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Pay-for-Performance

An Empirical Examination of Transit Employee Attitudes and Actual Performance

Highlights of the Federal Employee Year–2003

The year began with the ill-fated mission of space shuttle Columbia and a country's collective grieving for the brave men and women of that fatal flight, but the year ended with the capture of Saddam Hussein and the end of his treacherous regime in Iraq. In between, Congress passed laws that will transform the federal workplace in the years to come.

EMPLOYMENT CHANGES UNDER THE NATIONAL DEFENSE AUTHORIZATION ACT OF 2004

The National Defense Authorization Act of 2004 (PL 108-87), which was signed into law on November 24, 2003, allows the Secretary of Defense to run the department more like a private corporation than a government bureaucracy. The new law grants sweeping authority over how civilian employees are paid and managed. The Secretary will be able to revise how jobs are contracted out and to abolish administrative functions at the Pentagon, and effect dramatic change at the Department of Defense with less oversight from Congress, OPM or labor unions than in the past. These immediate changes are intended to allow DoD to turn on a dime in its war on terror and free the agency from bureaucratic red tape.

National Security Personnel System. The DoD Transformation Act gives Defense the ability to mold its 1.4 million enlisted workforce and boost efficiency without having to add more people to the department. For further details on the new pay-for-performance personnel system, refer to the Alternative Personnel Systems section of this *Guide*.

Senior Executive Service. The same DoD act establishes a new performance-based pay system for SES effective governmentwide January 11, 2004. The current six levels of SES pay established under 5 USC 5382 will be abolished and replaced by an open pay range, and the base pay will rise to $142,500. Locality Pay and automatic across-the-board pay increases will no longer be extended each year to the roughly 7,900 SES members. All career members will be slotted into the new pay system at current compensation, including locality pay. See the Senior Executive Service section of this *Guide* for further details.

Overtime Pay. 5 USC 5542 (a)2, which determines the overtime pay rate for employees whose basic pay is at a rate which exceeds the minimum rate of basic pay for GS-10, was amended as follows: the overtime hourly rate of pay is an amount equal to **the greater of** one and one-half times the hourly rate of the minimum rate of basic pay for GS-10, **or the hourly rate of pay of the employee** (items in bold are the amendments.) This amendment has a positive impact on employees at a grade of GS-12 step 5 or higher.

Human Capital Performance Fund. Established under the National Defense Authorization Act of 2004, $500,000,000 is authorized for the Fund for fiscal year 2004, which allows Federal managers a new tool to recognize employee performance critical to the achievement of their agency's mission. Up to 10 percent of the Fund will be made available to participating agencies for training; the other 90 percent will be used to provide human capital performance payments to individual employees based on exceptional performance contributing to the achievement of the agency mission. Congress funded the Fund only minimally as we went to press, however. See the Pay section of this *Guide* for more details.

NEW HIRING PROCESSES

Categorical Ranking. With 40% of federal employees expected to retire in the next five to ten years, the Bush administration has ramped up the process of hiring qualified candidates outside the guidelines of the 'rule of three' format. The new process will enable managers to reduce the hiring process from half a year to one month or less. The rapid formation of the Department of Homeland Security (DHS) came about by implementing the new hiring process for that agency 2 years ago. Because it worked so well with DHS, the President wanted the same efficiency in hiring throughout other government agencies. In the past, managers were restricted to hiring one of three top-qualifying candidates.

The old 'rule of three' hiring process is a convoluted practice that involves assigning scores to various qualifications and then ranking the candidates numerically and selecting the top three scores for the hiring managers to interview. The new system simplifies the screening process and allows the hiring managers to 'score' other tangible qualities of a candidate like how they interact with others, leadership ability, technical skills etc. Applicants will be grouped on how well they meet these standards *i.e.* highly qualified or qualified as opposed to being assigned a numerical score.

The hiring managers will then receive a list of the 'most qualified' candidates to select from. Veterans will still receive preference for any opening. This new hiring process, known as 'category ranking,' has been in play for the past several years at the Internal Revenue Service (IRS) and the US Department of Agriculture (USDA) to expedite their staffing needs.

Direct-Hire Authority. This allows agencies to appoint candidates directly to occupations where the Office of Personnel Management (OPM) determines there is a severe shortage of candidates, or a critical hiring need for particular occupations, grades (or equivalent), and/or geographic locations. This authority can be Governmentwide or limited to one or more specific agencies depending on circumstances. After careful review and consideration, the Director of OPM has approved the immediate use of direct hire authority as follows:

1. **Governmentwide Severe Shortage of Candidates – Medical Occupations**: Agencies may use this authority to appoint individuals to the following occupations at all grades and all locations: Diagnostic Radiologic Technologist, GS-0647; Medical Officer, GS-0602; Nurse, GS-0610 and 0620; and Pharmacist, GS-0660.
2. **Governmentwide Critical Hiring Need – Information Technology Management (Information Security), GS-2210**: Agencies may use this authority to appoint individuals to these positions at GS-9 and above, at all locations, in support of Governmentwide efforts to carry out the requirements of the Government Information Security Reform Act and the Federal Information Security Management Act.
3. **Agency Specific Critical Hiring Need – Securities and Exchange Commission**: SEC may use this authority to appoint accountants, GS-510; economists, GS-110; and securities compliance examiners, GS-1831 at GS-9 and above, at all locations, to respond to Congressional interest and to help the agency meet its mandate to fill in excess of 800 positions. This direct-hire authority shall remain in effect for 2 years from the date of this memorandum.

Agencies may give individuals in the categories, occupations, and grades listed above competitive service career, career-conditional, term, temporary, emergency indefinite, or overseas limited appointments, as appropriate. In all cases, agencies must adhere to public notice requirements in 5 USC 3327 and 3330, and the displaced employee procedures found at 5 CFR part 330, subpart G.

The above authorities are effective and available for use as of the June 20, 2003 and will be in effect indefinitely, unless otherwise noted.

YOUR PAY AND THE 2004 OMNIBUS BILL

For the second year in a row, the Senate failed to pass the $820 billion FY 2004 omnibus spending bill as we went to press. The giant catchall spending bill is was necessary because Congress had passed only 6 of the 13 appropriations bills needed to keep the government running for the fiscal year that began on Oct. 1, 2003. The omnibus bill will help finance the programs covered by the other seven bills and provide funds for the government's non-military programs that include education, health, veterans

Also beginning in 1994, there were to be locality-based comparability adjustments based on the difference between federal and non-federal salaries in local areas, starting with the recommendations of the Federal Salary Council, a body composed of experts in the fields of labor relations and pay, and members of federal employee organizations—all appointed by the President. From there, the recommendations of the Federal Salary Council are to be considered by the president's "Pay Agent" (consisting of the Secretary of Labor and the Directors of the Offices of Management and Budget and of Personnel Management). The Pay Agent is to submit recommendations to the president, who makes the final decision within the limits of statutory discretion.

Actual Operation. However, the scheduled January 1994 general pay adjustment was turned down for budgetary reasons and not enacted as scheduled (the raise was to have been 2.2 percent). Regarding locality pay, however, the Federal Salary Council recommended that a total of 28 pay localities be established, coinciding with the existing boundaries of 27 Metropolitan Statistical Areas (MSAs) and Consolidated Metropolitan Statistical Areas (CMSAs), within which the Bureau of Labor Statistics of the U.S. Department of Labor has been conducting salary surveys for locality pay purposes. These MSAs and CMSAs are defined by the Office of Management and Budget. In addition, a special locality-pay area was constituted composed of the "Rest of the United States (RUS)." In 1995, four new areas were added, while five of the original areas fell below the "Rest of the United States" category and were dropped. In 1997, three new Locality Pay Areas were added. Two more areas were added in 1998, but the list has remained basically unchanged since. In 2004, there are 32 metropolitan Locality Pay Areas including the RUS (see Locality Pay Areas at the end of this chapter. (For the most up-to-date pay tables, visit **www.fedguide.com/paytables.html**.)

The system, as established, gives the president discretion to act on the raises recommended by the Pay Agent, following the recommendations of the Federal Salary Council, thus triggering the raises applicable to the various pay localities.

In practice, most employees receive a basic across-the-board pay increase for the General Schedule (GS), as well as for the pay schedules of the Foreign Service and certain health care workers employed by the Veterans Health Administration. The minimum rate of basic pay for senior level (SL) or scientific or professional (ST) positions is increased by the same amount because of the GS pay adjustments to which they are geared.

Meanwhile, the basic rate of pay for both the Senior Executive Service and the Executive Schedule, as well as the Federal Wage System (FWS), Administrative Law Judges (ALJs), and members of Boards of Contract Appeals, are set by other provisions of law and are capped by congressional pay. The maximum rate of basic pay for SL or ST positions is geared to the Executive Schedule. Similarly, the rates of basic pay for Contract Appeals Board members are calculated as a percentage of the rate for Level IV of the Executive Schedule.

Locality Pay. In addition to the basic, across-the-board pay increase for most employees, there usually is a raise based on locality pay for most employees, especially white-collar workers, in accordance with the locality pay system described above. Locality pay raises are calculated for the separate Locality Pay Areas, as well as for "the Rest of the U.S."

Prior to 2004, members of the SES and the Foreign Service stationed in the U.S., as well as Administrative Law Judges, SL and ST employees, and Boards of Contract Appeals members, also received locality pay; those paid under the Executive Level Schedule did not. However, with the passage of the National Defense Authorization Act of 2004 (PL 108-87), SES members will no longer receive a locality pay increase (see SES chapter for more on FY04 changes to SES pay.) Because locality pay was designed for white-collar workers paid according to the uniform rates of the General Schedule, military members and workers outside the continental United States cannot receive locality raises. Federal blue-collar workers are paid under a separate locality pay system that bases annual wage adjustments on prevailing private-sector pay rates. Wage-grade employees do not receive GS locality pay. (See information box and Web link, **www.cpms.osd.mil/wage/wage.html**, on wage grade workers at the end of this chapter).

HUMAN CAPITAL PERFORMANCE FUND

The Human Capital Performance Fund, established by the National Defense Authorization Act of 2004, is expected to create greater employee performance in the Federal Government. Monies from the Fund will be used to reward agencies' highest performing and most valuable employees. The Fund will offer Federal managers a new tool to recognize employee performance that is critical to the achievement of agency mission. Half a billion dollars was appropriated for fiscal year 2004 (but not authorized as of our print time). Up to 10 percent of the Fund will be made available to participating agencies to train supervisors, managers and other individuals involved in the appraisal process on using the performance management systems. The other 90 percent will be used to provide human capital performance payments to individual employees based on exceptional performance contributing to the achievement of the agency mission.

The Office of Personnel Management (OPM) will administer and approve Fund allocations only after an eligible participating agency submits a plan for consideration. To be eligible for consideration, an agency shall:

(1) Develop a plan that incorporates the following elements:
  (a) Adherence to merit principles;
  (b) A fair, credible, and transparent employee performance appraisal system;
  (c) A link between the pay-for-performance system, the employee performance appraisal system, and the agency's strategic plan;
  (d) A means for ensuring employee involvement in the design and implementation of the system;
  (e) Adequate training and retraining for supervisors, managers, and employees in the implementation and operation of the pay-for-performance system;
  (f) A process for ensuring ongoing performance feedback and dialogue between supervisors, managers and employees throughout he appraisal period, and setting timetables for review;
  (g) Effective safeguards to ensure that the management of the system is fair and equitable and based on employee performance; and
  (h) A means for ensuring that adequate agency resources are allocated for the design, implementation, and administration of the pay-for-performance system;

(2) Upon approval, receive an allocation of funding from OPM;

(3) Make payments to individual employees in accordance with the agency's approved plan; and

(4) Provide such information to OPM regarding payments made and use of funds received as OPM may specify.

