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The effects of pay level on organization-based self-esteem and performance: A field study

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Most compensation managers implicitly assume (or perhaps hope) that high pay levels will maintain and enhance future performance. To date, this assumption has been largely untested. Given the importance of pay level and the large expense that pay represents to most organizations, understanding how and why pay level influences the behaviour of employees in organizations is an important question. The purpose of this study is to examine the motivational effects of pay level on employee performance. To examine these issues, we collected field study data from a variety of sources, at three different times, and assessed the effects of employee pay level on subsequent self-esteem and performance. Specifically, we hypothesized that the effects of pay level on performance would be mediated by pay level effects on organization-based self-esteem. We base this hypothesis on the premise that level of pay within an organization communicates a sense of how much the organization values an employee and thus affects employee organization-based self-esteem which, in turn, enhances job performance. After controlling for organization tenure, and previous pay change, results supported a mediated model that suggests that pay level affects employee self-esteem, which in turn, affects employee performance.

One of the strongest determinants of employee attitudes, motivation and behaviours is compensation (Gerhart & Milkovich, 1992). For example, Opsahl and Dunnette (1966) noted that, while employees profess to value many types of rewards (such as recognition) more than pay, 'they behave as if they value money highly' (p. 106; also see Wiley, 1997). The extant compensation research literature (e.g. Gerhart & Milkovich, 1992; Heneman, 1992; Lawler & Jenkins, 1992; Opsahl & Dunnette, 1966) provides evidence that pay, in its various forms, affects employee–organization relationships. However, most existing research on the effects of pay on employee behaviours and attitudes has focused on how pay is administered. Consistent with reinforcement and expectancy theories, most of this research concludes that when high performance results in high pay increases, performance is reinforced and more likely to be repeated in the future (see Jenkins, Mitra, Gupta, & Shaw, 1998, for a meta-analytic review; and

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Lawler & Jenkins, 1992, on strategic uses of pay). Gerhart and Milkovich (1992), in a major review of the compensation literature, stated that 'Our sense is that there is relatively strong evidence that individual incentives, merit pay and bonuses, and gainsharing [all reinforcers for past performance] can contribute to higher performance under the right circumstances ...' (p. 533).

Gerhart and Milkovich (1992) and others (Pfeffer, 1998; Rynes & Gerhart, 2000), however, also lament the fact that we don't know more about *how* pay characteristics affect employee attitudes and behaviours. One key characteristic of pay is the amount of total direct compensation, or *pay level*, that each employee is given in exchange for his or her labour. A number of factors affect pay level such as type of work, prior performance-based pay increases and tenure within the organization. Nevertheless, it remains an empirical question as to whether pay level, independently of pay increases/changes, affects subsequent employee performance. Most compensation managers implicitly assume (or perhaps hope) that high pay levels will maintain and enhance future high performance (Kanter, 1987). Yet, this assumption remains largely untested. Thus, the purpose of this study is to examine the motivational effects of pay level on performance.

Several researchers have noted the dearth of research that examines the role that individual differences might play in compensation→employee response relationships (e.g. Barber & Bretz, 2000; Heneman & Judge, 2000; Shaw, Duffy, Mitra, Lockhart, & Bowler, 2003). Our research focuses on one such individual difference construct, organization-based self-esteem (the degree to which employees believe they are competent, need-satisfying members of their organization), as one way in which pay level may affect future employee performance. Specifically, we look at three research questions: (a) Is there a relationship between pay level and subsequent employee performance; (b) Is there a relationship between pay level and organization-based self-esteem; and (c) Does organization-based self-esteem link pay level with performance? We hypothesize that organization-based self-esteem mediates the effects of pay level on employee performance levels.

In this research, we differentiate pay level (an employee's total direct compensation excluding benefits) from pay increases (an employee's pay raise or change in pay level at some given point in time). We focus on pay level (a relatively stable construct that represents the result of cumulative changes in pay across time) because we theorize that it more closely represents the employee's overall worth to an organization, as opposed to a single change in pay. A single change in pay, in contrast, is often a function of many factors including overall health of the economy, financial ability of the firm to raise wages, union negotiations, the need to retain an important individual or class of employees, and relative performance of a particular employee. Furthermore, consistent with Thierry's (2001) emphasis on the meaning of pay, we theorize that pay level across time communicates more to employees about their value to the firm than the information conveyed by a single change in pay which may be influenced by the above external factors.

Pay level and performance

There is some empirical evidence that pay has direct effects on performance (e.g. Gneezy & Rustichini, 2000; Hechler & Wiener, 1974), sometimes moderated by other variables like self-esteem (e.g. Brockner, 1985). There is substantially more evidence that positive outcomes such as higher subsequent performance are more likely when pay increases are made contingent on good performance than when pay increases are not contingent on performance (e.g. Gerhart & Milkovich, 1992; Jenkins *et al.*, 1998). Over several years, however, consistently higher performers should also have higher pay levels than their lower performing counterparts (in comparable positions). Under such conditions, equity theory (Adams, 1963) would suggest that high pay levels represent high outcomes that should motivate employees to adjust their inputs (performance) upward.

