For interval

variables the selected association measurement was the correlation coefficient (r) and the significance calculated in conjunction. All tests of significance were based on a standard of .05 confidence level.

The nominal variables in this study included faculty member's rank and discipline. In tests of association involving these variables, the lambda statistic was used along with the Chi-square test for significance.

Test of Research Question #1:
Theory Conditions and Faculty Effort

Tests of association for the two independent variables created to represent level of conformity to theory (1. the individual's expectancy, consisting of the pay-performance relationship and the value assigned to money, and 2. the institutional variable comprised of the size of the range of awards and the level of public disclosure) were each run against each of the behavior (effort) variables. These tests addressed the central question of the study: Is there an association between motivation levels among faculty subject to merit pay plans and the existence of the conditions required to motivate as stated in Lawler's theory?

The results of the correlation showed no significant relationships between individual

expectancies about merit pay and effort levels. There were some significant relationships between the way the institution implements the plan (award size and disclosure) and effort in two of the faculty activities. As the size of the range of merit awards and level of disclosure increased the faculty reported a willingness to put more effort into teaching and professional service for all the hypothetical reward levels presented.

Table 3 summarizes the results of the crosstabs and calculated association measures and their significance for those associations that resulted in significant relationships.

Tests of association to address research question #1 were conducted using a second approach. Rather than using two independent variables for the theory conditions, the four conditions were tested separately against reported faculty effort to examine whether any one condition corresponded to motivational patterns. Significant relationships that resulted are presented in Table 3.

**TABLE 3. RESULTS OF TESTS OF ASSOCIATION
BETWEEN THEORY CONDITIONS AND
REPORTED FACULTY EFFORT**

Resulting Significant Relationships Somers' d Measure Significance

Independent variable:
Theory Variable #2
(Award size and disclosure)

and

<u>Dependent variable:</u>		
Additional Effort for:		.0005
Teaching for 5% merit	.316	.0061
Teaching for 10% merit	.255	.0125
Teaching for 15% merit	.237	.0011
Teaching for bonus	.281	.0006
Service to prof. 5% merit	.387	.0003
Service to prof. 10% merit	.430	.0012
Service to prof. 15% merit	.416	.0140
Service to prof. for bonus	.301	

Independent variable:
Theory Condition #1:
Pay-performance relationship

and

<u>Dependent variable:</u>		
Additional Effort for:		.007
Teaching for 5% merit	-.234	.010
Teaching for 10% merit	-.233	.013
Teaching for 15% merit	-.233	.057
Teaching for bonus	-.144	.005
Research for 5% merit	-.247	.003
Research for 10% merit	-.282	.001
Research for 15% merit	-.338	.007
Research for bonus	-.228	.010
Community serv. 10% merit	-.211	.005
Community serv. 15% merit	-.271	.024
Service to prof. 5% merit	-.214	.003
Service to prof. 10% merit	-.286	.000
Service to prof. 15% merit	-.357	.023
Service to prof. for bonus	-.223	

**TABLE 3. cont'd RESULTS OF TESTS OF ASSOCIATION
BETWEEN THEORY CONDITIONS AND
REPORTED FACULTY EFFORT**

<u>Independent variable</u>		
Theory Condition #3:		
Award Size		
and		
<u>Dependent variable</u>		
Additional effort for:		
Teaching for bonus	.233	.006
Service to prof. for 5% merit	.281	.003
Service to prof. for 10% merit	.236	.012
Service to prof. for 15% merit	.241	.012
 <u>Independent variable</u>		
Theory Condition #4:		
Disclosure		
and		
<u>Dependent variable</u>		
Current effort level	-.519	.000

Pay-Performance Relationship. The results of the calculated measures of association between the pay-performance variable and the behavior response variables resulted in negative relationships between the faculty's perceived strength of the pay-performance relationship and virtually all of the expressed intentions for increased effort under the various incentives for all work activities. As the score for the pay-performance variable increased (i.e., the strength of the perceived relationship got stronger),

the faculty showed less willingness to devote more effort to:

- (1) teaching for all three merit award levels (5%, 10%, 15%)
- (2) research for all three merit award levels and the bonus
- (3) campus and community service for the two largest merit awards
- (4) service to profession for all merit award levels and the bonus.

Value of Money. Calculations for associations between the degree of importance one places on money and the behavioral variables resulted in no significant relationships. That is, evidence of Lawler's theory that a higher value an individual places on money creates more motivation to behave in a way to receive a pay award, was not exhibited here.

Range. The test of association revealed that the greater the range between high and low merit awards, the greater the overall effort level of the faculty respondents. Additionally, they expressed willingness to increase their effort in service to one's profession for merit awards and in teaching for a bonus.

Disclosure Policy. The results of the association measures on the disclosure policy showed a significant

relationship only with the behavior variable corresponding to current effort levels. The more open the disclosure policy, the higher the effort level.

Test of Research Question #2:
Demographic Data and Behavior

To address the question of whether other factors appear to relate to motivation levels among faculty under various pay plan conditions, several of the demographic variables about the faculty members and about the institution were selected to test for association with the responses regarding effort.

A brief overview of the characteristics of the faculty reveals that in terms of rank, tenure, and age, the faculty respondents from the four institutions were relatively similar, as shown in Table 4. Overall, assistant, associate, and full professors were approximately evenly represented, although 'MP 3' had a much greater proportion of full professors. Approximately two-thirds of the faculty held tenure, more than three-fourths at 'MP 2'. Most of the faculty respondents were between 30 and 49, with only 3 percent under 30 and 4 percent over 60.

TABLE 4. FACULTY CHARACTERISTICS, BY INSTITUTION

(Percent of Faculty)

	<u>MP1+</u> <u>MP2+MP3</u>	<u>MP 1</u>	<u>MP 2</u>	<u>MP 3</u>	<u>No MP</u>
Rank					
Assistant	31	40	22	21	33
Associate	33	20	39	14	20
Full	36	40	39	64	47

Tenure					
Yes	69	67	78	71	67
No	31	33	22	29	33

Age					
Under 30	3	7	0	0	0
30 - 39	34	27	39	14	27
40 - 49	37	47	33	36	33
50 - 60	21	20	28	36	20
Over 60	4	0	0	14	20

Discipline					
English	33	33	33	36	53
Math	23	0	33	21	13
History	20	7	17	43	33
Economics	9	0	17	0	0
Commun.	10	33	0	0	0
Religion	4	20	0	0	0

Salary					
<\$30,000	13	40	6	7	7
\$30-49,000	51	53	50	50	60
\$50-69,000	31	0	39	7	33
\$70-100,000	3	0	5	7	0

Years as a faculty member (avg)					
	13.7	12.4	15	20	19
Years at present inst. (avg)					
	11.6	9.6	12	17.6	16.5

The disciplines most represented were History, Mathematics, and English as these were the targeted departments. As discussed earlier, 'MP 1' included respondents from the Religion and Communications

departments in order to create a larger sample. 'MP 2' included faculty from the Economics department due to many of the History faculty's unfamiliarity with the merit pay plan.

Across all institutions, over half of the faculty respondents earned salaries between \$30,000 and \$49,000, and nearly one-third were between \$50,000 and \$69,000. Only three percent earned between \$70,000 and \$100,000. Faculty from 'MP 1' had lower average salaries than the other institutions, as 40% of the respondents earned less than \$30,000.

The average number of years of faculty service was fourteen, 11.6 years on average at their present institution. 'MP 1' had the lowest average institutional tenure, 9.6 years, as well as the lowest average overall, 12.4 years.

These demographic statistics were tested first as independent variables against the behavior responses to the highest merit award (15%) to check for any relationship. If a significant relationship was shown at the 15 percent award level, the variable was then tested for association against the other levels of awards.

Significant relationships were found between the following variables and faculty effort:

- Salary. A negative association resulted between salary and additional effort in teaching and service to one's profession for all award levels presented. Those faculty with higher salaries were less likely to devote additional effort toward teaching and service to one's profession.

- Tenure. A significant relationship existed between tenure and additional hours of work for merit pay and between tenure and additional effort for teaching for a merit incentive. Faculty members without tenure were more likely to devote more hours to their jobs at all award levels and more effort to teaching for a 15% merit award and bonus.

- Average Merit Pay. A significant negative relationship was found between the size of the average merit pay increment and the current level of effort and additional effort to service to one's profession for all merit pay award levels. In other words, the higher the average merit pay awarded by the institution, the lower the current level of effort and the less likely were faculty willing to devote additional effort to service to one's profession.

Average merit pay also produced a significant relationship with the pay-performance variable. The higher the average merit pay, the stronger was the perceived pay-performance relationship score.

- Percentage of Faculty Receiving Merit Pay. A significant negative relationship was found between the percentage of the faculty at an institution receiving merit pay and the current level of effort and service to one's profession for all merit pay levels. That is, the higher the percentage of faculty receiving merit pay awards, the lower was the current level of effort for and effort in professional service.