A human capital performance payment provided to an individual employee from the Fund, in any year, shall not exceed 10 percent of the employee's rate of basic pay. Any payment provided an employee from the Fund is in addition to any annual pay adjustment and any locality-based comparability payment that may apply.

SPECIAL SALARY RATES

Still other employees do not receive locality pay because they are paid under special salary rates for certain technical or hard-to-fill jobs. In these cases, employees usually start with a basic general schedule rate of pay and then receive add-on pay for their career specialty.

Special salary rates for General Schedule positions have been authorized since 1954. The statutory authority for special salary rates (higher minimum rates of basic pay and rate ranges) is found in 5 USC 5305. Executive Order 12748 delegates to OPM the pres-

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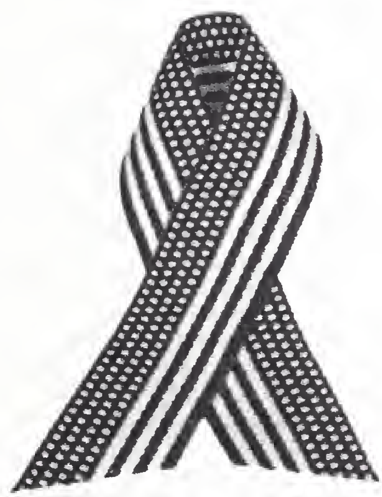
2004 FEDERAL PERSONNEL GUIDE



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Pay-for-Performance

An Empirical Examination of Transit Employee Attitudes and Actual Performance

Final Report
December 1986

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EXECUTIVE SUMMARY

Research Context and Organization of Report

The declining growth rate of productivity in the United States, relative to other nations, is a matter of increasing concern for both the private and public sectors. Productivity, or the efficiency with which goods and services are produced, represents a means of maintaining economic growth, retaining foreign markets, reducing unemployment, and controlling inflation. Because the cost of labor is a major factor in the production of goods and services, increasing the output of human resources is a major element in reversing productivity decline.

Urban mass transit systems provide direct service to the public and represent a major cost to state, local, and federal governments. They are also receiving close public scrutiny when resource dollars are allocated. In response to these pressures for increased productivity and better quality of service, transit authorities are reexamining the use of financial incentive programs (FIPs). A financial incentive, in the generic sense, is pay that is contingent on individual or group performance. While various types of FIPs are commonly found in both the private and public sectors, merit pay programs are the most widely used type of financial incentive plan in both the private sector and the transit industry. A survey conducted by the Conference Board (1976) found that over 90% of the surveyed companies used a merit pay program. A study by Scott and Deadrick (1984) found that merit pay is the most popular FIP among transit authorities with 30% of respondents having a merit pay program.

Purpose of Study

The purpose of the research reported here is to examine the efficacy of merit pay plans and their effectiveness in the transit environment. Specifically, the goals of this project were to:

- Investigate the relationship between performance ratings and merit increases.
- Investigate whether supervisors consistently rate employees too high or too low compared to other supervisors.
- Investigate whether merit increases are given to the same individuals year after year or whether they are random.
- Investigate whether employees perceive a linkage between merit pay and performance.
- Investigate employee perceptions critical to successful merit pay programs.

Chapter 1 of this report presents, in detail, the reasons for this research, an overview of merit pay programs, objectives of the study, and a brief outline of the research approach. Chapter 2 presents a review of the literature on merit pay plans. The findings of the literature review are examined with respect to empirical research as well as strengths and weaknesses of merit pay programs. A detailed description of the study research methodology is provided in Chapter 3. Chapter 4 presents a summary of research findings, and Chapter 5 provides a discussion of the research findings, conclusions, and implications.

Literature Review

The first step in our literature review was to identify the journals and other sources in which financial incentive articles are published. A thorough preliminary examination of the financial incentive literature indicated a potentially rich source of information. Financial incentive plan (FIPs) studies, specifically those dealing with merit pay plans, were scattered throughout numerous journals and disciplines over the past 70 years.

The review of the literature uncovered 94 articles on merit pay. A majority of these articles were simply descriptive or conceptual in nature. These descriptive articles suggest "rules of thumb" which outline certain conditions which must be present if merit pay is to elicit improved job performance.

Only 16 articles empirically evaluated the effects of merit pay programs in use. The review of the literature suggests that empirical research is desperately needed in the merit pay area. Virtually any empirical study which casts light on the efficacy of merit pay plans will contribute substantially to our knowledge base.

Research Methodology

The research site for this study was a large transit system on the West Coast. This transit authority employs over 5,000 employees, with approximately 1,400 participating in the transit authority's merit pay plan.

For this research an employee questionnaire was designed to measure employee perceptions of the merit pay process, the performance appraisal process, and other work related issues critical to successful merit pay programs.

Certain information necessary to the study could be more efficiently collected from employee records than with questionnaires. Information collected from organization records included such things as employee performance appraisal scores, employee merit increases, and employee length of service. Employee performance appraisal scores and merit increases were collected over a three year period.

Summary of Research Results and Conclusions

Our general results and conclusions are reported in this executive summary. The findings in this report are based on an analysis of employee attitudes, as measured by our survey, and employee records.

Do Employees Want Merit Pay? Questionnaire data indicate that transit authority employees do, in fact, want a merit pay system. This finding was systematically substantiated with our line of questioning.

What Criteria Do Supervisors Use for Appraisals? On average, employees rated past performance as the most important criteria employed by their supervisor. In other words, it was job performance which was most important in determining their pay increase, and not some other criteria.

Are Employees Satisfied With The Merit Pay System? Paradoxically, while transit employees believed in merit as a criteria for pay increases, and while they believe supervisors used merit as a basis for pay increases, 64 percent of the respondents were dissatisfied with the last merit increase they received. Most employees did not agree with their supervisor's assessment of their performance.

Do Supervisor's Ratings Have Serious Bias? Our analysis reveals that all supervisors do not rate their employees the same. The data indicate that there are large differences between supervisors in the average performance score they give to their subordinates.

Are The Same Employees Rewarded Year to Year? The data indicate that supervisory assessments of employees over time are consistent. That is, high performers in one year tend to be high performers in subsequent years, and vice versa.

What is The Relationship Between Performance Appraisal and Merit Pay? One of the more surprising statistics in this study is the relatively low correlation between employee's performance appraisal scores and their pay increases, especially for the first two years of the program (1983 and 1984). Given the nature of the study methodology, and given the fact that performance score is supposed to drive the merit increase, we expected to find the correlation between these two variables much stronger than it was.

Recommendations

Based on the results of our analysis we would make the following recommendations to transit authority management.

- Investigate whether or not performance scores given by supervisors are reflective of true performance.
- Provide supervisory training in management by results systems so that supervisors provide feedback to employees on a continuous basis.
- Investigate average evaluations of employees across supervisory units to determine if there are true performance differences, or if evaluator bias is occurring. If the results are due to evaluator bias, then we would recommend a training program for supervisors which trains them in the types of biases which they may be subject to. If the results are due to true performance differences, then there may be isolated performance problems which need to be addressed by management.
- Periodically monitor employee attitudes toward the merit pay system, and examine employee records to determine if the fine tuning of the merit pay system has resulted in a system which is doing a better job of reflecting transit authority objectives of higher productivity through a highly motivated work force.

CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS AND SYMBOLS

BARS - Behaviorally Anchored Rating Scale

FIP - Financial Incentive Program

Incentive - Financial Incentive

Transit - The agencies or authorities that provide transportation (bus, train) to urban areas. These are publicly owned organizations and their operation is directed by local governments.

UMTA - Urban Mass Transportation Administration

Chapter 1: Research Context and Organization of Report

Introduction

The declining growth rate of productivity in the United States, relative to other nations, is a matter of increasing concern for both the private and public sectors. Productivity, or the efficiency with which goods and services are produced, represents a means of maintaining economic growth, retaining foreign markets, reducing unemployment, and controlling inflation. Because the cost of labor is a major factor in the production of goods and services, increasing the output of human resources is a major element in reversing productivity decline. Based on the economic realities of our times, Americans are finding that a commitment to quality above sheer physical productivity is a necessity. Without this, as a nation, we will face further erosion of our markets and even tighter resource constraints. Because urban mass transit provides direct service to the public and represents a major cost to state, local, and federal governments, it is receiving close public scrutiny as part of this general concern for productivity when resource dollars are allocated.

In response to these pressures for increased productivity and better quality of service, private and public sector organizations are reexamining the use of financial incentive programs (FIPs). A financial incentive, in the generic sense, is pay that is contingent on individual or group performance. Unlike wages and salaries that are payment for satisfactorily performing a particular job (termed position pay), incentive pay is determined by how well the employee does on one or more performance criteria, usually judged in terms of quality and/or quantity of output. These performance criteria may include subjective supervisory appraisal of employee behaviors or goal accomplishments, or objective criteria such as overall unit profits and earnings, realized labor cost savings, the number of units produced, growth in sales, and so forth. Incentive pay is designed so that an individual's pay may increase or decrease over time based on that person's performance or contribution to the organization's productivity and effectiveness. Furthermore, it is believed that pay differences based on individual performance or results encourage a perception of pay equity among employees. Lawler (1971), for example, has found that employees believe that high performers should be paid more than the low performers. A complete listing of references utilized in this report can be found in Appendix B.

The assumption that a portion of an employee's remuneration should be intimately tied to performance as a means of obtaining the desired work behaviors is a well-accepted goal of modern compensation programs. Numerous researchers such as Lawler (1971) and Locke, et al. (1980) have provided an impressive array of evidence showing that where pay is related to individual performance, employee motivation is increased and turnover is largely restricted to poor performers. More specifically, Locke, et al. (1980) found that financial incentive programs had a far larger impact on employee performance than did other major management programs, i.e. participative management, job enrichment, and goal setting.

Financial incentive plans can be classified into several categories including bonus plans, piecerate incentive systems, profit sharing plans, labor cost savings programs, suggestion plans, and merit pay plans. While various types of FIPs are commonly found in both the private and public sectors, merit pay programs are the most widely used type of financial incentive plan in both the private sector and the transit industry. A survey conducted by the Conference Board (1976) found that over 90% of the surveyed companies used a merit pay program. A study by Scott and Deadrick (1984) found that merit pay is the most popular FIP among transit authorities with 30% of respondents having a merit pay program.

While merit pay plans are the most frequently used type of financial incentive plan in transit, they are used much less frequently than in the private sector. FIPs are not as common in the public sector in general due to political barriers and such limiting factors as Civil Service policies and procedures. Much of the public sector employment policies are "controlled" by legislation and regulation; thus, the freedom to institute innovative employment programs has been limited. However, recent public sector interest in such programs may be attributed to the belief that the use of FIPs such as merit pay plans represents an innovative strategy that can help contain costs and show taxpayers that high performance and productivity are of value to government.

A recent shift in the transit environment from expansion to maintenance of service can be characterized by a reduction in capital investment and an emphasis on human resource development, an area that represents one of the most important avenues for improving transit agency productivity. Because mass transit is relatively labor intensive, more efficient and effective use of labor could result in substantial savings. Merit pay plans are management systems that link valued rewards to desired behaviors and stress better utilization of human resources in terms of specific performance and productivity criteria. Merit pay plans are the focus of this research and report.