Extending past research and taking a different approach, we build on the meaning of pay (Thierry, 2001) and social exchange theory (Blau, 1964) to guide our examination of effects of pay level on performance. Social exchange theory focuses on the exchange relationships between two or more actors (in our case, an organization and its employees). Exchange occurs within an environment of mutual dependence, where actors (or partners) control resources (such as pay and effort) that other actors value. To consummate an exchange, each actor provides something that the other actor values. Assumptions of social exchange theory include: (1) actors provide outcomes to each other through exchange, (2) actors are motivated to obtain more of the outcomes that they value and others control, and (3) exchanges between actors recur over time (Molm, Takahashi, & Peterson, 2003).

When the nature of the exchange relationship is incomplete or ill-specified, neither actor has a complete and comprehensive understanding of outcomes the other actor will provide. Instead, in social exchange relationships, the norm of reciprocation (Gouldner, 1960) predominates and one actor performs a beneficial act for another without knowing when, or to what extent, the other actor will reciprocate. The pattern of exchanges develops over time (not on the basis of discrete acts) and leads to perceptions of fairness or justice regarding the exchange relationship (Molm *et al.*, 2003). For example, when one exchange partner receives a high level of benefits (e.g. high pay level) from the other partner, application of social exchange theory would predict a reciprocal response (such as high performance) and perceptions by both partners that the exchange is fair (Cropanzano & Greenberg, 1997).

Substantial empirical evidence supports the norm of reciprocity ('the more I get, the more I give'), showing that positive benefits enhance positive attitudes, beliefs and behaviours (e.g. Homans, 1961; Settoon, Bennett, & Liden, 1996; Tsui, Pearce, Porter, & Tripoli, 1997). Applying prior theory and research to the present study, we propose that the more inducements (in the form of pay) that an organization provides to an employee, the more that employee will reciprocate by performing at higher levels. Over time, this exchange should perpetuate itself, particularly when both parties perceive the exchange to be fair (Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Cropanzano & Greenberg, 1997). Furthermore, because the organization is the primary determinant of pay levels (e.g. through job evaluation and resulting pay structures), we would expect employee reciprocity efforts such as job performance to benefit the organization (Masterson, Lewis, Goldman, & Taylor, 2000; Rupp & Cropanzano, 2002). Thus, we hypothesize:

H1: Pay level has positive effects on employee performance.

Pay level and organization-based self-esteem

Although it seems reasonable that high pay levels might lead to high performance, we know little empirically about factors that might intervene between pay and performance. One individual difference construct that has potential to fill this role is organization-based self-esteem (OBSE), an employee's self-perceived value as a member of a specific organization. Pierce, Gardner, Cummings, and Dunham (1989) developed the concept of OBSE, building on Coopersmith's (1967) suggestion that self-esteem reflects the extent to which an individual believes him/herself to be capable, significant and worthy. Organization-based self-esteem reflects an assessment of personal adequacy and worthiness as an organizational member. Thus, employees with high organization-based self-esteem have come to believe that they are important, meaningful and worthwhile within their employing organization.

Organization-based self-esteem is one component of overall self-esteem that, in turn, is a facet of self-identity that is an even broader construct. OBSE differs from global self-esteem and self-identity, however, because it is more situation-specific and thus is more responsive to proximal factors. For example, although global self-esteem and self-identity are relatively stable individual differences, based in large part on early childhood and socialization experiences (Coopersmith, 1967), OBSE evolves over time based on an employee's overall experiences within a specific work organization.

In describing the origins of self-esteem, Korman (1970, 1976) emphasized the importance of messages from significant others which signal competence, capability, significance and value. Pay level (Frank, 1985; Milkovich & Milkovich, 1992; Thierry, 1992, 1998, 2001) is an important signal from the organization, and we propose that it sends an important message to employees about their worth (value) to the organization. For example, Greller and Parsons (1995) concluded that even when pay increases were not based on performance, they communicate an employee's value to the organization. In describing the 'Frog Pond Effect', Frank (1985) emphasized the importance of relative status, specifically pay relative to others in the most proximal context. Thus an employee's pay level compared to others in the same organization is a tangible indicator of that employee's value to the organization. Pay level can also affect one's perception that one belongs to an elite group (Lawler & Jenkins, 1992), which in turn would have an effect on self-esteem (Tyler & Blader, 2002).