Percentage of faculty receiving merit pay was also tested for association with the pay-performance variable. A significant relationship was established: the higher the percentage of faculty receiving merit pay, the stronger the perceived pay-performance relationship.

THE FOUR THEORY CONDITIONS - DESCRIPTIVE ANALYSIS

Despite the absence of many relationships between the four theory conditions and faculty effort to validate Lawler's theory, responses from the study

questionnaires proved to be worth a brief discussion to reveal overall attitudes about faculty's reaction to incentives and their perceived behavior. It also permits the inclusion of an examination of the respondents at 'No MP' with respect to the institutions with merit pay plans.

Reward-Performance Relationship

The study questionnaire asked faculty respondents the following question regarding the relationship between performing various faculty activities and receiving particular rewards:

In your opinion, at your institution, how direct is the relationship between three kinds of rewards (merit pay, public recognition, promotion) and specific work activities? Circle the number from the scale that indicates the importance of these activities to receiving the specified reward, not as you think it should be, but as you perceive the situation at your institution. For example, if you feel there is a very strong relationship between effective teaching and receiving merit pay (i.e., that effective teaching is 'very important' to receiving merit pay), you would circle 5 for the first response below; if you think it has very little or no importance to your receiving the reward, circle 1. Use the following scale:

(very unimportant) 1-----2-----3-----4-----5 (very important)
|
neither|important
nor unimportant

Three rewards and six job activities were presented to gauge the reward-performance relationship. Thus, there were 18 scores from each respondent:

Reward
Merit Pay Increase
Public Recognition
Promotion in Rank

Job Activity
Effective teaching
Scholarly publication
Receipt of external
funds
Service on campus
committee
Service to profession
Public service

Table 5 shows the distribution of faculty responses to each combination of reward-activity for all the institutions (4 & 5=important, 1 & 2=unimportant). For the three types of rewards presented an overwhelming majority (69-85%) consider effective teaching to be important in earning rewards. About half of the respondents also cited scholarly publications as important. A large proportion of faculty (42-54%) felt that service to one's profession and public service activities were unimportant in receiving any of the designated rewards. Other than effective teaching, less than half of the faculty believed that performing any of the designated activities was important in gaining a reward of public recognition.

**TABLE 5. FACULTY PERCEPTIONS OF THE REWARD-
PERFORMANCE RELATIONSHIP**

Faculty responding that activity was important/ unimportant* to receiving MERIT PAY:	<u>ALL</u>	<u>MP 1</u>	<u>MP 2</u>	<u>MP 3</u>	<u>NMP</u>
	(percent)				
Effective Teaching					
Important	83	80	89	79	
Unimportant	6	7	0	14	
<hr/>					
Publications					
Important	42	13	84	14	
Unimportant	38	53	5	64	
<hr/>					
External Funds					
Important	19	0	26	29	
Unimportant	35	67	16	29	
<hr/>					
Campus Committee					
Important	60	53	53	79	
Unimportant	19	20	16	21	
<hr/>					
Service to Profession					
Important	19	27	11	21	
Unimportant	42	53	37	36	
<hr/>					
Public Service					
Important	19	27	5	29	
Unimportant	54	47	74	36	
<hr/>					
Faculty responding that activity was important/ unimportant to receiving PUBLIC RECOGNITION:					
Effective Teaching					
Important	69	73	63	71	87
Unimportant	15	0	21	21	13
<hr/>					
Publications					
Important	48	27	74	36	53
Unimportant	25	33	10	36	33
<hr/>					
External Funds					
Important	42	20	68	29	40
Unimportant	31	40	16	43	40

TABLE 5. FACULTY PERCEPTIONS OF THE REWARD-PERFORMANCE RELATIONSHIP (cont'd)

	<u>ALL</u>	<u>MP 1</u>	<u>MP 2</u>	<u>MP 3</u>	<u>N&P</u>
	(percent)				
Campus Committee					
Important	40	60	21	43	60
Unimportant	35	13	47	43	27
<hr/>					
Service to Profession					
Important	15	27	0	21	40
Unimportant	42	47	42	36	40
<hr/>					
Public Service					
Important	27	57	10	21	40
Unimportant	46	33	53	50	33
<hr/>					
Faculty responding that activity was important/unimportant* to receiving PROMOTION:					
Effective Teaching					
Important	85	93	84	79	80
Unimportant	4	0	0	14	7
<hr/>					
Publications					
Important	50	33	89	14	53
Unimportant	31	47	5	50	20
<hr/>					
External Funds					
Important	21	20	26	14	27
Unimportant	42	67	16	50	27
<hr/>					
Campus Committee					
Important	54	73	32	64	93
Unimportant	21	13	21	29	0
<hr/>					
Service to Profession					
Important	25	40	10	29	53
Unimportant	46	40	53	43	27
<hr/>					
Public Service					
Important	21	47	0	21	20
Unimportant	54	33	79	43	20

* 'Important' to receiving reward=4 or 5 on question scale (Very important or important.

'Unimportant' to receiving reward=1 or 2 on question scale (Very unimportant or unimportant)

Value of Money

Faculty respondents from the merit pay institutions were asked to assign points, according to their importance, to various types of possible rewards, including merit pay, and various aspects of the job, including financial security. Respondents distributed 100 points among ten rewards in a way that reflected the relative importance or value of each reward to that individual. (Not every reward had to be assigned points):

- Promotion in rank
- One semester leave of absence with pay
- Tenure
- Ten percent merit salary increase
- Public recognition of outstanding teaching
- One course load reduction for a semester
- Appointment to professional or campus honorary position
- \$5,000 university research grant
- Two-week paid leave for professional development
- Peer recognition in discipline

In a similar fashion, faculty were asked to distribute 100 points among a list of work attributes.

- Professional growth opportunities
- Sense of financial security
- Satisfaction of making a research discovery
- Amount of freedom you feel you have to do your job
- Recognition from peers
- Recognition from superiors
- Collegiality of workplace
- Satisfaction from being a good teacher

Table 6 shows the relative value of all the rewards and attributes as indicated by the number of points respondents at each institution distributed, on

average, among the various awards. Taken together, faculty at the merit pay institutions assigned tenure the highest average points (only non-tenured faculty were asked to assign points to tenure) among the rewards. A one semester leave of absence with pay and a 10 percent merit salary increase tied for the second highest value, followed by promotion in rank, public recognition of outstanding teaching, and peer recognition in one's discipline. The main difference among the merit pay institutions was the #2 ranking 'MP 2' faculty gave to recognition from peers.

Ratings for job attributes were similar for faculty across all merit pay institutions. Satisfaction from being a good teacher was most valued, followed by freedom in doing one's job, financial security, collegiality of the workplace, and professional growth opportunities.

Studies by Gustad (1960) and Eckert and Stecklein (1961) found that faculty placed certain intrinsic aspects of their jobs ahead of salary as most rewarding. The results of the survey in this study revealed similar preferences. Caplan et al. (1975) examined the motivation of workers across a number of

different occupations and concluded that professors, more than all others, found intrinsic satisfactions in their work.

TABLE 6. VALUE RATINGS OF REWARDS AND JOB ATTRIBUTES BY FACULTY, by Institution

(Average score out of 100 points distributed)

<u>REWARD</u>	<u>MP 1</u>	<u>MP 2</u>	<u>MP3</u>	<u>ALL</u>
Tenure*	19	31	28	26
One Semester Leave of Absence with Pay	18	15	19	17
10% Merit Salary Increase	18	13	22	17
Promotion	15	14	9	13
Public Recognition of Outstanding Teaching	11	13	11	12
One Course Load Reduction for Semester	11	10	7	10
Peer Recognition in Field	8	15	7	10
\$5,000 University Research Grant	6	8	8	7
Two-Week Paid Leave for Professional Development	4	5	5	5
Appointment to Professional or Campus Honorary Position	5	2	3	3
<u>JOB ATTRIBUTE</u>				
Satisfaction from Being a Good Teacher	27	18	26	23
Amount of Freedom to do Job	14	17	25	18
Financial Security	15	14	13	14
Collegiality of Workplace	12	13	15	13
Professional Growth Opportunities	10	13	9	11
Recognition from Peers	6	11	6	8
Satisfaction of Making a Research Discovery	8	8	3	6
Recognition from Superiors	7	7	4	6

*Includes scores of non-tenured faculty only.

Almost a third of all faculty at the merit pay institutions gave merit pay the most points of the rewards. Just under half gave merit pay either the most or second most points. About 12 percent of the merit pay faculty did not assign any points of value to merit pay. Financial security was given the most or second most points among the list of job attributes by over half of the respondents. Nearly 23 percent gave financial security the most points, while just over 10 percent assigned no points.

Size and Range of Merit Awards Granted

For 'MP 1' and 'MP 2', the average merit pay award for all faculty ranged from a low of two percent to a high of four percent. 'MP 1' had the broadest range of awards, from 1.5 - 11 percent. 'MP 2' had the narrowest range, only 4 percentage points.