Merit Pay Programs

Merit pay plans are designed to establish a linkage between an employee's salary and performance. Pay increases are awarded based on employee performance over a specified time period (usually annually). An overall merit budget is established by top management and is based on either the past financial performance of the organization, expected future performance, or ability to pay. The merit budget is designed to reward only those employees who have performed at high levels during the past period. This is neither a general increase, which enables the firm to stay competitive, nor a cost of living adjustment which protects employees from inflationary pressures.

The overall merit budget is then divided among the organization's various departments, usually based on a percentage of each unit's total labor costs (salaries and wages). These funds are then allocated among deserving and eligible employees by individual supervisors. This merit award represents a permanent increase in the employee's wage or salary, and thus a permanent increase in the organization's total labor costs.

Inherent in any merit pay program is the need for some "reliable" method of individual performance measurement. Most performance assessments are based on a periodic evaluation by the employee's supervisor. Behaviorally anchored rating scales (BARS), management by objectives (MBO), and graphic rating scales represent the most commonly used appraisal instruments (Bernardin and Beatty, 1984). In some cases, all employees receive their performance appraisals at the same time during the year. This presumably provides consistency in employee comparisons and makes the program less difficult to administer. On the other hand, some organizations provide merit reviews on employment anniversary dates. Regardless, merit pay is used primarily with employees for whom no readily measurable performance objectives are available.

Because an employee's merit increase becomes a permanent part of the employee's pay, distortion in the compensation system may occur. In order to retain an equitable relationship among jobs (and the employees holding those jobs), the compensation structure usually specifies pay ranges for each position. Once the person reaches the top of their pay range, they usually become ineligible to receive another merit pay increase unless the pay structure is adjusted upward. The midpoint of the pay range reflects the level at which an average, fully-trained employee should perform and be rewarded.

There are numerous variations of merit pay plans, each of which has evolved as organizations tailor the program for their own use. It is this wide adaptability of the plan which has contributed to its popularity.

While the widespread and continued use of merit pay plans is certainly prima facie evidence that managers believe such programs enhance employee performance and productivity, the value attributed to merit pay programs is in large part an act of faith. There is very little empirical evidence with which to rigorously evaluate these programs. Furthermore, there are a number of experts who have identified weaknesses in merit pay programs, and they contend that these programs can create motivational problems if the programs are improperly used (Meyer, 1975; Hills, 1979). The efficacy of merit pay programs within the transit environment is addressed in this research.

Research Goals and Approach

Purpose: The purpose of this report is to examine the efficacy of merit pay plans in the transit environment. Specifically, the goals of this project were to:

- Investigate the relationship between performance ratings and merit increases.
- Investigate whether supervisors consistently rate employees too high or too low compared to other supervisors.
- Investigate whether merit increases are given to the same individuals year after year or whether they are random.
- Investigate whether employees perceive a linkage between merit pay and performance.
- Investigate employee perceptions critical to successful merit pay programs.

Research Approach: A brief overview of the research approach utilized in this study is provided below. Chapter 3 presents a detailed description of the research methodology. In order to accomplish the research goals listed above, the following steps were taken:

- The first step in the process was to conduct a review of the literature on merit pay to identify employee perceptions and other issues which are critical to successful merit pay programs.
- Utilizing the information obtained in the literature review a two pronged research strategy was developed. First, an employee attitude questionnaire was developed and administered to employees participating in a merit pay program. Second, we examined organizational records to determine how the merit pay system was actually operating in practice.
- Data obtained from administration of the employee attitude questionnaire and organization records was then analyzed to answer the research questions.

Organization of the Report: Chapter 1 has presented the reasons for this research, an overview of merit pay programs, objectives of the study, and a brief outline of the research approach. In Chapter 2 a review of the literature on merit pay plans is presented. The findings of the literature review are examined with respect to empirical research as well as practical strengths and weaknesses of merit pay programs. A detailed description of the study research methodology is provided in Chapter 3. Chapter 4 presents a summary of research findings, and Chapter 5 provides a discussion of the research findings, conclusions, and implications.

Chapter 2: Literature Review

Introduction

The first step in our literature review was to identify the journals and other sources in which financial incentive articles are published. A thorough preliminary examination of the financial incentive literature indicated a potentially rich source of information. Financial incentive plan (FIPs) studies, especially those dealing with merit pay plans, were scattered throughout numerous journals and disciplines over a 70 year period. (Foreign journals were not examined.)

The periodical abstracts in personnel/labor relations, sociology, psychology, organization behavior, etc. were examined and relevant articles were reviewed for FIP content. From this review, specific journals and other published documents were identified as major sources of information. Each of these sources was examined in detail for the articles, books, and government documents that described and evaluated FIPs. The lists of references in each book or article were also examined to identify additional publications on merit pay plans.

In an effort to ensure that the literature review had indeed captured the relevant articles written on merit pay, a computer literature search was undertaken. Two major on-line computer data bases, ABI/Inform (1971 - 1986) and Management Contents (1974 - 1986), were searched for articles dealing with merit pay plans. Listings obtained from the computer literature search were then compared to previous findings and additional citations were added when appropriate. Comparison of findings indicated that with few exceptions, the literature review had in fact captured the vast majority of existing articles dealing with merit pay.

Once a listing of articles was obtained, articles were reviewed and categorized as empirical or nonempirical. Articles were considered empirical when there was a systematic collection and analysis of data. Of the 94 articles identified dealing with merit pay, only 16 (17%) were classified as empirical in nature. In the following literature review, merit pay plans are analyzed with respect to objectives, description, research, and an evaluation of strengths and weaknesses. Both public and private sector studies on merit pay are discussed.

Merit Pay Plans

Objectives of Merit Pay Plans: Merit pay programs are largely based on three theoretical foundations. First, it is assumed that employees will perform at higher levels if they are rewarded for their efforts. Second, by providing salaried employees with the opportunity for movement within pay ranges, it is assumed that the company's overall pay structure will be perceived as more equitable. This is sometimes referred to in the professional literature as individual equity pay (Milkovich and Newman, 1984; Hills, 1987). Finally, it is assumed that by rewarding the high performers, all employees will work harder to become one of those who receive a substantial pay increase. The final result is that productivity, in a per unit of output sense, increases while at the same time costs per unit of output decrease even as wages increase. Scott and Deadrick (1984) outline several typical approaches to merit pay plans:

- One traditional plan relies on the establishment of a competitive salary range, starts employees out at a minimum, and then provides pay increases as employees learn the jobs until they reach the midpoint of the pay range. After the midpoint is reached, no further merit increases are awarded unless the employee exhibits outstanding performance.

- Another type of merit plan utilizes pay-for-performance matrices to determine merit increases. The merit increase is based on the employee's current position in the salary range and his/her most recent performance rating. An example of this is the use of guide charts (Hills, 1987).

- Merit pay programs may be rigidly structured, where the performance rating dictates the amount of merit pay the employee may receive. Alternatively, a supervisor may use the performance appraisal information as only one input in determining individual merit pay allocations.

In the following section, conceptual and empirical research on merit pay programs is reviewed.

Research on Merit Pay: The review of articles dealing with merit pay indicates that a considerable void exists with respect to empirical testing of the effectiveness of merit pay programs and with respect to empirical investigation of the theories underlying merit pay. While many academicians have noted this great "gap" between research endeavors and pay practices (e.g. Dunnette and Bass, 1963; Haire, et al., 1967; Lawler, 1971; Rodney, 1967). Haire, et al. (1967) best describe the situation:

> Few other areas of industrial practices have the layers upon layers of traditional thinking that characterize wage and salary administration . . . . We have made the same (institutionalized) assumptions and not tested or questioned them (p. 8).

Based on our review of the literature on merit pay, this argument appears as valid in 1986 as it did in 1967.

The review of the literature uncovered 94 articles on merit pay. A majority of these articles were simply descriptive or conceptual in nature. These descriptive articles suggest "rules of thumb" which outline certain conditions which must be present if merit pay is to elicit improved job performance. For money to motivate improved job performance:

- Money must be a reward valued by employees (Lawler, 1971; Collins, 1981).

- Money must be valued highly relative to other rewards (Hills, 1979). While money may be important to an individual, it may not be the primary motivating force. For example, an individual may be more highly motivated by the nature of the work itself or need for affiliation than by money (Hills, 1987).

- Workers must perceive that pay is tied to performance (Lawler, 1981; Hamner, 1975).

- Employees must believe that effort will lead to successful job performance (Lawler, 1971; Kearney, 1979).

- Pay increases must be large enough to be meaningful (Brennan, 1984; Kearney, 1979; Kopelman and Reinharth, 1982).

- Employees must perceive that performance can be and is accurately measured (Katzell and Yankovich, 1976; Kearney, 1979).

- High levels of trust are necessary if merit pay programs are to be accepted by employees and have the intended motivational effects (Brennan, 1984; Collins, 1981).

- Good communication is essential to successful merit pay programs (Dwortzan, 1982; Lawler, 1981).

Only 16 articles empirically evaluated the effects of merit pay programs in use. One important study by Marriott (1962) focused on employee attitudes about merit pay plans. The most important finding was that the firm's performance appraisal system did not perceptually distinguish among high and low performing workers. No employees were rated as below average, yet most employees were very dissatisfied with the system. The question arises as to whether all employees were indeed good performers. Was there some other reason for dissatisfaction? While there is insufficient information available to answer these questions, these findings raise the problem of rating errors, specifically leniency, and supervisor motivation to discriminate on the basis of performance in a merit pay environment (Kearney, 1979).

Leniency and severity in performance ratings are often viewed as "constant" errors, i.e. the result of a tendency on the part of particular raters to be unjustifiably lenient or harsh in their ratings (Bernardin and

Beatty, 1984). The tendency to be lenient or harsh in ratings can be a real problem, particularly when ratings are to be linked to important personnel decisions such as merit pay awards (Tesser and Rosen 1975).

Kearney (1979), in a conceptual piece on merit pay, raises the question of whether managers really want to measure performance. Managers know that the performance evaluations will be used as the basis for determining pay increases and that the information contained in the performance evaluations will be made known to employees. Kearney argued that it is one thing to provide negative information to someone that you will never see again, and quite another to provide negative information to someone with whom you have a long-term relationship. This would be particularly true where an individual's pay depended on the evaluation. The conceptual literature indicates that a major criticism of merit pay programs is the inability to measure performance accurately (Handy, 1972; Katzell and Yankovich, 1976; Greene, 1978). More research is needed on both supervisor's inability and motivation to measure performance accurately in a merit pay environment. Indeed, managers may use other criteria in allocating pay increases. For example, Patten (1968) found that an employee's age, length of service, and the type of organization have a greater effect on merit pay increases than does the individual's performance.

Greene (1973) tested the relationship between satisfaction and performance in a sample of 62 managers employed by a communications equipment manufacturer. Findings indicated that satisfaction was not a cause of performance; however, performance may cause satisfaction. Greene and Podsakoff (1975) conducted a field study in which a merit system was discontinued in a plant. The satisfaction of the higher performers greatly decreased whereas the low performers were more satisfied and more productive.

Kopelman, Reinharth, and Beer (1983), in a study of 1,165 nonsupervisory, white-collar employees, examined performance and reward ties with various rewards (merit systems). It was found that having a wide range of rewards available increased overall performance. Strong ties between performance and rewards resulted in high achievement.

Pearce and Perry (1983) conducted a study based on managerial motivation before and after implementation of merit pay in five federal agencies. Managers ranked other rewards such as challenging responsibilities and retirement benefits as more important than pay. This, combined with managerial perceptions that their pay was not based any more on performance than it had been prior to merit pay, led the investigators to conclude that managers are not more highly motivated under a merit pay system.

