

**EFFECTS OF COMPENSATION STRATEGY  
ON JOB PAY DECISIONS**

**Working Paper 89-06**  
(Revised, May 1990)

**Caroline L. Weber**  
**Sara L. Rynes**

Center for Advanced Human Resource Studies  
New York State School of Industrial & Labor Relations  
Cornell University  
Ithaca, New York 14851-0952

This paper has not undergone formal review or approval of the faculty of the ILR School. It is intended to make the results of Center research, conferences, and projects available to others interested in human resource management in preliminary form to encourage discussion and suggestions.

## ABSTRACT

Previous research has revealed wide variations in pay for the same job, even within a single locality. To date, however, the sources of such pay differentials are not well understood. The present research investigates how compensation managers from a wide variety of organizations combine information about current job pay rates, market rates, and job evaluation points to arrive at new pay rates for jobs. In addition, it examines the role of two pay strategy variables (pay leadership position and external versus internal orientation) in job pay decisions, controlling for differences in organizational demographic characteristics (e.g., size, industry). Results suggest that pay strategies affect assigned pay levels, with higher pay being assigned by managers from firms with market-leading strategies and internal pay orientations. In addition, pay strategies appear to influence the relative weights attached to market survey versus job evaluation information in pay-setting for jobs. Specifically, although market survey information consistently explained more variance in assigned pay than did job evaluation, this effect was more pronounced among managers from firms having an external orientation. Organizational demographics also affected assigned pay levels, but to a lesser extent than pay strategies.

-----

We wish to thank the American Compensation Association, Cornell's Center for Advanced Human Resource Studies, the New York State School of Industrial and Labor Relations, and the U.S. Army Research Institute (Contract SRFC-MDA903-87-K-0001) for financial and staff support for this project. However, the authors retain sole responsibility for the views and findings contained herein. We would also like to thank Barry Gerhart, Harry Katz, George Milkovich, Judy Olian, Vida Scarpello, Pamela Tolbert, two anonymous reviewers, and participants in the research workshops at the Universities of Illinois, Iowa, and Maryland for helpful comments on earlier versions of this manuscript.

Economists have long recognized the existence of large differentials in pay for the same job, even in a single local labor market (Dunlop, 1957). However, the sources of these differentials are not well understood. To a large extent, this is because most studies of compensation differentials have focused on levels of analysis other than the job per se.

Economists, for example, have devoted most of their efforts to explaining individual earnings differentials. These are modeled as a function of demographic and human capital characteristics (e.g., education, experience), controlling where possible for organizational characteristics such as size or industry (e.g., Becker, 1964; Dunn, 1986; Mellow, 1982; Mincer & Polachek, 1974). Similarly, management and compensation researchers have focused primarily on the impact of individual characteristics (seniority, performance levels) on pay allocations, particularly with respect to merit increases (e.g., Bartol & Martin, 1989; Fossum & Fitch, 1985). Both disciplines have modeled executive compensation levels as a function of organizational and market characteristics (e.g., Gerhart & Milkovich, forthcoming; Gibbons & Murphy, 1990).

Economists have also examined the sources of inter-industry differentials across a wide range of jobs (e.g., Dickens & Katz, 1986; Masters, 1969; Weiss, 1966). However, the unique contribution of job pay decisions to individual earnings has been largely ignored in both the economics and management literatures.

This is a serious omission, because job pay decisions are critical determinants of individual earnings. Research on the earnings gap between men and women has consistently revealed that differences in job placement and job pay, rather than individual differences in pay for the same job, account for the bulk of the difference in male and female earnings (Treiman & Hartmann, 1981). Indeed, in the few cases where job-level data have been incorporated into earnings equations, job variables have completely dominated individual characteristics as sources of variance in earnings (e.g., Gerhart & Milkovich, 1989; Rosenbaum, 1985).