Public Disclosure

There is little public disclosure of merit awards at the institutions studied. Only 'MP 2' discloses anything about merit pay, and then no more than the size of awards. None of the three merit pay institutions discloses the names of merit reward recipients.

Small wonder, then, that faculty were not fully informed about the size and distribution of merit pay awards. Table 7 reveals the accuracy of faculty's perceptions of merit pay distribution. Only about half of the faculty knew within 1 percentage point the average merit pay award granted. Only a few were more knowledgeable (within 10 percentage points of the actual) about how many faculty members received merit pay.

**TABLE 7. ACTUAL VERSUS FACULTY PERCEPTIONS
OF MERIT AWARDS GRANTED**

(percent)

	<u>MP1</u>	<u>MP2</u>	<u>MP3</u>
Actual Avg. Merit Pay	2	4	NR
Faculty Perceptions: Those faculty reporting:			
Actual	13	17	
Below actual	7	33	
Above actual	73	39	
Within +/- 1% of actual	40	56	
<hr/>			
Actual Percentage of Faculty Rcv'g Merit Pay	90	100	NR
Faculty Perceptions: Those faculty reporting:			
Actual	0	61	
Below actual	47	28	
Above actual	47	0	
Within +/- 10% of actual	47	61	

NR=Not Reported

REPORTED EFFORT - DESCRIPTIVE ANALYSIS

The responses to the behavior questions (effort levels and direction of effort under various incentives) analyzed in terms of frequencies of responses revealed interesting overall trends in the data.

Current Effort Levels

Current effort levels were measured by the number of hours per week faculty designated in response to the question:

Circle the number on the continuum that corresponds to the average number of hours per week you are fully engaged in your professional work. Include all aspects of your job, including teaching and research activities, campus and professional service, and grant applications.

25----30----35---40---45----50----55----60----65
or less or more

Additionally, respondents were asked to allocate their work hours, as a percentage of total work time, among teaching, research, campus/community service, and service to profession. The average effort level for the merit pay institutions was 57 hours per week, and for 'No MP', the average was 51 hours (Table 8). On average, over half of all the faculty members' effort went into teaching or closely related activities, with about one-fifth of the faculty members' effort at

institutions with merit pay, devoted to research and another fifth to campus and community service activities. 'No MP' faculty spent about twice as much time on campus and community service than on research activities.

TABLE 8. CURRENT EFFORT LEVEL AND DIRECTION OF EFFORT

	ALL <u>MP</u>	<u>MP1</u>	<u>MP2</u>	<u>MP3</u>	NO <u>MP</u>
Current Effort Level (hours/week)	57	60	52	60	51
Current Allocation of Effort (%):					
Teaching	55	58	49	60	64
Research	18	12	22	14	11
Campus/Comm. Service	19	15	19	21	20
Service to Profession	10	15	8	5	8

 MP=Merit pay institution
 NO MP=Institution w/o merit pay

Additional Effort for Specified Incentives

Means were calculated for the additional hours per week the faculty respondents were willing to work overall for different rewards. Responses to the following question were in terms of additional hours per week:

Assume that your institution will reward salary increases for meritorious performance. Consider each size reward listed below. How many more hours (if any) would you be willing to work to earn each? For example, in the first case, how many more hours would you be willing to work

(from 0 to more than 10 additional hours per week) for a 5% merit salary increase?

5% Merit Increase: 0----2----4----6----8---->10
Additional hours per week

10% Merit Increase: 0----2----4----6----8---->10
Additional hours per week

15% Merit Increase: 0----2----4----6----8---->10
Additional hours per week

One-time bonus equal to 5% of your current salary:
0----2----4----6----8---->10
Additional hours per week

As displayed in Table 9, the faculty at merit pay institutions were willing to work a marginally greater number of hours per week as the merit award grows from 5% to 10% to 15%, but they were hardly willing to work more hours for the bonus.

On average they would be willing to work .7 more additional hours (42 minutes) per week for a 5% merit award, twice that amount (84 minutes) for a 10% merit award, and over three times as much (just over 2-1/4 hours) for a 15% merit award.

'No MP' faculty were, on average, willing to work the most for a 5% merit award and for a bonus. Their responses to 10% and 15% merit pay awards closely resembled 'MP 1' and 'MP 2'.

TABLE 9. FACULTY RESPONSES TO CHANGES IN BEHAVIOR FOR INCENTIVES

	ALL MP	MP1	MP2	MP3	NO MP
	(means) *				
<u>Additional effort for:</u>					
5% merit pay	.7	.9	.9	.4	1.1
10% merit pay	1.4	1.6	2.0	.9	1.9
15% merit pay	2.3	2.7	2.7	1.3	2.5
Bonus	.6	1.3	.3	.4	2.5

	(medians) **				
<u>Additional effort in teaching for:</u>					
5% merit pay	1	2	1	1	1
10% merit pay	1	2	1	1	2
15% merit pay	1	2	1	1	2
Bonus	1	2	1	1	2

<u>Additional effort in research for:</u>					
5% merit pay	1	2	1	1	2
10% merit pay	1	3	1.5	1.5	3
15% merit pay	2	4	1.5	1.5	3
Bonus	1	2	1	1	3

<u>Additional effort in campus/community service for:</u>					
5% merit pay	1	1	1	1	1
10% merit pay	1	2	1	1	2
15% merit pay	1	2	1	1	3
Bonus	1	1	1	1	2

<u>Additional effort in service to profession for:</u>					
5% merit pay	1	2	1	1	2
10% merit pay	1	3	1	1	2
15% merit pay	1.5	3	1	1	2
Bonus	1	2	1	1	2
=====					
* Response equals additional hours per week					
** Scale of 1 to 5; 1=no more effort; 3=somewhat more effort; 5=significantly more effort					

Direction of Effort for Incentives

To determine the effect of monetary incentives on the direction of faculty effort into various activities, faculty were asked the following question for each of four activities: teaching, research, campus/community service, and service to profession.

Assume that the pool of merit pay at your institution were earmarked for distinguished performance in [designated activity]. How would it affect your level of effort? Would your effort in [designated activity] increase or remain unchanged under each of the reward levels below? Respond for each reward level by circling a number on the continuums based on the following scale:

	1-----2-----3-----4-----5
	no more somewhat significantly
	effort more effort more effort
5% Merit	1-----2-----3-----4-----5
10% Merit	1-----2-----3-----4-----5
15% Merit	1-----2-----3-----4-----5
One-time bonus (5% of salary)	1-----2-----3-----4-----5

Appropriately for ordinal variables, medians were calculated for the responses to these hypothetical situations. Table 9 shows that for all merit institutions, there was little deviation from a median of 1, signifying a willingness to devote no additional effort to any of the specified activities at all award levels. The merit pay faculty were willing to commit slightly greater effort to research at the 15% merit

level, a median of 2, and into service to one's profession for a 15% merit award, a median of 1.5.

'No MP' faculty showed a similar pattern to that of 'MP 1', although the former were willing to put forth somewhat more effort for the bonus.

Chapter 4

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

Research Questions

This study examined faculty behavior under merit pay plans at four liberal arts colleges to determine whether there was a relationship between the level of faculty motivation and the degree to which institutional pay plans and individual expectancies conformed to Lawler's theory of an effective monetary incentive structure (Lawler 1971, 1981, 1990). The analysis of faculty behavior was based upon the four conditions Lawler prescribed as necessary if merit pay is to motivate performance. These conditions were:

1. Individuals must believe that there is a valid link between good performance and merit pay.
2. Individuals must place a high level of importance on monetary compensation.
3. The size of the awards must be perceived by workers as relatively large.
4. If the pay system does in fact reward good performance and is perceived as such by employees, the system should disclose

information about who receives awards and how much they receive.

Using this theoretical basis, this study proposed the following questions:

1. Is there an association between motivation levels among faculty subject to merit pay plans and the presence or absence of the theoretical conditions required to motivate?
2. Are there other factors that are related to motivation levels among faculty under various pay plans?

Methodology

To answer these questions the study examined three merit pay institutions, characterizing their pay plans in terms of their conformance to Lawler's theory. Additionally, one institution without merit pay was studied. Faculty motivation at these institutions was derived from faculty responses to survey questionnaires using self-reported level of effort as a proxy for the motivational behavior of the faculty. Current behavior patterns and expected behavior under proposed incentive pay scenarios constituted the data.

The study data were provided from completed questionnaires from approximately 25 percent of the

faculty at each institution (targeted to selected academic departments), an 83% response rate. Statistical correlation techniques were used to test for associations between the reported behavior of the faculty and the four conditions of Lawler's theory.

Results

Statistically significant results that addressed research question #1: Is there an association between reported faculty effort and the conditions of Lawler's theory?:

- A positive relationship exists between the theory variable combining reward size and disclosure, and faculty effort in teaching and service to profession for all proposed reward levels. As the range of awards and public disclosure increased, faculty reported a willingness to increase effort in teaching and service to profession.