Birnbaum (1983), in a laboratory study, investigated the perceived fairness of three merit raise allocation systems. These systems were based on: (1) a relative increase in which equal percentage raises are assigned to persons of equal merit, (2) absolute increases in which equal money raises are allocated to persons of equal merit, and (3) adjusted increases in which equal raises are assigned to equally underpaid persons. In a series of contrived experiments using faculty and students, the adjustment system was perceived to be the most fair and raises under the relative system to be the least fair. Results of these experiments were utilized to develop a raise allocation system where merit raises are proportional to the differences between actual and deserved salaries.

In a study of 71 managers and professionals, Markham and Peterca (1986) examined merit pay based on group or individual performance. The study showed that cohesive groups of employees tended to get similar raises, i.e. all high or all low. Elliott (1985), in a study of 60 personnel professionals and public employees in federal, state, and local governments, found that there was general support for merit pay programs.

Only one empirical study (Kopelman, Reinharth, and Beer, 1983) examined the effect of merit pay programs on individual performance. According to the Kopelman, et.al study, merit pay did increase employee performance levels. None of the studies, however, were able to show the effect on organizational effectiveness. Considerable research is needed in this area to determine exactly what effect merit pay programs have on both individual performance and organizational productivity. This lack of research is a major concern because merit programs are the most widely used type of financial incentive plan (Conference Board, 1976). The need for this research is made pointedly by such writers as Meyer (1975), Hills (1979), and others who have questioned the value of such programs.

This literature review revealed numerous arguments for and against merit pay. A summary of these arguments is presented below. While not exhaustive, these arguments give insight into potential benefits and problems associated with merit pay programs. Special problems associated with merit pay in the public sector are also identified.

Arguments for Merit Pay Programs

Brinks (1980) presents several arguments in favor of merit pay systems. These arguments include:

- It increases motivation. Industrial psychologists argue that the more employees believe their own performance influences pay, the harder they will work to improve performance. Thus, to deliberately leave merit out of the pay system ignores at least one, if not the major, motivational tool for eliciting better job performance.
- Frequent monetary rewards tied to performance provide a worker with direct feedback on the acceptability of performance.
- Alternative systems such as total seniority or total COLA-based systems provide no monetary incentive to perform well. The only incentive in these systems is to avoid performing poorly.

Helwig (1979) advances several arguments for merit pay in the public sector. These arguments include:

- It fosters greater accountability to citizens and elected officials.
- It requires clearer definition of objectives and agreement on their importance.
- More key results will be achieved.
- The adoption of higher salary ranges occurs because importance of results is better understood and measured.
- It enables better identification of strong and weak performers.
- Lawler (1981) adds that employees at all levels of organizations think that people should be paid for their performance and that pay for performance is a valid salary administration procedure.

Arguments Against Merit Pay Programs

Brinks (1980) summarizes numerous arguments which have been advanced against the use of merit pay. These arguments include:

- Merit pay systems are difficult and costly to administer.
- The differences between acceptable performers and top performers is not great enough to warrant the extra effort and may actually be demotivating to employees.
- Most people are not motivated by money but rather by things such as advancement opportunity or the nature of the work itself.
- Most supervisors cannot (or will not) make objective, valid distinctions in performance.
- The vast majority of people see themselves as well-above average. Therefore, average merit increases destroy self-esteem and thus demotivate the employee.
- When inflation is high, so much of the annual increase is due to range change that the merit portion is minimal. Lawler (1981) affirms this argument.
- Merit pay increase budgets presume a bell-shaped performance population, i.e. as many performing below average as above average. In many organizations, this may not be the case.
- Most supervisors will play it safe and give everyone close-to-average increases. Thus, the best employees leave because they are undercompensated, and the worst employees stay and are overcompensated.
- Most performance ratings are based on personality characteristics rather than objective results achieved.

Other writers have also suggested criticisms of merit pay which include:

- Incentives circumvent the purposes of non-profit organizations. In a sense, incentives act like profit sharing and such action is against the basic concept of non-profit organizations (Clark, 1983).
- The use of money as an extrinsic reward causes intrinsic motivation to decrease (Deci, 1976).
- Merit pay programs, because they result in salary increases, are often used to achieve goals that have little or nothing to do with employee performance. For example, women may be given a higher merit increase than performance dictates in order to correct for inequities in salaries between men and women resulting from differential personnel practices (Goldberg, 1977).
- Unless salary ranges are sufficiently wide, there will not be an adequate reward variance between high and low performers (Hills, 1979).
- Lawler (1981) suggests that benefits growth is also a problem for merit pay. Compensation dollars that could be spent on merit pay are being spent on benefits, many of which are not universally desired. He argues that the growth in employee benefits has weakened the link between pay and performance.

Special Problems in the Public Sector

Scott and Deadrick (1984) suggest there may be some special problems in applying merit pay in the public sector. While certain of these problems may be found to some extent in the private sector, they can be particularly acute in the public sector. These problems include:

- Resource Availability: Since most merit programs are governed by state and local law, the available rewards are usually limited to the size of the specified step increases.
- Longevity Pay: Another problem is that pay increases based on employee service (seniority or longevity pay) traditionally have made up a large portion of the employee's annual increase. Thus, the "merit" increase is a relatively small component of the overall reward. Also, many jurisdictions have not found a way to reward employees who are at the top of their pay ranges because there are no more step increases available.
- Elected Officials: One basic difference between the public and private sectors is that top management in public institutions is elected. Public employees represent a large political group, especially in local politics. As a result, the political leaders who manage the public sector funds are balancing the conflicting interests of large blocks of voters. Thus, even though merit pay may motivate higher performance, it may not be politically feasible to grant such rewards.
- Budgetary Constraints: An agency's annual budget serves as a limiting factor for merit pay plans; only money which is budgeted for performance purposes is available for merit increases, regardless of how many people qualify. The budget is prepared and approved at least one year in advance. Hence, merit performance is, in essence, being predicted and budgeted for. If actual performance exceeds expectations, rewards too should exceed the budgeted performance. Thus, the budget may become an agency's performance standard; performance levels will drop off to maintain an equitable pay-off.

Research Questions and Literature Review

The review of the literature suggests that empirical research is desperately needed in the merit pay area because most of the conflicting arguments that have been made are based only on personal insight or experience. Virtually any empirical study which casts light on the efficacy of merit pay plans will contribute substantially to our knowledge base.

The conceptual literature suggests that pay must be tied to performance if money is to motivate improved job performance. Two questions arise related to this issue. Is pay in fact tied to performance? If so, do employees perceive pay to be tied to performance? The fact that pay is tied to performance is no guarantee that employees will perceive this to be the case. No empirical studies were identified which investigated either actual or perceived linkage of pay to performance. A related question is whether patterns can be identified in the way merit increases are awarded. For example, are merit increases given to the same individuals years after year, are they rotated, or are they random? No empirical studies were identified which addressed this issue. Three goals of this project were to:

- Investigate the relationship between performance ratings and merit increases.
- Investigate whether employees perceive a linkage between merit pay and performance.
- Investigate whether merit increases are given to the same individuals year after year or whether they are random.

The conceptual literature also stresses the importance of performance appraisals in the merit pay process. For merit pay to work, supervisors must be able and willing to accurately evaluate employee performance. It is suggested that employee perceptions of performance appraisal fairness and accuracy are positively related to employee perceptions that pay is tied to performance, a precondition for successful merit pay programs. Employees who do not believe performance appraisals are accurate will not perceive pay as being tied to performance. Therefore, it is important for supervisors to have the ability and the motivation to properly evaluate the performance of subordinates. No empirical studies were identified which investigated supervisor ability and motivation to properly rate in a merit pay environment. One goal of this project was to investigate whether supervisors consistently rate employees too high or too low compared to other supervisors.

In summary, numerous articles and other documents have been written on merit pay plans. While the literature review does indicate major support for the use of merit pay plans, very little rigorous empirical research on the impact of merit pay within organizations has been conducted. Given the wide popularity of merit pay programs and the lack of empirical evidence supporting their use, it is important to empirically verify in a field setting the "rules of thumb" suggested in the conceptual literature. This study addresses critical issues identified in the conceptual literature and will provide a valuable contribution to understanding the impact of merit pay in a field setting.

Chapter 2 has presented an overview of merit pay plans including objectives and descriptions. Both empirical and theoretical literature on merit pay were discussed. Arguments for and against merit pay programs were presented, and special problems associated with merit pay in the public sector were identified. Chapter 3 provides a detailed description of the research methodology employed in this study including site selection, research questions and hypotheses, data collection, data entry and verification, and data analysis.

Chapter 3: Research Methodology

Research Site

Numerous transit authorities were considered for the current research project. The principal investigators contacted potential sites by phone and mail to determine if they were suitable for the research project and if they were interested in participating in the study.

The research site for this study is a large transit authority located on the West Coast. This authority employs over 5,000 employees, approximately 1,400 of which participated in the transit system's merit pay plan. This transit authority system maintains a fleet of over 2,000 buses. During the fiscal year 1984-1985, it carried approximately 500,000,000 passengers.

Site Selection Criteria: The West Coast authority was selected as the research site for several reasons including:

- The authority is a very large organization and has over 1,000 managerial and clerical employees under a merit pay plan. Thus, the sample size is sufficiently large to perform required statistical analyses.
- The merit pay plan has been in place for three years. Data on performance appraisal and merit increases are available for this three year period.
- The authority maintains a wide range of employee records on computer, thus facilitating access to the required information.
- The performance appraisal system for noncontract employees is appropriate for our analysis.
- Previous contact with this authority demonstrated the high quality of the personnel staff and resulted in a favorable impression of the organization.
- The authority expressed support for the research study, and it was willing to commit employee time to the study.

Research Questions

Research Questions: As specified in the grant, research questions investigated in this study included:

- What is the relationship between performance ratings and merit increases?
- Do supervisors consistently rate employees too high or too low compared to other supervisors?
- Are merit increases given to the same individuals year after year or are they random?
- Do employees perceive a linkage between merit pay and performance?

In addition to examining the above research questions, several other employee perceptions critical to successful merit pay programs were investigated. These included employee perceptions with respect to satisfaction with performance ratings, accuracy of performance ratings, quality and quantity of feedback, satisfaction with merit increases, supervisor criteria in allocating pay increases, and preferred employee criteria for allocation of pay increases.

Data Collection

Questionnaire Development: The principal investigators conducted a literature review to identify constructs and information necessary to investigate the research questions. Once relevant constructs and information were identified, scales to measure the constructs had to be taken from the literature or developed. All scales utilized in this research had their origin in prior research and were used either verbatim or modified for the present research. Scales and other required information were then organized into an employee questionnaire. The employee questionnaire was designed to measure employee perceptions of the merit pay process, the performance appraisal process, and other work related issues critical to successful merit pay programs. This questionnaire was administered to employees eligible for merit pay increases. Scales measured on this instrument included such things as employee perceptions that pay is tied to performance, employee attitudes toward merit pay, and satisfaction with the performance appraisal system. A copy of the employee questionnaire can be found in Appendix A.

Pilot Testing of Questionnaire: This questionnaire was pilot tested at a small transit authority on the East Coast. The questionnaire was administered to a group of clerical and managerial employees who were eligible for merit pay increases. Following the questionnaire administration, a debriefing was held in which participants were asked to comment on any potential problems with the questionnaires. Based on information obtained in the pilot study, several changes were made in the questionnaire to improve clarity.