Job pay decisions are also important because they appear to afford considerable discretion to decision makers. The pay strategy literature suggests that managers make conscious choices about whether their firms will lead or lag the market (Foulkes, 1980; Weeks, 1976), whether pay structures will be steep or flat (Kanter, 1987; Lawler, 1986), whether particular jobs will receive unique compensation treatment (Belcher, 1974; Pfeffer & Davis-Blake, 1987), and whether job rates will be driven more by internal or external considerations (e.g., Milkovich & Newman, 1990). Discretion is also implied by the efficiency wage literature, which assumes that managers make explicit decisions to pay above-market salaries in order to attract and retain higher quality workers (e.g., Weiss, 1980; Yellen, 1984). Finally, the sheer magnitude of interfirm differentials for the same job title (up to 300% in a single location) makes it unlikely that differences in job content are the only factors operating (Dunlop, 1957; Gerhart & Milkovich, forthcoming; Lester, 1952; Rees, 1966; Treiman & Hartmann, 1981).

Given that the most direct determinant of individual earnings is the job held rather than the stock of human capital per se (e.g., Gerhart & Milkovich, 1989; Rosenbaum, 1985; Thurow, 1975), the failure to incorporate job-level data into individual earnings equations is likely to lead to serious misspecification problems. As such, it is important to (1) understand how job pay decisions are made and (2) incorporate those decisions into future studies of individual earnings.

The present research addresses the first of these research needs. Specifically, we examine how managers combine information about current job pay rates, market survey rates, and job evaluation results in making job pay decisions. Additionally, we investigate how job pay decisions are influenced by differences in compensation strategies and organizational demographics such as size and industry. Finally, we offer tentative observations concerning the role of job evaluation in job pay decisions, an area of considerable controversy in the job pay literature (e.g., Livernash, 1957; Milkovich & Newman, 1990; Remick, 1981; Schwab, 1980).

## RESEARCH QUESTIONS AND HYPOTHESES

### **Role of Current Pay, Market Rates and Job Evaluation in Job Pay Decisions**

Managers make job pay decisions on the basis of multiple factors. These include current pay structures, market surveys, job evaluation, collective bargaining, and attraction and retention experiences (e.g., Johnson & Ash, 1986; Northrup, 1980; Schwab, 1980). However, most American workers are not covered by collective bargaining agreements (Freeman & Medoff, 1984), and there is no consistent method for integrating direct information about labor supply and demand into job pay decision processes (Rynes & Milkovich, 1986). In practice, then, the vast majority of compensation managers deal with three pieces of information in determining job pay: the current pay structure, market survey information, and job evaluation results (e.g., Mahoney, Rosen & Rynes, 1984).

How these pieces of information are combined can make a substantial difference to pay outcomes. Prior research has shown, for example, that although market surveys and job evaluation results are highly correlated, they nevertheless frequently produce different rank orderings of job worth (e.g., Treiman, 1979; Milkovich & Newman, 1990). This fact has also been evident in compensation litigation (Rynes and Milkovich, 1986). Indeed, the major impetus for comparable worth litigation has been the fact that pay rates based on market surveys often produce less favorable results for female-dominated jobs than would pay assignments based on job evaluation results. Thus, job pay rates depend, in a very real way, on the relative importance attached to market surveys versus job evaluation results in the job pay decision.

**A priori**, market surveys and job evaluation might simply be regarded as alternative ways of assessing job worth, such that neither is likely to dominate the other in pay decisions. In practice, however, there are a number of reasons to expect that market survey information will be weighted more heavily than job evaluation. For example, market rates are transmitted in terms of a scale that is used by everyone (dollars), making it easier to interpret and compare the

information, whereas job evaluations are described in terms of job point totals which vary in meaning and value across companies. Additionally, examination of comparable worth litigation suggests that when market rates and job evaluation conflict, both employers and judges tend to accord the market more weight in determining appropriate compensation levels (Rynes & Milkovich, 1986). Court testimony reflects the dual beliefs that, regardless of job evaluation results, applicants will not be attracted to "men's jobs" if they are paid at below-market rates, and employers will be at a cost disadvantage if they raise pay for "women's work" to above-market levels. Finally, most employers do not openly communicate the details of their job evaluation ratings. As such, employees are more likely to know about market rates than job evaluation points, and hence to be more sensitive to deviations from market practices than from job evaluation results. For these reasons, we hypothesize:

H1: Market survey information will be weighted more heavily than job evaluation results in job pay decisions.