Testing the four theory conditions separately resulted in the following significant associations:

- As the size of the range of awards increased, faculty reported higher current effort level and increased willingness to devote additional effort toward teaching for a 10 percent bonus, and

toward service to profession for each level of merit award.

- The stronger the faculty's perception of the strength of the pay-performance link the lower their reported willingness to devote additional effort toward teaching, research, and service to profession, and toward campus and community service for the two largest merit awards.

- A positive relationship between the openness of the disclosure policy and faculty's current effort level, but no relationship between disclosure and faculty's willingness to exert additional effort for financial rewards.

- No significant relationships between the individual's value of money and reported effort.

In addition to analyzing the variables for significant associations that related directly to the theory, another aspect of the study explored whether other factors had some relation to the faculty's reported behavior (research question #2). Characteristics such as tenure, salary, age, and discipline, were examined for possible associations with behavior. As salary levels increased, reported willingness to give additional effort to teaching and service to profession at all award levels went down.

Faculty members without tenure reported that they were inclined to work harder for merit and bonus rewards.

As the percentage of faculty receiving merit pay and the average size of the merit awards at an institution increased, the current level of effort and the willingness to devote additional effort to service to profession decreased. This finding is qualified, however, by the inaccurate perceptions faculty had of the actual merit payments awarded to others. Faculty perceptions of the merit pay plan, as opposed to the actual merit awards given would have affect their reported effort.

Each of the four conditions in Lawler's theory were analyzed descriptively. The pay-performance relationship variable (theory condition #1) was determined from faculty perceptions of the importance of numerous professional activities in receiving various rewards. Effective teaching was considered by a majority of faculty as important in earning rewards. For non-financial awards, 'No MP' faculty expressed the strongest belief that performance was important to receiving the designated rewards. Aggregating the perceptions of the faculty from all four institutions, respondents classified most activities as 'neither important nor unimportant' to receiving awards,

implying that faculty believe the determination of reward recipients is unpredictable with respect to one's performance.

The faculty valued monetary rewards and financial security relatively high in importance (theory condition #2). Just under half ranked merit pay as either the first or second most valued reward. Financial security was ranked first or second by over half of the faculty. However, several intrinsic rewards and job attributes were also highly rated, including recognition, satisfaction from teaching, job freedom, and collegiality of the workplace.

The range of merit awards granted (theory condition #3) ranged from 4 percentage points at 'MP 2' to 10 percentage points at 'MP 1'.

The fourth condition of Lawler's theory, public disclosure of awards and recipients, was relatively limited at all three merit pay institutions. 'MP 1' and 'MP 3' do not disclose the names of recipients or the sizes of rewards. 'MP 2' divulges the size of awards, but not who received them.

The faculty responses to the behavior queries were also examined individually. To assess faculty motivation, the faculty were presented with hypothetical situations in which they would receive a

specified merit pay increment or a one time bonus equal to 10 percent of their salary. Faculty indicated how the prospect of such awards would affect their effort level. At the three merit pay institutions, faculty expressed a willingness to work an average of only .6 to 2.3 hours more per week as the incentive reward grows, and the least number of additional hours for the bonus. The 'No MP' faculty were, on average, willing to work the most for a 5% merit award (1.1 additional hours) and a bonus (2.5 additional hours), but they responded similarly to 'MP 1' and 'MP 2' on 10% and 15% merit pay awards.

The effect of various incentive rewards on the direction in which faculty would spend their effort showed that as a whole, the faculty at the merit pay institutions signified a willingness to devote only a small amount of additional effort to any of the specified activities, whatever the award levels. They were willing to put a relatively higher level of effort into research and in service to one's profession at the 15% merit level. 'MP 1' faculty indicated that they would be willing to put forth somewhat more effort than the other merit pay institutions in virtually all cases. 'MP 1' notably had the widest range of merit awards, the overall strongest reward-performance

perception, and the highest value assigned to money. 'No MP' faculty were relatively more responsive to the bonus than were faculty at the merit pay institutions.

CONCLUSIONS

When considering the results of the study, it is important to account for the source and amount of data. This study focused on four institutions of a specific type. The results are based only on what faculty say they would do or would have done under various incentives, and not on what has actually occurred. Additionally, since many faculty members believe that they already work the maximum number of hours possible, they are unwilling to consider additional hours for any reason.

Additionally, the environment of every institution affects faculty behavior in general, and their reaction to incentives more specifically. However, these factors are not often observable, tangible, or amenable to statistical analysis. Any discernible differences between responses among the faculty based on institutional affiliation will be included in the discussions that follow of the theory elements and the responses to the behavioral questions.

Test of the Theory

The results of this study showed a weak application of Lawler's pay and motivation theory to liberal arts faculty. The faculty in this study exhibited no significant relationship between their expectancies regarding merit pay (the strength of the pay-performance relationship and value of pay, theory conditions #1 and #2) and their motivation in response to merit pay incentives. The combined institutional conditions of Lawler's theory, the size of awards and public disclosure (conditions #3 and #4), were positively associated with faculty effort in teaching and service to profession. That is, as the range of rewards and disclosure level increased, faculty were willing to put greater effort into teaching and professional service for 5%, 10%, and 15% merit awards and a one time 10% bonus. Because of the small differences in the level of public disclosure among the institutions with merit pay, most of the effect of this relationship can be assumed to derive from the range of merit awards granted. The positive nature of the relationship between the size of merit pay awards and effort that resulted from these data was expected, assuming the validity of the theory. Higher stakes may

provide the incentive that yields greater effort from faculty.

Association of the theory's four conditions with faculty effort were also tested by correlating the four conditions separately against faculty's reported effort when presented with monetary incentives. Two of the theory conditions, the level of disclosure about merit recipients and the degree to which faculty value monetary rewards, bore no significant relationship to the faculty's willingness to increase their effort for merit pay or bonuses. The only theory conditions showing statistically significant associations with the behavior variables were the size of the range of merit pay awards and the strength of the perceived pay-performance relationship, although the latter had an unexpectedly negative association.

The variable for the range of merit awards demonstrated the expected results as regards current effort level and effort towards service to one's profession. That is, the wider the range of merit awards granted, signifying a supposedly greater recognition of performance and a reward of some financial significance, the more effort these faculty members put into their jobs and the more effort they

were willing to put into service to their profession, but not for the other faculty activities.

The perceived pay-performance relationship showed a statistically significant negative association with additional effort for pay incentives. Lawler's theory, however, suggests that the stronger one's belief in the connection between good performance and rewards the more one is motivated to perform. The faculty sample in this study displayed the opposite behavior. That is, as the belief in the pay-performance relationship strengthened, faculty showed less willingness to increase their effort in response to offers of monetary rewards for good performance. This was an unexpected outcome, and, absent a significant positive relationship between the pay-performance link and behavior, no relationship would have been more expected than one that was negatively significant.

Another explanation may lie in an examination of the perceived pay-performance relationship. The strongest pay-performance link was between effective teaching and merit pay. Eliminating this relationship from the pay-performance part of the questionnaire significantly weakens the overall perception of the pay-performance relationship. Faculty at these institutions are enthusiastic about teaching regardless

of the monetary rewards, as evidenced by the high value respondents placed on the satisfaction that derives from being a good teacher (Table 6). Therefore, the strength of the pay-performance variable, attributed in large part to the effective teaching-pay relationship would not necessarily translate into additional effort given the prospect of merit pay.

Deci (1972) theorized that intrinsic and extrinsic rewards are interrelated and, more importantly here, that focusing on extrinsic rewards actually decreases intrinsic interest in the task itself. This may explain in part why faculty are not inclined to commit more effort, as teachers, for more money. The goal of monetary rewards may be inimical to the intrinsic rewards guaranteed from teaching.

The general skepticism about the relationship between pay and other faculty activities could, in fact, help explain the negative relationship between perceived pay-performance and effort. Festinger (1957) theorized that motivation levels are the result of perceived inequities in the incentive plan. Workers may adjust to these inequities by reducing work effort and making fewer contributions. The data from this study suggest that there may indeed be feelings of inequities among faculty. Aside from the teaching-

reward relationship, faculty do not see a close relationship between pay and performance. In addition, faculty overestimated rewards (see Table 7). Under these circumstances, where workers view the reward system as unfair, Festinger posits that employees reduce their contributions to the organization.

Interestingly, the service to profession variable was the one activity with any significant positive (increased effort) relationships resulting from the separate testing of the four theory conditions. This result probably stems from the nature and role of professional service to other faculty priorities. Of the four activities addressed in this study--teaching, research, campus and community service, and service to profession--service to profession may be the only one where faculty could envision making additional effort, as the faculty allocated the least time to this area (see Table 8). Thus, any prospect of rewards for performance that could increase effort might occur in an area such as service to profession where there is some margin for increased effort.

These tests of association between the four conditions of Lawler's theory and the reported behavior from faculty question and weaken the validity of Lawler's theory, at least as applied in these

particular academic settings. Whether this is because there are other factors at play in motivating faculty, or because these faculty simply did not respond to merit pay incentives remains speculative. Other theories of pay and motivation were reviewed in an effort to further explain faculty behavior.