Questionnaire Administration: A research team from Virginia Polytechnic Institute and State University administered the questionnaires. Participants were notified by memoranda from the Personnel Department of the project and were requested to attend one of the scheduled sessions to fill out the questionnaires. Eighteen one-hour sessions were conducted during a one week period. While participation was not mandatory, it was strongly encouraged. An employee sign-up sheet was utilized by the Personnel Department to track which employees attended the sessions. The importance of confidentiality was stressed at the sessions. Individuals who did not attend one of the formal sessions were provided with questionnaires and instructions for mailing them directly to the research team at Virginia Tech.

Data From Organization Records: It was necessary to collect certain information from organization records including a three year history of employee performance appraisal scores, a three year history of employee merit increases, and employee length of service. Access to this information on computer tape facilitated data collection as it eliminated the need to pull the information from employee records, code it into the computer, and verify the coding.

Measurement of Variables in Employee Records

Performance Appraisal Score: This organization has a merit pay policy which requires that a "pay-for-performance" evaluation be completed annually for every non-contract (nonunion) employee. By policy, these evaluations are to be completed by supervisors during the month of June each year. The evaluations cover employee performance for the period from July 1 of the previous year through June 30 of the current year. This pay-for-performance system was established in July, 1982, to become effective with pay raises given July 1, 1983.

The actual performance appraisal system is a rather elaborate document comprised of four parts. One part of the evaluation requires the supervisor to examine the work habits of employees. The work habits section requires judgements about: (a) attendance and punctuality, (b) safety, and (c) observance of rules and regulations. The supervisor records his/her judgements on a five point continuum which is: Unsatisfactory, Needs Improvement, Competent, Superior, and Outstanding. In theory, each subscale of the work habits portion of the evaluation is evaluated independently.

A second major part of the evaluation requires supervisors to conduct a task analysis of each subordinate's job and to identify: (a) standards of performance for each task and (b) actual measured performance against the performance standards for each task. Again, the supervisor uses judgement in assigning a performance level ranging from Unsatisfactory through Outstanding for each task.

A third part of the evaluation requires the supervisor to write a narrative essay which describes the employee's job performance and "justifies" the judgements which are made. Supervisors are specifically encouraged to use "examples of good performance" and to "be explicit, using specific instances". In many respects, the narrative portion is quite similar to the critical incidents" technique (Flanagan, 1954), although, the incidents are not organized into the currently popular Behaviorally Anchored Rating Scales (Bernardin and Beatty, 1984).

Finally, the supervisor is required to combine all of this information "clinically" into an overall judgement of performance. Again, the five point continuum from Unsatisfactory to Outstanding is used. For this study, it is this overall evaluation which is used as the measure of performance level. The scaling was converted to a numeric system by assigning values of 1 through 5 to the performance levels with 1 = Unsatisfactory and 5 = Outstanding. The performance appraisal score for this study, therefore, is a five point scale with a value of one being the poorest performance level and a value of five representing the highest performance level. We obtained this performance appraisal score for employees for the years 1983, 1984, and 1985.

Pay Increase: Pay increases in this study are measured as the percentage pay increase which an employee received after controlling for adjustments to the wage structure. The percentage increase is relatively straightforward; what needs explanation is the annual adjustment to the wage structure. In 1983 the wage level/structure went up 8%, in 1984 3.5%, and in 1985 4%. This constant amount was removed from the annual increase in pay to control for the structure adjustment. This is done to assure that employees truly received merit increases and that increases due to other phenomena did not get built into the wage increase which was considered merit. Therefore, under this procedure, an employee could have gotten an average performance appraisal, stayed in the same step, and the increase would be 0 percent since the annual structure shift was removed from consideration. This standardization process allowed us to control for structure shifts within year and to compare pay increase information over the three study years.

Data Analysis

Data analysis was accomplished using the university mainframe computer, an IBM 3084 system, and an IBM Personal Computer AT operated by the Management Department within the College of Business at Virginia Tech. The software package utilized for statistical analysis was the Statistical Analysis System (SAS). Statistical analyses utilized to test the hypotheses and investigate employee perceptions included descriptive statistics such as frequencies and means, as well as correlational analysis, and analysis of variance.

In summary, Chapter 3 has provided a description of the research methodology utilized in this project. Site selection, research questions, data collection, and data analysis were discussed. A summary of research findings will be presented in Chapter 4. Chapter 5 will contain a discussion of research findings, conclusions, and implications.

Chapter 4: Research Results

Introduction

This chapter reviews the results of our research into one transit authority's merit pay system. Does the merit pay system function in the manner in which it was designed?

Sample Characteristics: There were over 1,400 employees who were under the merit pay plan and therefore, were eligible for this study. Over 800 employees completed the survey questionnaire for a fifty-nine percent response rate. The age of respondents ranged from 26 to 67 years. The average age of responding employees was 44.8 years. Respondents had an average length of service of 13.5 years with length of service ranging from 1 to 44 years. Seventy eight percent of the respondents were male and 22% were female. A wide variety of ethnic backgrounds were represented: 26% were black, 55% were white, 7% were Asian/Pacific Islanders and 13% were Hispanic. Respondents also had a varied educational background: 8% held a high school diploma, 43% had some college, 21% had a college degree, 11% had some graduate work, and 15% had a graduate degree.

Relationship of Performance Appraisal Scores From Year to Year: One of the important questions with respect to conducting performance appraisals is to ask about the degree of association between performance scores of employees from one year to the next. This issue is important from at least two viewpoints. First, it is possible that there is no association between performance levels of employees from one year to the next. This could happen because: (a) performance is highly variable over time and/or (b) because supervisors, in conducting evaluations, intentionally or unintentionally introduce bias or error into the evaluation process. A second possible association between performance levels from one period to the next is that they are positively related to each other. This could happen because: (a) employee performance is stable over time and/or (b) because of supervisor bias (supervisors always rate the same people high and the same people low).

We investigated the relationship between performance appraisal scores for employees from one year to the next by correlating scores in one year with the employee's scores in a second year. The descriptive statistics for these variables appear in Tables 4.1 through 4.3.

Table 4.1

Frequency Distribution of Performance Appraisal Scores (1983)

	Unsatisfactory	Needs Improvement	Competent	Superior	Outstanding
Number	1	16	600	425	45
Frequency	0%	1%	55%	39%	4%
Cumulative	0%	1%	57%	96%	100%

Table 4.2

Frequency Distribution of Performance Appraisal Scores (1984)

	Unsatisfactory	Needs Improvement	Competent	Superior	Outstanding
Number	1	19	628	466	75
Frequency	0%	2%	53%	39%	6%
Cumulative	0%	2%	55%	94%	100%

Table 4.3

Frequency Distribution of Performance Appraisal Scores (1985)

	Unsatisfactory	Need Improvement	Competent	Superior	Outstanding
Number	0	14	576	558	107
Frequency	0%	1%	46%	45%	8%
Cumulative	0%	1%	47%	91%	100%

One of the interesting observations about the data in tables 4.1 through 4.3 is that the average performance appraisal score is slowly creeping up over time. In 1983 39% of the employees were evaluated as superior and only 4% were evaluated as outstanding. By 1985 45% were rated as superior and 8% were rated as outstanding.

Table 4.4

Correlation of Performance Appraisal Scores
for Years 1983, 1984, 1985

	1984	1985
1983	0.56 (0.0001) n = 1011	0.46 (0.0001) n = 941
1984	----	0.59 (0.0001) n = 1084

From Table 4.4, the correlation between employee performance appraisal scores in 1983 and 1984 is r = .56 (p = .0000) based on a sample size of 1087 employees. The correlation for performance appraisal scores for 1984 and 1985 is r = .59 (p = .0000) and the sample size is 1094. The correlation of 1983 performance scores with 1985 performance scores is .46 (p = .0001) and the sample size is 941. These data indicate that employees performance in one year is significantly correlated with performance in the following year and that this relationship has been relatively stable.

Performance Appraisal Scores and Supervisory Unit: One of the important questions about performance appraisal scores in a merit pay context is: Do supervisors give the same average appraisal score to their employees? For a merit pay increase to be effective there must be perceived equity across supervisory units when allocating pay increases. This will not happen if some supervisors give their employees high evaluations and other supervisors give their employees low evaluations. To test for this we examined the average performance appraisal score within supervisory unit. To be sure that the data were not biased by supervisors with only one or two subordinates we included only those supervisors who supervised four or more people. The descriptive statistics for this hypothesis appear in Table 4.5.

Table 4.5

Average Performance Appraisal Score for Supervisors (and Variations)

Year	Number of Supervisors	Number of Subordinates	Average Evaluation Score	S.D.	Min.	Max.
1983	75	580	3.48	.60	2.80	4.50
1984	82	653	3.49	.63	3.00	4.43
1985	98	701	3.61	.67	3.00	4.88

The most important thing about the data in Table 4.5 is that it reveals there is significant variation in the average performance appraisal score that supervisors give their employees. For example, in 1983 one supervisor gave his/her employees a 2.8 average evaluation whereas another supervisor gave his/her employees an average evaluation of 4.5. (Performance evaluation scores range from 1 to 5 with 1 being unsatisfactory, 2 being needs improvement, 3 being competent, 4 being superior, and 5 being outstanding.) For the year 1984 the minimum and maximum average evaluations were 3.00 and 4.43 respectively, while for the year 1985 these values were 3.00 and 4.80 respectively. Remember, these are units composed of 4 or more employees. Statistical tests of the variation in average performance appraisal scores by supervisor (Duncan/Scheffe tests) indicate that there are statistically significant differences in average performance appraisal scores across supervisors for each of the three years.

Finally, it is also worth noting that the average performance appraisal score for employees began to creep upward in 1985. This statement is based on data from Table 4.6 which shows that the average performance appraisal score in 1985 is significantly higher than for 1983 and 1984.

Table 4.6

Average Performance Appraisal Score for All Employees (by Year)

	Performance Score	N
1983	3.46	1087
1984	3.50	1189
1985	3.60*	1255

* 1985 average score is statistically significantly higher than 1983 and 1984 scores (Duncan/Scheffe, $F = 16.69$, $p = .0001$).

Performance Evaluation - Pay Increase Correlation: One of the ultimate tests of whether a merit pay system is working as it is supposed to is to ask if there is any correlation between performance appraisal scores of employees and the size of their pay increase. The results of the test of this appear in Table 4.7.

Table 4.7

Performance Appraisal - Merit Pay Increase Correlation by Year

1983	r = .44	N = 942	P = .0001
1984	r = .32	N = 1098	P = .0001
1985	r = .73	N = 1240	P = .0001

As the data in Table 4.7 indicate, there is a significant association between performance appraisal score and percentage pay increase for all three study years. However, the correlation only reaches meaningfulness in the year 1985. For 1983 and 1984 the correlations, while statistically significant, are not large at all and suggest that there is not as clear a link between performance and pay increase as might be suggested by the pay for performance policy.

Employee Attitudes Toward Merit Pay System

Another important way to evaluate a merit pay system is to solicit employee opinions about the merit pay system. In our research on merit pay we asked employees a series of questions to ascertain their attitudes toward the merit pay system. These questions, along with employee responses are reported, in the succeeding paragraphs.

Attitudes Toward Performance Appraisal: Performance appraisals are a vital part of merit pay systems since it is the performance appraisal which drives the recommendation for a merit increase for an employee. Therefore, we asked a series of questions to try to get a good fix on what employees felt about the performance appraisal process. One of these questions asked the employee to indicate how satisfied they were with their last performance appraisal. The question asked, and employee responses, appear in Table 4.8. (For these questions the abbreviation "SA" means Strongly Agree and the abbreviation "SD" means Strongly Disagree.