Beyond the relative contribution of market surveys and job evaluation to job pay, an additional question concerns the combinatory model used to integrate these two pieces of information. It is important to know whether changes in market rates and job evaluation points exert a linear effect on job pay decisions, or whether nonlinear decision rules (e.g., declining or increasing marginal effects) set in at some point. It is also of interest whether market survey and job evaluation data are considered independently, or whether the effect of job evaluation information depends in some fashion on the specific level of the market rate.

Previous decision research has shown that, in general, additive linear models do a good job of predicting most judgments, particularly at a between-subjects level (Einhorn & Hogarth, 1982). Although this principle has not been tested with respect to compensation decisions, we predict:

H2: Market survey and job evaluation information will be combined in additive linear fashion in making job pay decisions.

### **Effects of Pay Strategies on Job Pay Decisions**

A review of the compensation literature suggests that organizations have not one, but multiple, pay strategies. However, many of these strategies are directed toward issues other than job pay (e.g., pay form, individual pay; Milkovich & Broderick, in press). In this study, we restrict our attention to two strategies that are explicitly associated with job pay decisions: (1) market leadership position and (2) external versus internal orientation.

**Market position.** Managers appear to make conscious decisions about whether pay levels should lead, lag, or meet the market (e.g., Foulkes, 1980; Milkovich & Newman, 1990; Weiss, 1980).<sup>1</sup> However, there has been some debate about the extent to which intended pay level strategies are "realized" in actuality. For example, Reynolds (1951) concluded (anecdotally) that the correspondence between managers' perceptions of market position and actual pay levels was surprisingly weak. However, Gerhart and Milkovich (forthcoming) reported a correlation of .50 between firms' intended executive pay levels and actual executive pay. Thus, we hypothesize:

H3: Managers from firms with market-leading policies will assign higher pay rates than market meeters, while those from market-lagging firms will assign lower ones.

**External/Internal Orientation.** In the development of any compensation system, the attempt to simultaneously achieve multiple objectives will at some point produce conflicts that force decisions about relative priorities. One such strategic choice is whether to emphasize internal consistency in the pay structure, or external competitiveness relative to market competitors (Milkovich and Newman, 1990). Firms with a strong internal orientation are believed to place a high priority on the historical internal positioning of jobs (and incumbents)

in pay structures (Doeringer and Piore, 1971; Edwards, Reich & Gordon, 1975; Osterman, 1988), hoping to decrease turnover and increase workforce stability. On the other hand, those with an external orientation are believed to be more responsive to market rates for a wide range of positions (Levine, 1987; Snow & Miles, 1986), facilitating recruitment and hiring efforts but perhaps increasing turnover.

These hypothesized differences raise the question of whether firms with different orientations place different **weights** on market survey versus job evaluation information in assigning job pay. Traditionally, market surveys have been viewed as reflecting "external" worth, and job evaluation, "internal" worth (e.g., Remick, 1981; Steinberg, 1985; Treiman, 1979). To the extent that this is a valid assumption, differentially oriented firms should place different relative weights on the two pieces of information. Specifically:

- H4: Managers from externally oriented firms will place relatively more weight on market survey information than will managers from internally focused firms. Conversely, managers from internally oriented firms will place relatively more weight on current pay rates and job evaluation points than will managers from externally focused firms.

It should be noted, however, that previous literature also suggests an alternative hypothesis. Specifically, some experts have argued that the primary function of job evaluation is not to measure internal worth, but rather to "capture" market pay policies for key jobs and to transmit those (i.e., market) policies throughout the organization (Livernash, 1957; Schwab, 1980). In terms of the present study, this would suggest that the relative weights placed on market and job evaluation information might not differ by orientation, because the true purpose of job evaluation is not to estimate internal worth. Rather, when both market rates and job evaluation results are available for a given job, job evaluations should be regarded as either redundant (when consistent with market surveys) or inferior data (when inconsistent). At present,

we know of no empirical evidence to suggest which view of job evaluation predominates in actual pay-setting. As such, hypothesis 4 is based on the conventional rhetoric of job evaluation as a measure of internal worth.