Other Theoretical Explanations

Several motivation theorists raise the issue of intrinsic rewards as important motivators. The implications of MacGregor's (1960) research on motivation, based on Maslow's hierarchy of needs, suggest that, while faculty value financial rewards, they also place great importance on the higher level, intrinsic needs for achievement, growth, and recognition. MacGregor contended that basic and higher level needs are equally important as motivators. Thus, merit pay alone may not exhibit a strong enough motivational impact to significantly affect faculty behavior.

Herzberg (1959) viewed external rewards, such as merit pay, as factors that prevent dissatisfaction among workers, whereas intrinsic rewards, the key to motivation, satisfied workers. McKeachie (1979) agreed that academicians, especially, are more apt to respond

to intrinsic rewards. Inasmuch as the faculty in the present study did not respond strongly to the prospect of merit pay, one could conjecture that intrinsic rewards are the more powerful motivators. The values expressed by faculty attest to the importance placed on intrinsic rewards.

Other research has suggested that the process of giving rewards, the development of evaluative criteria and the assessment of individual faculty performance, underlies motivation. McGeoch and Irion (1952) focused on the perceived reward-performance link and concluded that it was the workers' perceptions of how their pay was determined that dictated the success of incentives.

The concept of procedural justice, which emphasizes how rewards are determined rather than the actual distribution, has often been used to explain reaction to rewards. Research has shown that the perceived fairness of a reward payment depends not only on the size of the reward, but also the fairness of the procedure used to determine it (Greenberg 1987). For college faculty these procedures include the extent of their involvement in the pay decisions and how faculty job performance is evaluated. The fairness of procedures is especially relevant to those who receive low payments. Given an unfair distribution,

individuals who receive relatively small payments are more apt to view these payments as unfair than are those who receive large payments. Greenberg's research also suggested that procedures may matter most to people when they result in negative outcomes. His research also indicated, however, that as long as the procedures for distributing the awards were viewed as fair, even those individuals receiving low payments felt their reward was fair. It would take further research to determine which procedural factors, specifically, were the cause of the perceived unfairness.

Seldin (1984) focused on approaches to evaluations of faculty performance and found that the faculty's perceived fairness of the evaluation process was critical to its success. Based on research of faculty, Seldin suggested that in order to ensure the perception of fairness: 1) evaluation standards and criteria should be clearly communicated to faculty, and 2) the faculty's confidence in the evaluation system can be strengthened through faculty participation in the development of evaluation standards and criteria. The procedures used in developing a faculty evaluation program were considered as important or more important to faculty than the actual criteria used.

Given that faculty in two of the three merit pay institutions in this study worked under a plan without formally defined categories of achievement, where administrators selected both the criteria and the recipients of merit, faculty may feel alienated from the process. This factor does not necessarily explain motivation of faculty, since the faculty at the institution where merit categories were defined and where faculty participated in determining the criteria did not show a stronger response to merit pay than faculty at the other merit pay institutions.

Discussion of Individual Theory Conditions

Despite the inability of the data to support Lawler's theory in an academic setting, the analysis of the four theory conditions separately produced some interesting results regarding faculty attitudes toward incentives.

Pay-Performance Relationship. For those activities that faculty perceived to be valuable in earning rewards, teaching was viewed as very important by virtually all. This result is highly predictable for liberal arts colleges, but it is likely that a different result would have occurred at research universities.

Fenker (1977) also found differences among faculty perceptions of the reward-performance link, although respondents at the large university in his sample perceived research as highly rewarded and teaching less so. The findings of both studies are consistent with the missions of the respective institutions studied.

An imbalance in the weight assigned to activities to evaluate performance can create problems in faculty perceptions of the credibility of the system (Beer et al. 1984). The faculty in this study, while confident that teaching was important to rewards, were far less convinced that other activities influenced the allocation of rewards. For most of the enumerated activities, the respondents rated the relationship between performance and rewards as 'neither important nor unimportant' or 'unimportant'. This may indicate that faculty believed that rewards were based on only select facets of their overall performance.

Value of Pay. The respondents in this study generally valued pay, although, as a profession, faculty are often less interested in money and more focused on intrinsic rewards. Monetary rewards and financial security had definite appeal, as indicated by the high value assigned to merit pay and the financial aspects of their jobs (Table 6).

However, the faculty also valued highly intrinsic rewards. Lawler's theory does not incorporate the value of intrinsic rewards or consider their relative importance to external rewards. While an individual may value money highly, some intrinsic rewards may be more highly valued, and thus have greater motivational impact.

Size of Merit Awards. The size of merit awards (in this study, the range between lowest and highest awards) proved to have the expected positive association with additional effort. Given higher education's current fiscal constraints, one might conjecture that 'MP 1', which offered very high merit awards, gave those awards to relatively few people, while 'MP 2' distributed smaller awards to a greater number of individuals. As a result, probably more faculty at 'MP 1' felt that they did not get what they deserved which, in turn, produced a higher level of dissatisfaction among faculty and a perception that performance and rewards were not tightly linked. In all but one job activity, the faculty at 'MP 1' rated the link between pay and performance as unimportant more often than did 'MP 2'. Thus, while one element of Lawler's theory, large reward size, applied to the behavior of this faculty, it could create a negative

effect on another condition of the theory, the perceived pay-performance relationship.

Disclosure. This study was inconclusive regarding the validity of public disclosure of merit pay as a prerequisite for a successful incentive pay plan. The faculty at the institution that had the most open disclosure plan were somewhat better informed about the size and number of awards than were faculty at the college that revealed no information. Still, only a little more than half of the faculty at the former institution could accurately state within 1 percentage point the actual size of the average merit award granted; less than two-thirds knew within 10 percentage points the proportion of the faculty that actually received merit pay. Evangelauf (1984) found that university faculty least informed about the pay plan had the most negative reaction to merit pay.

Weakness of Behavior Responses

The faculty's responses to the behavior questions revealed some expected trends, such as a willingness to work more hours as the size of the merit award at stake increased. Among the merit pay institutions the bonus was the least attractive of the financial awards presented. Interestingly, the 'No MP' faculty were

willing to put in the greatest additional effort for the proposed financial incentives. The non-merit institution faculty were more responsive to bonuses than the merit pay institutions, responding about equally to the bonus as to the merit awards (Table 9). This might suggest that faculty under merit pay plans want a reward that builds their base salary and fear that bonuses will drain the pool of merit funds and not have the same long-term payoff. Faculty on campuses without merit pay incentives, on the other hand, perhaps do not discriminate as much among the types of financial incentives and may be less cognizant of the long-term differences between bonuses and additions to base salary.

Perhaps familiarity with a merit pay system in practice breeds a more skeptical attitude because it has not proven to be as equitable or as fruitful in operation as the faculty expect in the abstract. Expectations are higher than reality. In general, all people believe they are meritorious. The faculty at 'No MP' may want to assume that the incentive pay system will be just by rewarding them with a fair amount of merit pay. Significant research evidence, however, points to a wide gap between the promise and the reality of a pay-for-performance system (Lawler

1971, McGeoch and Irion 1952, Hackman 1970, Fenker 1977, Beer et al. 1984). The difference between faculty at the merit pay colleges and 'No MP', as regards additional hours, highlights the low expectations among faculty experienced with merit pay. Everyone may agree that merit pay is a good idea, but those that actually have experience with it have become skeptical. The results here between the 'No MP' faculty and the merit pay faculty indicate that the expectations for merit pay plans can be easily set too high, and should not be the primary instrument for motivating faculty.

The relative magnitude of the additional effort faculty were willing to undertake for financial incentives was small; many faculty maintained that the presence of financial incentives would not change their behavior at all. Over half of the respondents would devote no additional hours to their work week if merit pay incentives were provided. For the various levels of incentive rewards proposed, the faculty were willing to work, on average, only 24 more minutes per week for the lowest merit award (5%) and at most, 2-1/4 hours for the highest award (15%). Just over two additional hours out of an average 57-hour week represents a relatively weak response at best.

One explanation for the weak responses may be that liberal arts faculty simply are not very motivated by merit pay incentives. The tepid response to incentives could also be due to perceptions that faculty already maximize the efforts they put into their jobs and therefore cannot increase effort, no matter what incentives are available. One might also wonder whether faculty overrated the effort they currently devote to their jobs (57 hours/week average). Yet, their perception of their workload as very heavy may be as important as the reality when it comes to responding with more effort for merit pay.

The data that indicated the direction of faculty effort toward specific activities were consistent in magnitude to overall effort--a small amount of additional effort, on average, for the targeted activities. For all four activities that were proposed as targets for merit pay, around half of the faculty would exert no additional effort. Interestingly, research was the activity that yielded the greatest response for additional effort. Since research is not the priority of liberal arts colleges or their faculties, perhaps financial incentives are needed to spur additional efforts. Little or no additional effort for teaching, the traditional focus of liberal

arts faculty, was consistently the overall response, as most faculty probably believe that they are directing maximum attention to teaching. Additionally, liberal arts faculty are more inclined to put significant effort into teaching because this activity yields intrinsic satisfactions with or without the prospect of merit pay.