Table 4.8

69) I am very satisfied with the last performance evaluation I received.

	SA	MA	?A	?D	MD	SD	na
Number	174	144	103	72	78	228	30
Frequency	21%	17%	12%	9%	9%	28%	4%
Cumulative	21%	38%	51%	60%	69%	96%	100%

The most startling observation about the results of this question is that employees seem to fall into two extreme groups of employees. There is a substantial proportion (21%) who are highly satisfied with their last performance appraisal. However, there is a substantial proportion (28%) who are highly dissatisfied with their performance appraisal. Clearly, employees are sharply divided in their attitudes toward satisfaction with their last performance appraisal.

Further insight into employees attitudes about the performance appraisal process can be gleaned from two additional questions which were asked. One of these questions asked if they felt their last performance review was consistent with actual job performance. The question and the responses appear in Table 4.9.

Table 4.9

70) My last performance evaluation was consistent with my job performance.

	SA	MA	?A	?D	MD	SD	na
Number	172	143	105	80	72	229	32
Frequency	21%	17%	13%	10%	9%	28%	4%
Cumulative	21%	38%	50%	60%	69%	96%	100%

Similar to the question about satisfaction with the performance appraisal, employees are strongly divided in their attitudes toward consistency of performance appraisals. Twenty-one percent strongly agree that their last review is consistent with actual performance, while 28% strongly disagree with the statement. Further, the same employees who indicate strong satisfaction or dissatisfaction with the question in Table 4.8 are also the same ones that indicate strong satisfaction or dissatisfaction on the question in Table 4.9. The correlation of responses for the two questions is $r = .90$ ($p = .0001$, $n = 827$).

While substantial groups of employees are not pleased with their assessed performance levels, further analysis reveals that it is the employees with the lowest appraisal scores who are most dissatisfied. This is borne out by the correlation statistic between the questions in tables 4.8 and 4.9 with employees' actual appraisal scores. The correlation between performance appraisal score and satisfaction with evaluation received is .64 ($p = .0001$, $n = 689$). Similarly, the correlation between belief that the last evaluation was consistent with past job performance and actual appraisal score was .62 ($p = .001$, $n = 693$). In other words, employees with high appraisal scores thought their appraisals reflected their true performance and they were satisfied with their appraisal from their supervisor. On the other hand, those employees who received low supervisory appraisals were dissatisfied with their appraisal and felt it did not reflect their true performance. At least two conclusions are possible from these results. First, if appraisal scores reflect true performance, then employees, while dissatisfied, have nothing to gripe about. Second, if appraisal scores are <u>not</u> reflective of true performance, then there may be no association between true performance and satisfaction with the appraisal process.

A second way to ask the same question is to ask employees to react to whether their appraisal was too high or too low. Responses to this question appear in Table 4.10.

Table 4.10

22) Compared to your actual level of performance, do you believe your performance rating was:

	Number	Frequency	Cumulative
much too high	5	1%	1%
too high	10	1%	2%
about right	363	45%	47%
too low	348	43%	91%
much too low	75	9%	100%

Consistent with earlier questions, it is again apparent that employees are about equally split between those who think their performance appraisals were about right (45%) and those who think that their performance appraisals were too low (43%).

One other way to obtain insight into employee's attitudes toward the performance appraisal process is to ask employees if they received enough feedback from their supervisor. Two such questions were asked; one dealing with quantity of output and another dealing with quality of output. The actual questions asked along with employee responses appear in Tables 4.11 and 4.12.

Table 4.11

38) I receive enough feedback concerning the quantity of my output on the job.

	SA	MA	?A	?D	MD	SD	na
Number	148	158	163	134	100	121	10
Frequency	18%	19%	20%	16%	12%	15%	1%
Cumulative	18%	37%	56%	72%	84%	99%	100%

Table 4.12

39) I am provided with sufficient feedback on the quality of my work.

	SA	MA	?A	?D	MD	SD	na
Number	154	167	163	145	88	113	6
Frequency	18%	20%	20%	17%	11%	14%	1%
Cumulative	18%	38%	58%	75%	86%	99%	100%

Employees are also strongly split over the amount of feedback they receive about both the quantity and quality of their output. A little over half of the employees tend to agree that they receive enough feedback, but a substantial minority (over 40%) tend to disagree that they receive adequate feedback.

The information on employee attitudes toward the performance appraisal system suggests that a sizeable minority is dissatisfied with the appraisal system. Further, that sizeable minority seems to feel that they do not receive adequate feedback in terms of quantity or quality of output. The possibility of providing managers training in the use of performance appraisals as a developmental tool should be investigated.

Attitudes Toward Merit Increases: There are several ways to find out how employees feel about merit increases. One way is to ask employees whether or not merit increases, in general, are tied to performance level. This question was asked of employees in two different ways as indicated in Tables 4.13 and 4.14.

Table 4.13

20) Merit increases accurately reflect an individual's job performance.

	SA	MA	?A	?D	MD	SD	na
Number	58	63	107	131	111	356	10
Frequency	7%	8%	13%	16%	13%	43%	1%
Cumulative	7%	15%	28%	44%	57%	99%	100%

Table 4.14

21) This organization gives pay increases on the basis of job performance.

	SA	MA	?A	?D	MD	SD	na
Number	53	79	151	116	117	302	12
Frequency	6%	10%	18%	14%	14%	36%	1%
Cumulative	6%	16%	34%	48%	62%	99%	100%

The responses to these two questions provide startling results; 72% of the employees disagreed (to some extent) with the statement that merit increases accurately reflect an individual's job performance. Further, 43% strongly disagree. Employee responses to the question in Table 4.14 reflect very similar patterns of responses indicating that employees strongly disagree with the assertion that merit raises reflect job performance. Thus, while there are some problems with the performance appraisals, there appear to be more problems with the merit allocation.

Employees were also asked if their last pay increase was consistent with their performance (Table 4.15).

Table 4.15

17) My last pay increase was consistent with my job performance.

	SA	MA	?A	?D	MD	SD	na
Number	77	99	107	118	108	296	34
Frequency	9%	12%	13%	14%	13%	35%	4%
Cumulative	9%	21%	34%	48%	61%	96%	100%

Based on these responses, it is clear that most employees disagree with the statement that their last increase was reflective of job performance. Sixty-two percent disagreed to one degree or another with the statement. Further, 35% strongly disagreed with the statement while only 9% strongly agreed with the statement.

The questions discussed so far have asked the employee to give their opinions about merit increases and performance. Yet another way for employees to assess their raises is to ask them to think about their raise relative to other employees. This was done with the question which appears in Table 4.16.

Table 4.16

19) I was very disappointed with the size of my last pay increase when I think about what other employees received.

	SA	MA	?A	?D	MD	SD	na
Number	190	82	125	133	112	125	69
Frequency	23%	10%	15%	16%	13%	15%	8%
Cumulative	23%	33%	48%	63%	77%	92%	100%

Interestingly, there is not the same kind of extreme results when employees compare their own raises to those of other employees. In fact, employees are highly dispersed ranging from 23% who strongly agreed (that they are disappointed with their raise) to the 15% who strongly disagreed.

Finally, we asked employees to share their attitude about satisfaction with their last merit increase without specifying a relationship to performance or how other employees came out in the pay increase process. The satisfaction question and employee responses appears in Table 4.17.

Table 4.17

16) I am very satisfied with the last merit increase I received.

	SA	MA	?A	?D	MD	SD	na
Number	63	114	124	115	105	274	43
Frequency	8%	14%	15%	14%	13%	33%	5%
Cumulative	8%	21%	36%	50%	62%	95%	100%

Fifty-nine percent of the employees expressed some degree of dissatisfaction with their last merit increase and one third of the employees strongly disagreed that they were satisfied with their pay raise. These data suggest that something is wrong with the merit pay system since such a large proportion of the employees are so dissatisfied with the merit pay raises they received.

Supervisor Decision Rules for Pay Raises: Previous questions in this report indicated that employees have considerable dissatisfaction with their last pay raises. The data also indicate that employees do not feel that their last performance evaluation reflected their true performance level. It is worth exploring, therefore, what criteria employees felt their supervisors used in making pay increase decisions. The question in Table 4.18 posed this issue to employees. Table 4.18 also contains their responses.

Table 4.18

3) The purpose of this question is to find out what you think were the most important factors determining your last pay increase. Please rank the five items listed below according to how important you think they were to your supervisor in determining your last individual pay increase. Place a 1 by the item you feel was most important, a 2 by the item you consider the second most important, and so on.

	Average Rank
my performance	1.7
my length of time with the supervisor	2.6
my length of time with the organization	2.6
my friendship with the supervisor	3.3
my economic need	4.2

The results in Table 4.18 are surprising considering that employees are so dissatisfied with their performance appraisals and with their pay increases. The data suggest that employees do believe that supervisors used performance as the most important criteria in making pay increase recommendations. The next most used criteria was length of time with supervisor and the organization.

Employee's Criteria for Pay Increases: One of the most important questions which needs to be answered when auditing merit pay systems is: do employees want pay to be based on individual merit? Unfortunately, obtaining the answer to such a question is not easy since to disagree with the concept of merit is about as popular as disagreeing with motherhood and apple pie. Therefore, our method was to ask a series of other questions which, along with employee responses, appear in Tables 4.19 through 4.22.

Table 4.19

25) In my job, all employees should get the same percentage pay increase.

	SA	MA	?A	?D	MD	SD	na
Number	205	58	76	132	95	262	10
Frequency	25%	7%	9%	16%	11%	31%	1%
Cumulative	25%	31%	41%	56%	68%	99%	100%

Notice that the majority of the respondents (58%) disagreed with the idea of equal pay increases.

Table 4.20

28) To be fair, everyone in my job should get the same pay increase.

	SA	MA	?A	?D	MD	SD	na
Number	167	50	74	135	98	297	10
Frequency	20%	6%	9%	16%	12%	36%	1%
Cumulative	20%	26%	35%	51%	63%	99%	100%

Tables 4.19 and 4.20 ask the same question in slightly different ways but there is high consistency in the responses. Employees strongly disagree that all employees should get equal pay raises.

Questions appearing in Tables 4.21 and 4.22 ask employees if they would like pay raises based on seniority. Again, the data indicate there is strong disagreement with using seniority for granting pay increases.

Table 4.21

26) Pay increases should be based primarily on length of service.

	SA	MA	?A	?D	MD	SD	na
Number	51	63	105	165	118	331	3
Frequency	6%	8%	13%	20%	14%	40%	0%
Cumulative	6%	14%	26%	46%	60%	100%	---

Table 4.22

27) In my job, the largest pay increases should go to the most senior employees.

	SA	MA	?A	?D	MD	DS	na
Number	37	41	66	176	120	387	9
Frequency	4%	5%	8%	21%	14%	46%	1%
Cumulative	4%	9%	17%	38%	53%	99%	100%

Based on these data it is safe to conclude that employees do wish individual merit to be used as a basis for allocating pay increases. Further, they even believe that supervisors tend to use performance to make pay increase decisions (Table 4.18). However, they apparently think that the supervisor's evaluations are biased since they do not agree that their performance is reflected in their performance evaluation (Tables 4.9 and 4.10), or their merit pay increase (Tables 4.13, 4.14, and 4.15). These data suggest the need to train supervisors in performance appraisal and the need to improve the merit pay system.