A final question is whether externally oriented firms pay more, on average, than internally oriented ones. Although one possibility is that neither orientation inherently implies higher pay levels than the other, a case can be made that internally oriented firms might pay less than externally oriented ones. Specifically, because externally oriented firms hire outside job candidates across the entire spectrum of organizational levels, they are directly subjected to market pay pressures at multiple levels. In contrast, in internally oriented firms, only entry-level jobs are directly affected by market rates for external job candidates; the rates of pay for higher-level jobs are only affected indirectly and therefore may change more slowly. Additionally, to the extent that externally oriented firms are more likely to hire non-entry-level employees away from other organizations, they may have to pay a premium to induce the necessary turnover. Hence, we predict:

- H5: Managers from externally oriented firms will assign higher pay levels, on average, than those from internally driven firms.

## **METHOD**

### **Overview**

A policy-capturing approach was used to study the job pay-setting decisions of compensation professionals. Compensation managers assigned new job pay rates on the basis of current job pay, market survey rates, and job evaluation results. After completing all pay assignments, subjects answered questions about themselves, their companies, and their companies' pay strategies. This information permitted variance in pay decisions to be examined as a function of personal, organizational, and strategic variables.

Experimental policy-capturing was used for a number of reasons. First, use of an experimental design permitted access to the decision processes of hundreds of compensation professionals from a wide variety of organizations. Such access would be impossible to obtain via field surveys, given that information about pay strategies, pay-setting processes, and job pay levels is typically regarded as highly sensitive and proprietary. Beyond that, experimental designs facilitate a direct focus on specific research questions, while controlling extraneous sources of variance and minimizing alternative explanations for obtained results. Moreover, policy-capturing has been shown to minimize a number of cognitive biases associated with direct self-reports of decision processes, such as lack of self-insight into unequal information weighting (Slovic & Lichtenstein, 1971). And finally, experimental policy-capturing results have been shown to be predictive of actual decisions in field settings (e.g., Olson, Dell’Omo & Jarley, 1987), particularly when experimental manipulations are realistic in relation to the natural decision environment (Levin, Louviere, Schepanski & Norman, 1983).

### **Sample**

Questionnaires were sent to approximately 1300 members of the American Compensation Association (ACA) who had taken the ACA’s certification course on job- and individual-pay setting. This course includes instruction about the creation of pay structures based on market wage surveys and job evaluation. Therefore, respondents from this sample could be expected to understand the nature of the job pay-setting task.

Pretesting revealed that the simulation took a long time (often more than an hour) to complete. Hence, all 1300 recipients were personally telephoned to encourage their participation. Completed questionnaires were received from 411 individuals, for a response rate of 32%. Missing data further reduced the effective sample size for some analyses (although never below 363 individuals). A comparison of respondents to nonrespondents on variables that

were observable from the mailing list (sex of respondent, version of questionnaire, public versus private sector) did not reveal any significant differences.

### **Procedure**

In order for the results of policy capturing research to be generalizable, it is important that the decision simulation mirror real-world conditions as closely as possible (Levin, et al., 1983). A variety of steps, described below, were taken to insure that both the task and the experimental manipulations were as realistic as possible.

Subjects received a questionnaire containing one page of instructions, three pages of job pricing information, and two pages requesting background information. The job pricing information contained current pay rates, market survey medians, job evaluation points, job titles and job descriptions for nine jobs. The instructions (truthfully) informed the subjects that the data they were about to see had been taken from a real organization in the process of reevaluating its pay structure. Managers were instructed to assign new pay rates (dollars per month) to each of nine jobs "according to the same priorities that would be used in your own organization." Instructions also reminded participants to think in terms of job pay rates rather than salaries for individual employees.

To avoid possible detection or discussion of the experimental manipulations, no two surveys were sent to the same company location. Thus, each respondent also represented a unique organizational unit. After completing the pay assignments, subjects provided information about themselves and their organizations. These variables were subsequently analyzed to see what effects, if any, they had on managers' decision processes or outcomes. Respondent and organizational characteristics are reported in Table 1.

(Insert Table 1 about here)

## Manipulations

Job titles, descriptions, and current pay rates for the simulation were drawn from the Washington State job evaluation project (Remick, 1981). Each subject assigned new pay rates for nine jobs based on the following pieces of information: job title and description, current pay rate, median market survey rate, and job evaluation points.