Faculty not under a merit pay plan assigned greater importance to public service and service to one's profession as they relate to receiving rewards, but this could be due in part to the particular campus climate. The faculty at the non-merit pay institution did not rate any of the professional activities listed as unimportant in receiving non-financial rewards, indicating a greater belief in the reward-performance link.

'MP 1' faculty expressed the greatest amount of additional effort for rewards in all areas. 'MP 1' also had the widest range of merit awards granted, the overall highest reward-performance scores, and the highest value assigned to money, all conditions which support the premises of the theory.

Relationship of Faculty Characteristics and Institutional Factors to Faculty Effort

The analysis of faculty characteristics (demographic variables), such as age, rank, field, salary, etc., as related to faculty response to merit pay, exhibited some associations. While none were significant enough to alter the conclusions about the application of the theory to faculty motivation, some of the results suggest the potential strength of merit pay as an incentive for different faculty.

The negative association exhibited between salary level and additional effort towards teaching and service to profession probably occurred because individuals who are already relatively highly paid are less interested in additional money. Because salary relates to rank and tenure, these factors may also affect incentive response. Indeed, the test of association revealed that those faculty members without tenure were inclined to work harder for specified rewards, perhaps in order to strengthen their case for future tenure, a highly valued reward among untenured faculty (Table 6). As an incentive for higher salaried and tenured faculty, merit pay may be less powerful because these individuals are more satisfied financially and feel no pressure to perform in order to gain tenure. That untenured faculty indicated a

willingness to exert greater levels of additional effort for merit rewards specifically in teaching may be attributable to less cynicism about the efficacy of pay plan administration because ego allows them to acknowledge that they could still improve.

The negative association that resulted between the percentage of faculty receiving merit pay at the institution and faculty effort might be attributed to the faculty's expectation that if most people receive rewards, there is not a great distinction between those who perform very well and those who do not. For institutions with higher average merit pay, however, one might have expected a positive association with effort because individuals would expend greater effort knowing the rewards are greater. The resulting association was, however, negative. This may mean that merit pay goes to research and teaching and dampens enthusiasm for service as a result. There are problems in assessing the true nature of any association using average merit pay and percentage of faculty receiving merit due to faculty perceptions about the true size of the merit awards granted to others. Significant portions of the faculty inaccurately indicated the average merit award at their institution, thereby

lessening the validity of the relationship between the actual average merit pay and effort levels.

The demographics of the faculty and the institutional factors therefore proved to have little correlation with the faculty's reported behavior patterns. Fenker (1977) found that faculty demographics did not significantly affect faculty perceptions of the current incentive structure. Likewise, these factors did not significantly contribute to the explanation of the application of Lawler's theory or faculty motivation in this study.

IMPLICATIONS FOR POLICY AND RESEARCH

Administration of Faculty Merit Pay Plans

A number of implications for the implementation and administration of faculty merit pay plans emerge from this study of pay and motivation theory. While the results are based on a small sample and apply to a specific type of institution, the patterns that appeared in the faculty responses, as well as additional comments provided by faculty, indicated some problems and misconceptions about merit pay plans that must be addressed to improve faculty incentive structures.

Larger Merit Rewards Have a Greater Motivational Impact. Faculty placed a relatively high value on monetary rewards and financial security. The data also showed a greater willingness by faculty at the institution granting the largest merit awards to exert more effort. Merit awards that are so small as to be financially insignificant will not have as much of a motivational impact. If only small rewards are granted to all recipients they could be potentially received more negatively than no merit pay awards because the small amount will be viewed as trivial, insignificant, and less than deserved. Resentment among workers may result.

If faculty members are to be motivated by money, the increase to salaries must make a noticeable financial difference so that the reward is deemed worth pursuing. Small merit awards should be granted to individuals whose performance justifies such an award, but sizeable awards should also be attainable by faculty whose performance warrants it. Given limited funds and the positive association between large awards and effort, larger awards to fewer individuals would have more of a motivational impact than smaller awards to many.

Intrinsic Rewards Show Potential as Faculty Motivators. Although faculty rated merit pay and financial security highly, they also expressed strong interest in intrinsic rewards. Their relatively weak response to merit pay, as illustrated by their unwillingness to exert much extra effort given the prospect of merit pay rewards suggest that merit pay alone will not provide significant motivational impact. Since merit pay incentives did not explain much of faculty motivation in this study, other incentives, such as intrinsic rewards could be stronger forces that meet the motivational needs of a broader range of individuals.

From the responses, many faculty appear to be reluctant to admit that they could be motivated to work harder than they already do if money is used as the incentive. Indeed, approximately half of the faculty indicated that they would not change their behavior at all for monetary incentives. Whether valid or not, faculty would like to believe that they are not highly motivated by extrinsic rewards. It has been argued that intrinsic rewards take precedence in academia (McKeachie 1979, Miller 1988). While certainly true for some individuals, this study concluded that money is important to faculty as revealed by the high ratings

they placed on merit pay. These data also indicated that intrinsic rewards, such as collegiality, satisfaction from teaching, and job freedom, ranked high in importance as well.

While Lawler's theory of pay and motivation was not found to apply to this sample of liberal arts faculty, some of the other theories discussed indicate that the role of intrinsic rewards may have a more significant role in explaining faculty motivation. Thus, a comprehensive faculty incentive plan would include both extrinsic and intrinsic rewards, without heavy reliance on merit pay to impact faculty effort. This would limit the power of monetary rewards to undermine intrinsic motivation and potentially reduce motivation. Administration sends a message about what is valued at the institution by holding up both extrinsic and intrinsic rewards as the outcome of exemplary performance, rather than exclusively emphasizing monetary rewards. A mix of incentive types also meets a variety of reinforcement needs that result from differences among individual valuations of rewards.

The relatively stronger response to proposed merit pay incentives from the faculty not currently subject to a merit pay plan further indicates that expectations

of the potential motivational impact of merit pay may be higher than the reality. Thus, by focusing primarily on merit pay to motivate faculty, an institution is unlikely to achieve fully the objectives of its incentive plan.

Merit Pay Can Have an Impact on the Direction of Faculty Effort. These data showed that faculty responded to merit pay more strongly for some activities than others. There was virtually no impact on the additional amount of teaching. Faculty were more willing to devote additional effort to service to one's profession, and research to a somewhat lesser extent, for merit pay. For liberal arts faculty, teaching may be valued more for its intrinsic value. Thus, faculty are less responsive to extrinsic rewards. For activities that do not have as high a priority for the faculty and the college, merit pay may have a greater motivational impact. Merit pay awards directed at specific activities, as opposed to overall performance, might be a more meaningful application of the incentives and may allow the institution to use merit pay to achieve more specific objectives. Because the faculty in this study demonstrated a willingness to work only a relatively small number of additional hours for merit pay, its usefulness as an incentive may lie

more in the direction of faculty effort rather than the amount of overall effort.

Disclosure Policy Regarding Faculty Merit Awards Did Not Affect Faculty Response to Merit Pay. This study was inconclusive regarding the relationship between motivation and knowledge about the size and recipients of merit pay. While it is clearly speculative that the weak perception faculty have about the relationship between performance and rewards reflects some dissatisfaction with the incentive system, a policy of more openness regarding merit pay information could improve that perception, if information demonstrates to faculty that the pay-performance link is strong.

Differences in Faculty Characteristics Affect Few Responses to Incentives. The faculty in this study with higher salaries and those with tenure indicated a weaker response to proposed merit incentives, further supporting the importance of not relying heavily on merit pay to motivate all faculty. One might speculate that if this is true for monetary incentives it may also be true for other types of rewards, as illustrated by Fenker (1977).

Periodic Assessments of Merit Pay Plans May Reveal the Need for Reevaluation of the System. It is

difficult for an administration to be fully aware of faculty discontent regarding pay practices. The results of this study would hardly assure administrators that merit pay offers a strong incentive. The merit pay plans have been in place for twelve years and more, yet the faculty indicated a significant degree of dissatisfaction with their institution's current plan and a degree of nonresponsiveness to the concept of merit pay incentives.

Even though general discontent may be sensed among the faculty, it is important to understand the specific problems and sensitivities and then attempt to determine the source of the problems. Periodic evaluations of merit pay plans that involve faculty feedback are important to reveal problems and to maintain an effective incentive system. Questionnaires, such as the one used in this study, can uncover disillusionment or misconceptions about the merit pay plan and its effects. A merit pay plan ought not continue year after year without the administration questioning whether it is accomplishing the intended purpose.

Recommendations for Further Research

This study concentrated on one theory of motivation and pay as it applied to a specific type and number of institutions. A number of unanswered questions remain that can be addressed through further research. Faculty incentives, particularly merit pay, is a timely issue that warrants significant research.