Chapter 5: Summary and Conclusions

Introduction

This document reports a study which was conducted to evaluate the merit pay system in a major transit system in the United States. The study was conducted under a grant from the Urban Mass Transit Authority within the Department of Labor. The findings in this report are based on an analysis of employee attitudes as measured by our survey and organizational records. These findings, conclusions, and our recommendations are contained in this chapter.

Do Employees Want Merit Pay?

Questionnaire data indicate that transit authority employees do, in fact, want a merit pay system. This finding was systematically substantiated with our line of questioning. First, we asked employees what criteria were used in determining their last pay increase (Table 4.18). Employees, on average, indicated that past job performance was the most important criteria. Since this question does not directly reflect what an employee might <u>want</u> used as a criteria, and since asking employees if they want a merit system is a leading question, a second way to get at the importance of a merit system is to ask employees if they'd like their pay to be based on other, non-merit criteria. We did this by asking employees if they would like their pay increases based on an equal raise basis (Tables 4.19 and 4.20), or a seniority basis (Tables 4.21 and 4.22). These are two pay increase criteria often offered in lieu of a performance based system. Interestingly, transit employees overwhelmingly rejected both of these as pay increase criteria. Therefore, unless there is some other important criteria which we overlooked, we must conclude that transit authority employees do believe in the merit concept.

What Criteria Do Supervisors Use for Appraisals?

As indicated above, we asked employees the criteria upon which they thought supervisors based pay increases (Table 4.18). On average, employees rated past performance as the most important criteria employed by their supervisor. In other words, it was job performance which was most important in determining their pay increase, and not some other criteria.

Are Employees Satisfied With The Merit Pay System?

Paradoxically, while transit employees believed in merit as a criteria for pay increases, and while they believe supervisors used merit as a basis for pay increases, 64 percent of the respondents were dissatisfied with the last merit increase they received (Table 4.17). There would seem to be several possible explanations for this finding. First, it is possible that employees do not agree with their supervisor's assessment of their performance. This is reflected by the fact that employees do not think that job-related feedback from their supervisor is adequate (Tables 4.11 and 4.12). This discrepancy between employee and supervisory perceptions of performance is further evidenced by the results in Tables 4.8, 4.9, and 4.10 which indicate that a substantial proportion of employees (nearly 50%) are dissatisfied with their last performance review and think that their last performance review was too low relative to their actual performance.

Two other observations are important in the analysis of this data. First, we found that there is a strong correlation between satisfaction with performance appraisal rating and satisfaction with the last merit increase ($r = .58$, $n = 682$, $p = .0001$). Second, we also found a very strong correlation between satisfaction with the last performance appraisal rating and the actual performance evaluation score ($r = .64$, $n = 689$, $p = .001$). In other words, those employees who got high ratings were very satisfied, those employees who received low supervisory ratings tended to be dissatisfied. These results are suggestive of two possible scenarios. In one scenario, if one assumes that supervisory ratings are reflective of true performance, then the performance review system and the pay system are doing their intended job; rewarding high performers. The reason that some employees are dissatisfied may be a natural result of their own failure to perform at high levels. On the other hand, in a scenario in which supervisory performance scores are not accurate reflections of true performance, then there are some high performers who are not being fairly treated and there are some low performers who are being over-rewarded. We suspect that this last scenario might be occurring some of the time based on the fact that about 45 percent (Tables 4.11 and 4.12) of the employees do not feel that they receive adequate feedback about their performance.

Do Supervisor's Ratings Have Serious Bias?

Our analysis reveals that all supervisors do not rate their employees the same. The data indicate that there are large differences between supervisors in the average performance score they give to their subordinates. On the one hand, the data could mean that there are true differences in average performance between supervisory units. On the other hand, it is possible that some supervisors are more lenient in their evaluations while other supervisors are excessively strict in their evaluations. The positive news for this organization is that the amount of spread between supervisor's scores has decreased over the past three years. Three years ago, about 43% of the variation in scores occurred between units. Two years ago it was 48%, and in 1985 about 40% of the variation in performance evaluation scores occurred between supervisor. The problem of major differences between supervisory units is serious because a perception of unwarranted bias can jeopardize the perception of equal and fair treatment for all employees. In light of the levels of dissatisfaction with the merit pay system, this second scenario warrants investigation.

A second type of supervisory bias was identified. This bias, which we have termed the "totem pole effect" is apparent among only a small number of supervisors (13). These supervisors are letting the job worth of employees' jobs bias their performance evaluations; employees at higher job levels are receiving systematically higher performance appraisal scores. The average correlation between job worth scores (pay grade for the job) and performance appraisal score for employees in these 12 supervisory units was $r = .32$ ($N = 132$, $P = .0002$). This is a bias which only certain supervisors exhibit; however, it is a serious bias which can probably be corrected by training.

Are The Same Employees Rewarded Year to Year?

These data indicate that supervisory assessments of employees over time are consistent. That is, high performers in one year tend to be high performers in subsequent years, and vice versa. Under an assumption that good employees are good employees year in and year out, and that problem employees tend to remain problem employees, these data are not surprising.

What is The Relationship Between Performance and Merit Pay?

One of the more surprising statistics in this study is the relatively low correlation between employee's performance appraisal scores and their pay increases, especially for the first two years of the program (1983 and 1984). Given the nature of the study methodology, and given the fact that performance score is supposed to drive the merit increase, we expected to find the correlation between these two variables much stronger than it is. During the 1983 year the correlation was $r = .44$ and for 1984 the correlation was $r = .32$. This relationship improved during the last study year (1985). For that year the correlation was $r = .73$.

Our analysis of organizational records and employee attitudes lead us to a brief set of recommendations which are in the next section of this report.

Recommendations

Based on the results of our analysis we would make the following recommendations to transit authority management.

- Investigate whether or not performance scores given by supervisors are reflective of true performance.
- Conduct supervisory training in management by results systems so that supervisors provide feedback to employees on a continuous basis.
- Investigate to determine if the variance in average evaluations of employees across supervisory units is a result of true performance differences, or a result of evaluator bias. If the results are due to evaluator bias, then we would recommend a training program for supervisors which trains them in the types of biases which they may be subject to. If the results are due to true performance differences, then there may be isolated performance problems which need to be addressed by management.
- Conduct periodic analyses of employee attitudes toward the merit pay system, and a re-examination of employee records to determine if the fine tuning of the merit pay system has resulted in a system which is doing a better job of achieving transit authority objectives of higher productivity through a highly motivated work force.

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TO: TRANSIT EMPLOYEES

FROM: Virginia Polytechnic Institute and State University

SUBJECT: Employee Attitude Survey

The purpose of this study is to survey the attitudes and opinions of transit employees who are eligible to participate in the merit pay program. Through this survey we hope to learn more about your feelings concerning transit authority policies and procedures as well as other work-related issues. Results of this study will be utilized for academic research and to satisfy requirements of a funded university research grant. This study is being conducted by researchers from Virginia Polytechnic Institute and State University.

To insure that the study results are kept confidential, Dr. Steve Markham, a professor from Virginia Tech, and Mike Vest, a Ph.D candidate, are conducting the survey. A summary of our findings will be provided to transit authority management. However, your individual responses will be kept strictly confidential. Management, your supervisor, or any other transit authority employee **WILL NEVER** see your completed questionnaire or have access to the answers that you, as an individual, give.

This survey is not a test - **there are no right or wrong answers!** Your answers will be combined for various employee groups so that employee responses will be completely anonymous. The results of this study will give management a better picture of the attitudes of employees subject to the merit pay system **only if your answers reflect the way you really feel.**

Thank you for assisting us in our research project on merit pay.

* * * CIRCLE THE APPROPRIATE RESPONSE * * *

Read each statement below and show how you feel about the statement by circling the appropriate letters in the column on the right.

"SA" = STRONGLY AGREE	"?D" = SOMEWHAT DISAGREE
"MA" = MODERATELY AGREE	"MD" = MODERATELY DISAGREE
"?A" = SOMEWHAT AGREE	"SD" = STRONGLY DISAGREE

An "na" means that the statement is NOT APPLICABLE TO YOU

1. I earn most of the money in my household. .... SA MA ?A ?D MD SD na
2. I (or my family) relies mostly on my income to meet my/our needs. .... SA MA ?A ?D MD SD na
3. I (or my family) must have my income to survive. .... SA MA ?A ?D MD SD na
4. My income is not absolutely necessary, but it does contribute to the quality of life in our household. .... SA MA ?A ?D MD SD na
5. The size of my last pay increase was meaningful to me. .... SA MA ?A ?D MD SD na
6. If my last pay increase had been one-half of what it was, it would still have been meaningful to me. .... SA MA ?A ?D MD SD na
7. If my last pay increase had been one and one-half times what it was, it would have been meaningful to me. .... SA MA ?A ?D MD SD na
8. If my last pay increase had been two times what it was, it would have been meaningful to me .... SA MA ?A ?D MD SD na
9. I am fairly paid compared to other employees who do similar jobs **in this organization** .... SA MA ?A ?D MD SD na
10. I am fairly paid compared to what **other employers** are paying for my kind of work. .... SA MA ?A ?D MD SD na
11. I am fairly paid compared to the **bus drivers** .... SA MA ?A ?D MD SD na
12. I am fairly paid compared to what other people **at my job level in other organizations** are paid .... SA MA ?A ?D MD SD na
13. I am fairly paid compared to other employees **in my work unit** .... SA MA ?A ?D MD SD na
14. Considering the skills I use in my work, I am very satisfied with my pay. .... SA MA ?A ?D MD SD na
15. I am satisfied with the wages/salary I am paid for the work I do. .... SA MA ?A ?D MD SD na
16. I am very satisfied with the last merit increase I received. .... SA MA ?A ?D MD SD na
17. My last pay increase was consistent with my job performance. .... SA MA ?A ?D MD SD na
18. I was satisfied with the size of my last pay increase when I think about what other employees received .... SA MA ?A ?D MD SD na
19. I was very disappointed with the size of my last pay increase when I think about what my coworkers got. .... SA MA ?A ?D MD SD na
20. Merit increases accurately reflect an individual's job performance. .... SA MA ?A ?D MD SD na
21. This organization gives pay increases on the basis of job performance. .... SA MA ?A ?D MD SD na
22. Poor performers at [redacted] are not likely to get pay increases .... SA MA ?A ?D MD SD na
23. At [redacted], the highest performers get the highest percentage pay increases. .... SA MA ?A ?D MD SD na
24. At [redacted], the highest performers get the highest dollar pay increases. .... SA MA ?A ?D MD SD na
25. In my job, all employees **should get** the same percentage pay increase .... SA MA ?A ?D MD SD na

"SA" = STRONGLY AGREE
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"?D" = SOMEWHAT DISAGREE
"MD" = MODERATELY DISAGREE
"SD" = STRONGLY DISAGREE