In order to determine whether pay-setting processes generalize across male- and female-dominated job categories, two versions of the questionnaire were created. One version contained only female-dominated (> 70% female) jobs; the other, only male-dominated jobs. Each subject received only one version of the questionnaire. Results showed that job gender had no effect on pay outcomes. Furthermore, results concerning the pay strategy variables were unaffected by the inclusion or omission of the job gender dummy variable. As such, current results are presented collapsing across both versions of the questionnaire. (Readers interested in a more detailed description of the gender manipulation and results should consult Rynes, Weber & Milkovich, 1989.)

Table 2 contains the job titles, current pay rates, market medians, and job evaluation points used in the questionnaires. Origins of the first two pieces of information are straightforward. Job titles and abbreviated job descriptions were abstracted from the Washington State study and the Dictionary of Occupational Titles (1977). Current pay rates were taken from rates in effect at the time of the Washington state study, but inflated to 1986 levels (the simulation was conducted in early 1987).

(Insert Table 2 about here)

A fundamental objective of the study was to determine how job pay decisions are made when alternative sources of information about job worth (current pay, market rates, job evaluation points) suggest different pay outcomes. Conflicting information was built into the simulation via the market survey and job evaluation manipulations.

Because current pay, market rates, and job evaluation points are highly correlated in the real world, both the market survey and job evaluation manipulations were derived from current pay rates. Turning first to the market manipulation, three (randomly chosen) jobs received market survey manipulations that were 6% higher than the current pay rate (Jobs 1, 4 & 6; Table 2). Three other jobs (Jobs 2, 3 and 7) received market survey manipulations that were 6% less than their current pay rates. Market rates for the remaining three jobs (Jobs 5, 8 and 9) were designed to reflect no discrepancy between the market rate and current pay. To do this, however, the market survey rates were manipulated up or down slightly (1-2%) to disguise their direct relationship to current pay.

Job evaluation points were likewise based on current pay. This time, however, a linear transformation was applied to current pay rates ( $\text{Current Pay} \times .4$ ) to create a job evaluation baseline on a different scale. This step was necessary to disguise the relationships between current pay, the market rate manipulation, and the job evaluation manipulation; (without transformation, the market and job evaluation manipulations would have resulted in identical numbers). Following transformation, baseline job evaluation points were manipulated in exactly the same way as the market survey rates (i.e., 6% above baseline, 1-2% above or below baseline, and 6% below base). This is important, because equivalently-sized manipulations are essential where there is interest in determining the relative importance of informational cues to overall judgments.

The market survey and job evaluation manipulations were completely crossed (3 x 3) and randomly assigned to each of the nine jobs. In addition to introducing the desired "conflict" across the three sources of information, this design yielded two additional attractions. First, the raw numbers for current pay, market rate, and job evaluation were strongly correlated, just as they are in actual compensation administration problems. However, the crossing of the market survey and job evaluation manipulations (-6%, 0, +6%) yielded orthogonal factors in the

analyses, thus permitting unambiguous determination of the relative contribution of each to overall pay decisions (Zedeck, 1977).

### Measures

The two **pay strategy** variables were measured as follows. Market position was assessed via the following question: "For the kinds of jobs described in this questionnaire, does your organization try to meet the market rate, or is it a market leader, or follower? Circle only one." Answers were dummy coded, with "meets market" as the omitted category.

External/internal orientation was derived from the following question: "If you were forced to say whether your company's pay rates are influenced more by market forces or internal forces (e.g., existing pay structures, organizational politics)<sup>2</sup> for these kinds of jobs, which would you choose? Check only one." Internal orientation was treated as the omitted category.

Consistent with prior economic research, a variety of **organizational demographic characteristics** were also measured and included as control variables. For example, organizational size was dummy coded into four categories: less than 500; 500-999; 1000-9999 (omitted category), and more than 10,000; (separate variables were used because the relationship between size and assigned pay level was nonlinear). Industry was dummy coded according to 2-digit SIC codes into the following categories: agriculture and mining; manufacturing; public utilities and transportation; retail and wholesale trade; finance; services; public administration, and diversified or multiple classifications (omitted category). Annual sales volume was coded in thousands of dollars, but was later omitted due to large amounts of missing data (particularly from financial service organizations). Organizational change was dummy-coded as "1" if the organization had recently undergone a major acquisition, merger, or reorganization. Organizational life cycle was dummy coded as expanding, stable (omitted category), or declining. Recruitment frequency for the jobs in question ranged from "1" (hardly ever recruit) to "7" (recruit almost continuously). Recruitment difficulty was coded as the average of three

7-point scales reflecting the organization's difficulty in filling clerical/administrative, technical, and production jobs (1 = extremely easy; 7 = extremely difficult). Unionization was dummy-coded as "1" if the respondent's organization was either partially or totally unionized for the types of jobs in the questionnaire.