Since this study focused specifically on independent liberal arts institutions, an obvious extension of the research would be to examine the use of merit pay at other classifications of higher education institutions. Studies of research universities are likely to yield different results than a study of liberal arts faculty.

Lawler's theory itself could be revised or extended to include an examination of other conditions hypothesized to be necessary for merit pay to motivate faculty. The strength of intrinsic rewards in particular could be examined in conjunction with the external rewards aspect of Lawler's theory (Deci 1972), rather than viewing intrinsic and extrinsic rewards separately. The mix and weight of activities evaluated for rewards might also be considered. Also, the process of granting rewards, more than just the disclosure aspect of Lawler's theory has potential for

in-depth examination. How does this process affect faculty perceptions and motivation?

A closer examination of one of the conditions of Lawler's theory, the perceived pay-performance relationship, is warranted because of its importance to pay and motivation research and because of the ambiguous role it played in the results of this study. An understanding of why faculty are disillusioned with the merit pay process would be useful in determining what it is about the administration of these plans that clouds the pay-performance linkage. Possible sources of employee disenchantment could be examined, such as the politics surrounding allocation of awards, the inaccurate perception of award sizes, excessively low caps on merit pay, or the plan's clash with the de facto value system of the institution.

The different goals of merit pay as an incentive could be a focus for continued research. Do the objectives of the plan's administrators match the perceptions of the faculty? It would be useful to have both administrators and faculty rate the perceived performance-reward link. A study of merit pay plan objectives might also include the examination of the impact of incentives designed to direct faculty toward specific activities.

The factors involved in the development of merit pay reward evaluation criteria could be studied from several perspectives: Who determines the criteria? What are the objectives? How are they communicated to employees? Are these factors related to faculty perceptions and satisfaction with the pay plan, and ultimately, to their motivation? Research has shown that procedural justice plays an important role in individuals' perceptions of the fairness of their payments. How might this affect their reactions to perceived injustices in the merit pay plan?

Time series research could be conducted in ways to reveal changes or trends in behavior of faculty subjected to merit pay plans. One approach might be to assess behavior patterns at an institution before and after the implementation or significant revision of a merit pay incentive plan to determine whether there are notable shifts in faculty behaviors and attitudes.

Additionally, faculty behavior could be monitored over time, comparing individual behavior before and after receiving a merit pay award. Faculty behavior could be compared between individuals who received large awards and those who received only nominal or no merit awards at the same institution. This has been done at a large university (Ehli 1986), but a similar

examination at a liberal arts college could reveal whether the motivational results of merit pay match the reported perceptions of the faculty.

Not only other categories of institutions, but other types of rewards should be investigated to compare the magnitude of motivational impact. In this study, merit pay's impact was very low, but it would be useful to see where merit pay stands in relation to other incentives.

Given the severe financial restrictions currently facing higher education institutions, research into non-monetary incentives would be valuable. A more in-depth examination of intrinsic rewards for faculty would prove beneficial in light of the weak response faculty in this study gave to extrinsic rewards. Specialized studies on non-monetary incentives offer an abundant source of needed research that could help determine the appropriate mix of faculty intrinsic and extrinsic incentives, both financial and otherwise.

**APPENDIX A
STUDY QUESTIONNAIRES**

A. MERIT PAY INSTITUTIONS

To Faculty Respondent:

You recently received the attached questionnaire regarding faculty incentives. If you have not yet completed it, would you please take a few minutes to complete it and return it in the attached stamped and addressed envelope. If you have already done so, thank you very much for your participation.

DIRECTIONS:

The following questionnaire is part of a study on faculty incentive plans. Some of the questions concern the current reward system at your institution, your personal views on various aspects of your job, and your current work patterns. Your responses to other questions will require that you make some assumptions about how you would react to various reward systems. In this study the term "merit pay" is the percentage increment that accrues to one's base salary in addition to or beyond any cost-of-living allowance provided to all faculty members, and is based on individual contributions.

All questionnaires **ARE TO BE ANSWERED ANONYMOUSLY** and all responses **WILL REMAIN CONFIDENTIAL** both in the final study report and from any other individuals at your institution.

Please return the completed questionnaire in the attached stamped envelope. Thank you very much for your assistance in this study.

1. In your opinion, at your institution, how direct is the relationship between three kinds of rewards (merit pay, public recognition, promotion) and specific work activities? Circle the number from the scale that indicates the importance of these activities to receiving the specified reward, not as you think it should be, but as you perceive the situation at your institution. For example, if you feel there is a very strong relationship between effective teaching and receiving merit pay (i.e., that effective teaching is 'very important' to receiving merit pay), you would circle 5 for the first response below; if you think it has very little or no importance to your receiving the reward, circle 1.

Use the following scale:

(very unimportant) 1-----2-----3-----4-----5 (very important)
 neither | important
 nor unimportant

a. Merit Pay Increase

Effective teaching	1	2	3	4	5
Scholarly publication	1	2	3	4	5
Receipt of external funds	1	2	3	4	5
Service on campus committee	1	2	3	4	5
Service to profession	1	2	3	4	5
Public service	1	2	3	4	5

b. Public Recognition*

Effective teaching	1	2	3	4	5
Scholarly publication	1	2	3	4	5
Receipt of external funds	1	2	3	4	5
Service on campus committee	1	2	3	4	5
Service to profession	1	2	3	4	5
Public service	1	2	3	4	5

*Includes formal recognition by the institution in the form of certificates, public announcements of achievements, non-monetary awards of commendation for outstanding teaching, research, and service.

c. Promotion in Rank

Effective teaching	1	2	3	4	5
Scholarly publication	1	2	3	4	5
Receipt of external funds	1	2	3	4	5
Service on campus committee	1	2	3	4	5
Service to profession	1	2	3	4	5
Public service	1	2	3	4	5

2. Distribute 100 points among the following ten rewards according to their importance to you. Not every reward needs to be assigned points, but the total points for all ten rewards (nine for tenured faculty) should add up to 100.

- Promotion in rank
- One semester leave of absence with pay
- Tenure (to be scored by non-tenured individuals only)
- Ten percent merit salary increase
- Public recognition of outstanding teaching
- One course load reduction for a semester
- Appointment to professional or campus honorary position (e.g., journal editor)
- \$5,000 university research grant
- Two-week paid leave for professional development
- Peer recognition in discipline

Below is a list of eight attributes people value about their jobs. Distribute 100 points among the list of eight attributes according to how much you value each in your job:

- Professional growth opportunities
- Sense of financial security
- Satisfaction of making a research discovery
- Amount of freedom you feel you have to do your job
- Recognition from peers
- Recognition from superiors
- Collegiality of workplace
- Satisfaction from being a good teacher

3. Circle the number on the continuum that corresponds to the average number of hours per week you are fully engaged in your professional work. Include all aspects of your job, including teaching and research activities, campus and professional service, and grant applications.

25-----30-----35-----40-----45-----50-----55-----60-----65
 or less or more

4. Assume that your institution will reward salary increases for meritorious performance. Consider each size reward listed below. How many more hours (if any) would you be willing to work to earn each? For example, in the first case, how many more hours would you be willing to work (from 0 to more than 10 additional hours per week) for a 5% merit salary increase? (Circle a number on the continuum for each award level.)

5% Merit Increase: 0-----2-----4-----6-----8----->10
 Additional hours per week

10% Merit Increase: 0-----2-----4-----6-----8----->10
 Additional hours per week

15% Merit Increase: 0-----2-----4-----6-----8----->10
 Additional hours per week

One-time bonus equal to 5% of your current salary:

0-----2-----4-----6-----8----->10
 Additional hours per week

5. Distribute 100 points among the activities listed below to reflect the proportion of your time you devoted to each during the past year.

- _____ Teaching, preparing for class, advising students
- _____ Research, writing articles/books/conference presentations, grant proposals
- _____ Campus/Community Service, time spent preparing and serving on committees
- _____ Service to profession or discipline

6. (a) Assume that the pool of merit pay at your institution were earmarked for distinguished performance in teaching related activities. How would it affect your level of effort? Would your effort in teaching activities increase or remain unchanged under each of the reward levels below? Respond for each reward level by circling a number on the continuums based on the following scale:

	1-----	2-----	3-----	4-----	5
	no more		somewhat		significantly
	effort		more effort		more effort
5% Merit	1-----	2-----	3-----	4-----	5
10% Merit	1-----	2-----	3-----	4-----	5
15% Merit	1-----	2-----	3-----	4-----	5
One-time bonus (5% of salary)	1-----	2-----	3-----	4-----	5

(b) Assume that the pool of merit pay at your institution were earmarked for distinguished performance in research activities. How would it affect your level of effort in research activities? Respond for each reward level using the continuum scale used in 6(a).