An "na" means that the statement is NOT APPLICABLE TO YOU

26. Pay increases **should be** based primarily on length of service. .... SA MA ?A ?D MD SD na

27. In my job, the largest pay increases **should go** to the most senior employees. .... SA MA ?A ?D MD SD na

28. To be fair, everyone in my job **should get** the same pay increase. .... SA MA ?A ?D MD SD na

29. I know the pay rates of the other people in my division. .... SA MA ?A ?D MD SD na

30. Individuals in my work group feel threatened when I perform well on my job. .... SA MA ?A ?D MD SD na

31. The reward for good performance in this organization is simply more work. .... SA MA ?A ?D MD SD na

32. My supervisor feels threatened when I do an outstanding job. .... SA MA ?A ?D MD SD na

33. I would try to be a high performer but I would be viewed as "rocking the boat". .... SA MA ?A ?D MD SD na

34. I have the ability necessary to perform my job successfully. .... SA MA ?A ?D MD SD na

35. I have the knowledge necessary to perform my job successfully. .... SA MA ?A ?D MD SD na

36. I have the training necessary to do my job. .... SA MA ?A ?D MD SD na

37. I am unsure of what my supervisor wants me to do on my job. .... SA MA ?A ?D MD SD na

38. I receive enough feedback concerning the quantity of my output on the job. .... SA MA ?A ?D MD SD na

39. I am provided with sufficient feedback on the quality of my work. .... SA MA ?A ?D MD SD na

40. I do not receive enough feedback about my job performance. .... SA MA ?A ?D MD SD na

41. If I work as hard as possible, I can complete my work on time. .... SA MA ?A ?D MD SD na

42. If I work as hard as possible, I can perform at a high level. .... SA MA ?A ?D MD SD na

43. If I work as hard as possible, I can produce high quality work. .... SA MA ?A ?D MD SD na

44. If I work as hard as possible, I can produce a large quantity of work. .... SA MA ?A ?D MD SD na

45. Compared to others **in the organization** , I am an above average performer. .... SA MA ?A ?D MD SD na

46. Compared to others **in my work group** , I am an above average performer. .... SA MA ?A ?D MD SD na

47. Compared to others **in similar jobs** , I am an above average performer. .... SA MA ?A ?D MD SD na

48. I trust my supervisor to treat me fairly. .... SA MA ?A ?D MD SD na

49. If I share job problems with my supervisor, it is likely to be held against me later. .... SA MA ?A ?D MD SD na

50. If I make a mistake on my job, my supervisor usually holds it against me. .... SA MA ?A ?D MD SD na

51. Generally speaking, my supervisor can be trusted. .... SA MA ?A ?D MD SD na

52. I trust top management to treat me fairly. .... SA MA ?A ?D MD SD na

53. Top management attempts to resolve employee complaints fairly. .... SA MA ?A ?D MD SD na

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"MA" = MODERATELY AGREE
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"?D" = SOMEWHAT DISAGREE
"MD" = MODERATELY DISAGREE
"SD" = STRONGLY DISAGREE

An "na" means that the statement is NOT APPLICABLE TO YOU

54. Top management has little regard for the average employee. ....SA MA ?A ?D MD SD na

55. Top management always follows through with what they say they are going to do. ....SA MA ?A ?D MD SD na

56. My immediate supervisor assures me that he/she has confidence in my integrity. ....SA MA ?A ?D MD SD na

57. My immediate supervisor pays attention to my needs and feelings. ....SA MA ?A ?D MD SD na

58. My immediate supervisor supports my actions and ideas. ....SA MA ?A ?D MD SD na

59. My immediate supervisor encourages me to solve problems and generate new ideas. ....SA MA ?A ?D MD SD na

60. My immediate supervisor explains the reasons behind programs and practices. ....SA MA ?A ?D MD SD na

61. I feel a sense of personal satisfaction when I do my job well. ....SA MA ?A ?D MD SD na

62. I take pride in doing my job as well as I can. ....SA MA ?A ?D MD SD na

63. I feel unhappy when my work is not up to my standards. ....SA MA ?A ?D MD SD na

64. It is important to me to look back on the day's work with the sense of a job well done. ....SA MA ?A ?D MD SD na

65. I feel that I have a number of good qualities ....SA MA ?A ?D MD SD na

66. I take a positive attitude toward myself. ....SA MA ?A ?D MD SD na

67. I wish I could have more respect for myself. ....SA MA ?A ?D MD SD na

68. I certainly feel useless at times ....SA MA ?A ?D MD SD na

69. I am very satisfied with the last performance evaluation I received ....SA MA ?A ?D MD SD na

70. My last performance evaluation was consistent with my job performance. ....SA MA ?A ?D MD SD na

71. I was very disappointed with my last performance evaluation ....SA MA ?A ?D MD SD na

72. I was very pleased with the results of my last performance evaluation. ....SA MA ?A ?D MD SD na

* * * ANSWER THE FOLLOWING QUESTIONS * * *

1. **WHAT DO YOU VALUE?** We want to find out how important each of these job characteristics is to you. Consider the job characteristics listed on the right in a situation where you are thinking about a new job. It is not likely that all job characteristics would be of equal importance to you in making your decision. Rank the job characteristics listed to the right according to how important they would be to you in your decision to take the new job. Place a 1 by the job characteristic you would consider the most important, a 2 by the characteristic you would consider second most important, and so on.

_______ *friendly coworkers*

_______ *job security*

_______ *opportunity for promotion*

_______ *pay/wages*

_______ *recognition for good work*

_______ *type of work*

_______ *working conditions*

2. What is your highest level of education? (Circle one.)

some high school	some college (or trade school)	some graduate work
high school graduate	college degree	masters degree or higher

3. The purpose of this question is to find out what **you think** were the most important factors determining **your last pay increase.** Please rank the five items listed below according to how important you think they were to your supervisor in determining **your last individual pay increase.** Place a 1 by the item you feel was most important, a 2 by the item you consider the second most important, and so on.

_______ my friendship with the supervisor
_______ my length of time with the supervisor
_______ my length of time with the organization
_______ my performance
_______ my economic need

Is there another factor which should be listed?
If so, specify: ____________________________

4. This question attempts to find out what **you think** were the most important factors determining the last pay increases **in your work group.** Please rank the five items listed below according to how important you think they were to your supervisor in determining the last pay increases in your work group. Place a 1 by the item you feel was most important, a 2 by the item you consider the second most important, and so on.

_______ our friendship with the supervisor
_______ our length of time with the supervisor
_______ our length of time with the organization
_______ our performance levels
_______ our economic needs

Is there another factor which should be listed?
If so, specify: ____________________________

5. Read each of the statements below and circle the best response from each pair.

Pay increases **should be** based on:	*cost of living*	**OR**	. . . *seniority.*
Pay increases **should be** based on:	*economic need* . .	**OR**	. . . *performance.*
Pay increases **should be** based on:	*seniority*	**OR**	. . . *economic need.*
Pay increases **should be** based on:	*performance*	**OR**	. . . *cost of living.*
Pay increases **should be** based on:	*cost of living*	**OR**	. . . *economic need.*
Pay increases **should be** based on:	*seniority*	**OR**	. . . *performance.*

6. How many hours overtime per week, on average, did you work during 1985? |_______|

7. How many subordinates report directly to you? |_______|

8. How many other people depend directly on you for financial support? |_______| people

9. Assume that you must allocate a total of $1,200 in pay increases to a high performer, an average performer, and a low performer. How much money would you allocate to each of these employees?

$ ______________ to the high performer
$ ______________ to the average performer
$ ______________ to the low performer
$ 1,200 TOTAL

10. I know what _______ % of my coworkers received for their last pay increase (for example, write 50 if you know what one-half of your coworkers received).

11. What do you think was the average pay increase this past year? ____________________

* * * CHECK THE APPROPRIATE RESPONSE * * *

Read each of the following statements carefully and place a check by the answer which comes closest to telling how you **actually** feel or act.

1. Does following a schedule
_______ appeal to you, or
_______ cramp you?

2. Are you more careful about
_______ people's feelings, or
_______ their rights?

3. Are you inclined to

_______ value sentiment more than logic, or

_______ value logic more than sentiment?

4. Are you

_______ easy to get to know, or

_______ hard to get to know?

5. Are you usually

_______ a "good mixer", or

_______ rather quiet and reserved?

6. Do you get more annoyed at

_______ fancy theories, or

_______ people who don't like theories?

7. Do you prefer to

_______ arrange dates, parties, etc. well in advance, or

_______ be free to do whatever looks like fun when the time comes?

8. Can you

_______ talk easily to almost anyone for as long as you have to, or

_______ find a lot to say to certain people or under certain conditions?

9. When you are with a group of people, would you rather

_______ join in the talk of the group, or

_______ talk individually to people you know well?

10. When you start a big project that is due in a week, do you

_______ take time to list the separate things to be done and the order of doing them, or

_______ plunge in?

11. When something starts to be the fashion, are you usually

_______ one of the first to try it, or

_______ not much interested?

12. Would you rather be considered

_______ a practical person, or

_______ an ingenious person?

13. In a large group, do you more often

_______ introduce others, or

_______ get introduced?

14. Would you rather have as a friend someone who

_______ is always coming up with new ideas, or

_______ has both feet on the ground?

15. When you go somewhere for the day, would you rather

_______ plan what you will do and when, or

_______ just go?

16. Would you rather

_______ support the established methods of doing good, or

_______ analyze what is still wrong and attack unsolved problems?

17. Do you more often let

_______ your heart rule your head, or

_______ your head rule your heart?

18. Are you

_______ male, or

_______ female?

19. How satisfied is your supervisor with your job performance?

_______ very dissatisfied

_______ dissatisfied

_______ moderately dissatisfied

_______ moderately satisfied

_______ satisfied

_______ very satisfied

_______ I don't know

20. How often is your job performance consistent with your supervisor's preferences?

_______ never occurs

_______ rarely occurs

_______ sometimes occurs

_______ often occurs

_______ occurs a great deal

_______ I don't know

21. How would you evaluate your job performance?

_______ outstanding

_______ superior

_______ competent

_______ needs improvement

_______ unsatisfactory

22. Compared to your actual level of performance, do you believe your performance rating was:

_______ much too high

_______ too high

_______ about right

_______ too low

_______ much too low

23. If you had rated your performance at the last review, the evaluation would have been:

_______ much higher

_______ higher

_______ about the same

_______ lower

_______ much lower

24. Consider the average pay increase this past year. Where did you fall with respect to the average increase?

_______ well above average

_______ above average

_______ about the same as average

_______ below average

_______ well below average

* * * CIRCLE THE APPROPRIATE RESPONSE * * *

Look at **EACH** pair of words listed below and **circle the word in each pair** which appeals to you more.

Which word appeals to you more?	*systematic* . . .	OR	. . . *spontaneous*
Which word appeals to you more?	*build*	OR	. . . *invent*
Which word appeals to you more?	*convincing* . . .	OR	. . . *touching*
Which word appeals to you more?	*reserved*	OR	. . . *talkative*
Which word appeals to you more?	*statement* . . .	OR	. . . *concept*
Which word appeals to you more?	*soft*	OR	. . . *hard*
Which word appeals to you more?	*forgive*	OR	. . . *tolerate*
Which word appeals to you more?	*hearty*	OR	. . . *quiet*
Which word appeals to you more?	*impulse*	OR	. . . *decision*
Which word appeals to you more?	*sensible*	OR	. . . *fascinating*
Which word appeals to you more?	*facts*	OR	. . . *ideas*
Which word appeals to you more?	*compassion* . .	OR	. . . *foresight*
Which word appeals to you more?	*orderly*	OR	. . . *easy-going*
Which word appeals to you more?	*systematic* . . .	OR	. . . *casual*
Which word appeals to you more?	*thinking*	OR	. . . *feeling*

* * * FILL IN THE BLANK (PLEASE PRINT CLEARLY) * * *

Your badge number: |____|____|____|____|____| Your division number: |____|____|____|____|

To whom do you report? Last name |____|____|____|____|____|____|____|____|____|____|____|____|____|

First name |____|____|____|____|____|____|____|____|____|____|____|____|____|

MANY THANKS FOR YOUR HELP!

APPENDIX B: REFERENCES

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