Respondents' **personal characteristics** (e.g., title, experience) were also measured. However, there were no **a priori** hypotheses as to how respondents' personal characteristics would affect their job pay decisions, particularly in light of the fact that respondents had been instructed to respond in accordance with their organization's (rather than their own personal) policies. Indeed, because preliminary analyses revealed no personal characteristics main effects or interactions with the strategy variables, personal characteristics were omitted from subsequent analyses.

### **Analyses**

Hierarchical multiple regression methods were used to determine the impact of the experimental manipulations, organizational characteristics, and pay strategies on assigned job pay rates (see Table 3). **Model 1** examined job pay decisions as a function of only the experimental manipulations (current pay, market rate, job evaluation points) in order to test whether market rates are given more weight than job evaluation points in job pay decisions (Hypothesis 1). Model 1 also included the market rate x job evaluation interaction in order to test whether managers combine this information in additive linear fashion (Hypothesis 2).

**Model 2** examined the contribution of organizational demographic variables, over and above current pay, market survey, and job evaluation information. The organizational demographic characteristics that were included were: size, industry, unionization, life cycle, organizational change, recruiting difficulty, and recruiting frequency. Finally, **Model 3** examined whether pay-leading and external orientation strategies have the hypothesized positive effects on assigned pay levels (Hypotheses 3 and 5), controlling for organizational demographic

characteristics. By including orientation x manipulation interactions, Model 3 also tested the hypothesis that market surveys and job evaluation are differentially weighted by externally-versus internally-oriented firms (Hypothesis 4).

(Insert Table 3 about here)

The three models were subsequently tested a second time, omitting current pay rate as an independent variable and instead using **change** in pay rates (new rate minus current rate) as the dependent variable (Table 4). Examination of this second set of models corresponds to the fact that in all but startup organizations, job pay decisions are made incrementally in relation to the current pay structure. Additionally, by removing the sizeable effects of current pay on new pay rates, these change analyses facilitate comparison of the relative contributions of organizational demographic characteristics and pay strategy variables on pay decisions. Relative effect sizes were assessed via changes in  $R^2$  and incremental F-tests of full-versus-reduced models (Pindyck & Rubinfeld, 1981, p. 117-119).

(Insert Table 4 about here)

## RESULTS

Table 3 summarizes the influence of the experimental manipulations, organizational demographics, and pay strategies on new pay assignments; Table 4 summarizes their influence on changes in pay. A comparison of the two tables shows that coefficients and significance levels for the independent variables (other than current pay) are very stable across the sets of analyses. However, the inclusion of current pay as a predictor adds substantially to overall variance explained in the new pay models (Table 3). This finding reflects the substantive reality that job pay decisions are heavily anchored in past pay practices, as well as the methodological principle that change scores yield lower variance-explained estimates than raw scores (e.g., Cronbach & Furby, 1970).

Turning to the a priori hypotheses, both the market rate and job evaluation manipulations contributed significantly to managers' pay decisions in all models. However, consistent with Hypothesis 1, changes in market rates consistently produced larger differences in assigned pay, particularly in Models 1 and 2. The relative reduction in size of the market coefficients in Model 3 suggests that pay strategies were responsible for at least some of the variance attributed to the market manipulation in the less comprehensive models.

Contrary to Hypothesis 2, there was a significant (negative) interaction between the market rate and job evaluation manipulations. Plotted cell means suggested that an additive model fitted the data quite well, except for the cell where both manipulations were at the +6% level (Job 6). In this case, subjects awarded a much smaller increment over current pay than would have been predicted by a purely additive model (\$77 actual increment versus \$126 predicted; see Figure 1).

(Insert Figure 1 about here)

Turning to the pay strategy variables, managers from firms with market-leading policies assigned significantly higher pay levels than those from market-meeting firms. Similarly, market-laggers assigned lower pay, thus confirming Hypothesis 3.