5% Merit	1-----	2-----	3-----	4-----	5
10% Merit	1-----	2-----	3-----	4-----	5
15% Merit	1-----	2-----	3-----	4-----	5
One-time bonus (5% of salary)	1-----	2-----	3-----	4-----	5

(c) Assume that the pool of merit pay at your institution were earmarked for distinguished performance in campus and community service activities. How would it affect your level of effort in service activities? Respond for each reward level using the continuum scale used in 6(a).

5% Merit	1-----2-----3-----4-----5
10% Merit	1-----2-----3-----4-----5
15% Merit	1-----2-----3-----4-----5
One-time bonus (5% of salary)	1-----2-----3-----4-----5

(d) Assume that the pool of merit pay at your institution were earmarked for distinguished performance in service to one's profession or discipline. How would it affect your level of effort in service to your profession? Respond for each reward level using the continuum scale used in 6(a).

5% Merit	1-----2-----3-----4-----5
10% Merit	1-----2-----3-----4-----5
15% Merit	1-----2-----3-----4-----5
One-time bonus (5% of salary)	1-----2-----3-----4-----5

7. What do you think was the average percentage increase for merit--exclusive of cost of living--for faculty in your department in 1990-91? _____%

What percentage of the faculty in your department do you think received some merit pay? _____%

Demographic Information

What is your rank? Assistant ___ Associate ___ Full ___

Do you have tenure? Yes ___ How long? ___ years No ___

What is your age? <30 ___ 30-39 ___ 40-49 ___ 50-60 ___
>60 ___

How many years have you been at your present institution? ___ years

How many years have you been a college/university faculty member? ___ years

What is your field or discipline? _____

What is your current salary level? <\$30,000 ___
\$30,000-49,000 ___ \$50,000-69,000 ___ \$70,000-100,000 ___
>\$100,000 ___

NON-MERIT PAY INSTITUTION

To Faculty Respondent:

The following questionnaire is part of a study on faculty incentive plans. Some of the questions concern the current reward system at your institution and your current work patterns. Your responses to other questions will require that you make some assumptions about how you would react to various reward systems. In this study the term "merit pay" is the percentage increment that accrues to one's base salary in addition to or beyond any cost-of-living allowance provided to all faculty members, and is based on individual contributions.

All questionnaires **ARE TO BE ANSWERED ANONYMOUSLY** and all responses **WILL REMAIN CONFIDENTIAL** both in the final study report and from any other individuals at your institution.

Please return the completed questionnaire in the attached stamped envelope. Thank you very much for your assistance in this study.

1. In your opinion, at your institution, how direct is the relationship between three kinds of rewards (merit pay, public recognition, promotion) and specific work activities? Circle the number from the scale that indicates the importance of these activities to receiving the specified reward, not as you think it should be, but as you perceive the situation at your institution. For example, if you feel there is a very strong relationship between effective teaching and receiving merit pay (i.e., that effective teaching is 'very important' to receiving merit pay), you would circle 5 for the first response below; if you think it has very little or no importance to your receiving the reward, circle 1.
Use the following scale:

(very unimportant) 1-----2-----3-----4-----5 (very important)
 neither important
 nor unimportant

a. Public Recognition*

Effective teaching	1	2	3	4	5
Scholarly publication	1	2	3	4	5
Receipt of external funds	1	2	3	4	5
Service on campus committee	1	2	3	4	5
Service to profession	1	2	3	4	5
Public service	1	2	3	4	5

*Includes formal recognition by the institution in the form of certificates, public announcements of achievements, non-monetary awards of commendation for outstanding teaching, research, and service.

b. Promotion in Rank

Effective teaching	1	2	3	4	5
Scholarly publication	1	2	3	4	5
Receipt of external funds	1	2	3	4	5
Service on campus committee	1	2	3	4	5
Service to profession	1	2	3	4	5
Public service	1	2	3	4	5

2. Circle the number on the continuum that corresponds to the average number of hours per week you are fully engaged in your professional work. Include all aspects of your job, including teaching and research activities, campus and professional service, and grant applications.

25----30----35----40----45----50----55----60----65
or less or more

3. Assume that your institution will reward salary increases for meritorious performance. Consider each size reward listed below. How many more hours (if any) would you be willing to work to earn each? For example, in the first case, how many more hours would you be willing to work (from 0 to more than 10 additional hours per week) for a 5% merit salary increase? (Circle a number on the continuum for each award level.)

5% Merit Increase: 0-----2-----4-----6-----8----->10
Additional hours per week

10% Merit Increase: 0-----2-----4-----6-----8----->10
Additional hours per week

15% Merit Increase: 0-----2-----4-----6-----8----->10
Additional hours per week

One-time bonus equal to 5% of your current salary:

0-----2-----4-----6-----8----->10
Additional hours per week

4. Distribute 100 points among the activities listed below to reflect the proportion of your time you devoted to each during the past year.

_____ Teaching, preparing for class, advising students

_____ Research, writing articles/books/conference presentations, grant proposals

_____ Campus/Community Service, time spent preparing and serving on committees

_____ Service to profession or discipline

5. (a) Assume that the pool of merit pay at your institution were earmarked for distinguished performance in teaching related activities. How would it affect your level of effort? Would your effort in teaching activities increase or remain unchanged under each of the reward levels below? Respond for each reward level by circling a number on the continuums based on the following scale:

	1-----	2-----	3-----	4-----	5
	no more		somewhat		significantly
	effort		more effort		more effort
5% Merit	1-----	2-----	3-----	4-----	5
10% Merit	1-----	2-----	3-----	4-----	5
15% Merit	1-----	2-----	3-----	4-----	5
One-time bonus (5% of salary)	1-----	2-----	3-----	4-----	5

(b) Assume that the pool of merit pay at your institution were earmarked for distinguished performance in research activities. How would it affect your level of effort in research activities? Respond for each reward level using the continuum scale used in 6(a).

5% Merit	1-----	2-----	3-----	4-----	5
10% Merit	1-----	2-----	3-----	4-----	5
15% Merit	1-----	2-----	3-----	4-----	5
One-time bonus (5% of salary)	1-----	2-----	3-----	4-----	5

(c) Assume that the pool of merit pay at your institution were earmarked for distinguished performance in campus and community service activities. How would it affect your level of effort in service activities? Respond for each reward level using the continuum scale used in 6(a).

5% Merit 1-----2-----3-----4-----5
 10% Merit 1-----2-----3-----4-----5
 15% Merit 1-----2-----3-----4-----5
 One-time bonus 1-----2-----3-----4-----5
 (5% of salary)

(d) Assume that the pool of merit pay at your institution were earmarked for distinguished performance in service to one's profession or discipline. How would it affect your level of effort in service to your profession? Respond for each reward level using the continuum scale used in 6(a).

5% Merit 1-----2-----3-----4-----5
 10% Merit 1-----2-----3-----4-----5
 15% Merit 1-----2-----3-----4-----5
 One-time bonus 1-----2-----3-----4-----5
 (5% of salary)

Demographic Information

What is your rank? Assistant___ Associate___ Full___
 Do you have tenure? Yes___ How long?___years No___
 What is your age? <30___ 30-39___ 40-49___ 50-60___
 >60___
 How many years have you been at your present institution?___years
 How many years have you been a college/university faculty member?___years
 What is your field or discipline?_____
 What is your current salary level? <\$30,000___
 \$30,000-49,000___ \$50,000-69,000___ \$70,000-100,000___
 >\$100,000___

QUESTIONNAIRE TO CHIEF ACADEMIC OFFICERS
AT MERIT PAY INSTITUTIONS

FACULTY PAY PLAN PROFILE

To the Chief Academic Officer:

The following questions regarding your institution's merit pay plan supplements the questionnaires being completed by some of the faculty. Please take a few minutes to answer the following questions and return this form in the attached stamped envelope. Your responses will be kept confidential and particular institutional policies will not be identified. Thank you for participating in this study.

1. Was a cost of living (COLA) increase provided to faculty last year (1990-91)? Yes ___ No ___
If yes, what was the percentage increase? ___%
2. What percentage of full-time faculty received merit pay in 1990-91? ___%
3. What was the average merit pay above COLA in 1990-91 (%)? ___%
4. What was the highest merit raise awarded? ___%
5. What was the lowest merit raise awarded? ___%
6. How many years has this merit pay plan been in existence? ___ years
7. What is the disclosure policy for merit awards? i.e., are award sizes and recipients of merit raises made public? (check all that apply)
___ Names of individuals who received merit pay and the size of merit awards are not publicly disclosed
___ Names of merit award recipients are made public
___ Size of merit awards are made public
___ The kinds of achievement that produced merit awards is made public

8. Who determines the criteria used in evaluating faculty for merit pay? (check all that apply)

President Department Chairs Deans
 Provost Faculty Trustees

9. Are there formally defined categories of achievement levels used in evaluating faculty for merit pay?

No

Yes

Are faculty members informed of these categories and their meaning?

Yes

No

10. Who determines who will receive merit pay?

11. Is there a maximum percentage of faculty who may receive merit pay?

Yes _____ %

No

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