Hypothesis 4, which predicted an interaction between external/internal orientation (E/I) and the experimental manipulations, was partially supported. Specifically, the orientation x market rate interaction confirmed that managers from externally oriented firms placed greater weight on market rates than did those from internally oriented firms. However, the interaction between orientation and the job evaluation manipulation was not significant, implying that managers from internally oriented organizations did **not** place greater weight on job evaluation than externally oriented managers.

These preliminary results were confirmed by running separate regressions for internally and externally oriented respondents. A comparison of standardized coefficients showed that

internals and externals weighted the job evaluation manipulation virtually identically (e.g.,  $\beta = .22$  for externals, versus  $.21$  for internals). However, externals placed substantially more weight on the market manipulation than did internals ( $\beta = .49$  versus  $.29$ ). Put another way, internals paid roughly equivalent attention to market survey and job evaluation information, whereas externals weighted market information approximately twice as heavily as job evaluation results.

Examination of cell and marginal means for the two manipulations revealed further that differences in reactions to the market manipulation were concentrated almost exclusively in the three jobs with the -6% market manipulation (Table 5). Specifically, externals were far more likely than internals to reduce job pay when market rates were below current pay levels: marginal means for the -6% market manipulation were -\$23 for externals versus +\$4 for internals (bottom row, Table 5).

(Insert Table 5 about here)

This difference in reactions to the -6% market manipulation also contributed to the finding of a negative main effect for external orientation. Across all manipulations, externals assigned an average increment of \$28, versus \$41 for internals. Again, the source of this difference was concentrated almost exclusively in the -6% market condition. This result conflicts with our a priori hypothesis that pay assignments of internally oriented firms would lag behind those of externals (Hypothesis 5).

Turning to comparisons of the three models, a number of organizational characteristics (size, industry, recent organizational change, and recruitment difficulties) had main effects on pay assignments (Model 2). However, incremental F-tests revealed that as a set, organizational characteristics did little to improve model efficiency (Model 2 vs. 1). In comparison, the addition of the pay strategy variables contributed significantly to efficiency when compared against both Models 1 & 2. Although not reported in the tables, additional analyses revealed

that the most efficient model was one containing **only** the manipulations and the pay strategy variables, omitting organizational demographic characteristics (incremental  $F = 27.33$ ).

Finally, given the impact of pay strategies on pay outcomes, we attempted to ascertain the determinants of pay strategy decisions using multinomial logit and probit procedures (Hanushek & Jackson, 1977) to "predict" the choice of market position and orientation. Each of these strategies was modeled, in turn, as a function of industry, unionization, organizational change, life cycle, size, and the other strategy variable (e.g., orientation was modeled as a function of pay leadership position, and vice versa).

Turning first to external/internal orientation, probit results suggested that externally driven organizations were significantly more likely to be market meeters (rather than leaders or followers) as compared with internals. These results were confirmed by post hoc examination of the leadership x orientation frequency distribution, which showed that the vast majority (79%) of externals were market meeters, while internally oriented firms exhibited a more evenly distributed range of market positions (24% laggards, 59% meeters, 17% leaders). Additionally, public utilities and services were significantly less likely to report external orientations than were diversified and multiple classification organizations (the omitted category).

Turning to market position, multinomial logit results again suggested that external orientation was associated with intentions to meet (rather than to lead or lag) the market. Unionized organizations were more likely to be pay leaders, while expanding organizations were more likely to be laggards or meeters than market leaders. Finally, respondents from public administration were more likely to be market followers.

These last results should be interpreted with caution, however, because we do not claim to have a nationally representative sample of industries and organizations. Furthermore, because predicting pay strategies was not the major focus of this research, we almost certainly have not captured all potentially relevant predictor variables.

## DISCUSSION

Results suggest that both job evaluation and market survey information figure importantly in managers' job pay decisions. However, as hypothesized, increases in market rates produced larger increments in pay assignments than did equivalent increases in job evaluation points. This difference diminished (but did not disappear) when pay strategies were taken into account, suggesting that different strategies make different use of these two pieces of information.

The stronger emphasis on market rates than job evaluation points in job pay-setting is problematic for those who advocate the use of job evaluation as a substitute for market valuation of job worth (e.g., Remick, 1981). Until now, arguments against using job evaluation to re-order job pay hierarchies have focused almost exclusively on the inherent reliance of job evaluation systems on market rates for validation of compensable factors and weights (Hildebrand, 1980; Schwab, 1980). Thus, skeptics have questioned the viability of developing, and using, job evaluation plans that are constructed independently of market compensation rules.

The present study suggests an additional difficulty with attempting to increase reliance on job evaluation; namely, managers do not appear to attach as much importance to job evaluation results as they do to market surveys. Two caveats are in order, however. First, this conclusion appears to depend somewhat on a firm's strategic orientation, given that internally oriented respondents placed nearly as much weight on job evaluation results as they did on market surveys. Second, managers might attach more weight to their own job evaluation systems than they do to experimentally-generated ones. However, this argument seems equally likely to apply to market surveys.

Nevertheless, the fact that the job evaluation manipulation consistently explained significant unique variance in pay assignments, even among externally oriented respondents, lends credence to the view that job evaluation is regarded as something more than a mere "capturer" of market pay policies. If job evaluation were viewed merely as providing redundant

or inferior information to market surveys, there would not be a job evaluation main effect since market information was available for each job.

Although job evaluations appear to provide unique pay-setting information, it is less clear whether managers regard them as indicators of "internal worth." Specifically, although internally oriented respondents placed less weight on market surveys than did externals, they did **not** place **more** emphasis on job evaluation. Put another way, internally oriented respondents were distinguished more by their reluctance to act on market data under certain conditions than by any tendency to place greater emphasis on job evaluation per se.

The reluctance of internally oriented managers to cut pay in the face of lower market (than current) rates resulted in internals paying more, on average, than externally oriented managers. This result suggests that having an internal orientation may be an expensive proposition if it prevents a firm from taking advantage of lower competitive rates in the external market. However, generalizability of this result almost certainly depends on the proportion of real-world instances in which market rates lag (or lead) current pay rates in internally-oriented organizations. Just as having an internal orientation may prevent firms from taking advantage of low competitive rates, so may it protect firms from having to immediately incorporate upward movements in market rates (although there is little evidence of this latter phenomenon in the present simulation; see the last column of Table 5).

Finally, the pay strategy variables contributed more to the model of job pay decisions than did organizational demographic variables. In fact, the results suggest that job pay decisions might be most parsimoniously modeled as a function of current pay, market rates, internal job structure, and pay strategies such as market pay position and internal versus external orientation. However, these results should be interpreted with some caution, given that the measures of organizational characteristics were provided by respondents rather than an external source (e.g., annual reports, Compustat files), because all responses were anonymous. Although the pay

strategy measures were also self-reported, it seems likely that the respondents were more familiar with pay strategies than with certain organizational demographics. Indeed, measures of financial performance had to be omitted due to large amounts of missing data.

### **FUTURE RESEARCH**

Certain future research suggestions flow directly from the present study; others arise from a more general concern with job pay and organizational pay structures. Turning first to direct research extensions, present results suggest the desirability of explicitly incorporating pay strategy variables into future job pay research. To date, most studies have included general organizational characteristics (e.g., size, profitability, life cycle) as proxies for likely pay strategies (e.g., market position, pay mix; e.g., Balkin & Gomez-Mejia, 1987; Brown, 1990; Ellig, 1982). However, present results suggest that pay strategies have a significant effect on job pay decisions, even controlling for organizational characteristics. As such, researchers should make a greater attempt to explicitly include them in future research.

Additional attempts should be also be made to ascertain the determinants of pay strategies. Consistent with previous research and speculation (Balkin & Gomez-Mejia, 1987; Ellig, 1987; Freeman & Medoff, 1984), the present results suggest that unionization is associated with pay leadership strategies, while expanding life cycles are associated with market following. Also, results suggested the commonsensical finding that attempts to meet the market are associated with external orientations. However, because predicting pay strategies was not our major focus, future research should bring representative organizational samples and additional predictor variables to bear on this question.

The negative interaction between the market rate and job evaluation manipulations also suggests a future research need. Specifically, present results do not indicate whether the interaction is attributable to idiosyncracies of the jobs involved, or whether it reflects a more