Thierry's (2001) 'reflection theory of compensation' is particularly instructive with respect to the relationship between pay level and self-esteem. Thierry proposes four ways in which pay can have meaning for an employee: motivational (instrumentality), relative position (feedback and status), control (autonomy), and spending (what can be purchased with pay). According to Thierry, 'the pay an individual receives encompasses a variety of meanings that we consider to be vital to that person's self-identity ... pay "reflects" information about what is happening in other fields [external to the person], the meaning of which connects to the person's self-identity' (Thierry, 2001 pp. 151–152). Although Thierry refers specifically to self-identity that is a broader concept than self-esteem, the second aspect of pay meaning (relative position) is especially relevant to our consideration of pay effects on OBSE. Research on Thierry's reflection theory of compensation suggests that the relative position aspect of pay meaning has stronger effects on employees than the other three dimensions. We argue that pay level represents the relative position aspect of pay and thus has positive implications for self-esteem in a particular setting. When an employee's pay is higher than that of others in comparable positions, it enhances self-perceived status within the organization and leads to higher OBSE.

We note that overall pay level (as opposed to the most recent pay increase) is one of the most important signals of overall employee worth to the organization. This is because many factors (such as the organization's profits, changes in demand for labour, inflation and a host of non-value-based factors) influence the size of any particular pay change (Milkovich & Newman, 1996). Accordingly, cumulative increases in pay over time (pay level) is more relevant to OBSE than the most recent pay increase. To date, only a few studies have considered the relationship between pay level and self-esteem. At the macro level, economists have demonstrated that pay enhances global self-esteem (Goldsmith, Veum, & Darity, 1997) and conclude: 'Commanding a "high" relative wage is associated with a more favorable view of self. These findings suggest that wages do significantly influence a person's self-esteem' (p. 827). Shifting our focus to more specific forms of self-esteem, as recommended by Tharenou (1979), we also note other research that demonstrates relationships between pay level and job-based or organization-based self-esteem (Aryee & Luk, 1996; Brockner, 1988; Tan & Peng, 1997).

In sum, given the theory and past research that suggest messages about personal value directly affect employee self-evaluation of global self-esteem, we hypothesize that pay level will have a similar effect on organization-based self-esteem. Higher pay levels signal to employees that they matter to the organization. Feeling that 'I COUNT around here' is the essence of organization-based self-esteem. Thus:

H2: Pay level has positive effects on organization-based self-esteem.

Organization-based self-esteem and performance

Korman (1970, 1976), and Brockner (1988) posited that an employee's self-esteem is central to the explanation of work performance. Consistent with this, Judge and Bono's (2001) meta-analytic review reported a corrected mean correlation between self-esteem and performance of .26, one of the strongest individual difference correlates of performance. There are several plausible explanations for this relationship. Proponents of self-consistency theory (e.g. Korman, 1970, 1976) argue that high self-esteem individuals are motivated to maintain a positive self-perception. Performance at a high level is one manner in which they can maintain behaviour that is consistent with their self-concept. When confronted with a task to perform, high self-esteem people value high performance, exert effort and engage in goal-directed behaviour. In addition, high self-esteem individuals are more likely to have higher self-efficacy than their low self-esteem counterparts (Gardner & Pierce, 1998; Locke, McClear, & Knight, 1996), which contributes to higher performance levels under almost all role conditions (Bandura 1977, 1989). Thus, prior research has demonstrated that high self-esteem individuals are more strongly task-motivated, are less distracted by adverse role conditions and are more persistent when dealing with obstacles than their low self-esteem counterparts.

Although most research shows a positive relationship between global self-esteem and performance (Korman, 1970; Shrauger, 1972), the results have not been consistently significant (Brockner, 1988). In response, scholars interested in self-esteem effects within specific contexts (e.g. school and work settings) have argued that situation-specific measures of self-esteem may provide more consistent results (e.g. Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995; Song & Hattie, 1985). Using this approach, cross-sectional relationships have been demonstrated between organization-based self-esteem and in-role performance (e.g. Pierce *et al.*, 1989) and between organization-based self-esteem and extra-role behaviour (e.g. Van Dyne, VandeWalle, Kostova, Latham, & Cummings, 2000). In addition, Pierce *et al.* (1993) observed an 8-month lagged correlation (r=.21, p < .01) between organization-based self-esteem and supervisory ratings of job performance. Consistent with past research and theory, we hypothesize that the psychological process of self-evaluation resulting in OBSE will influence work performance:

H3: Organization-based self-esteem has positive effects on employee performance.

The mediating role of organization-based self-esteem

The last step in the development of the logic for the mediating role of OBSE in linking pay level and performance is the theoretical ordering of the constructs in the model. In the preceding sections, we proposed that (a) pay level affects employee performance, (b) pay level affects organization-based self-esteem, and (c) organization-based self-esteem affects employee performance. We now propose that pay level influences employee performance by virtue of its effect on organization-based self-esteem. Thus, we hypothesize that organization-based self-esteem mediates the pay level→employee performance relationship. We view our mediation hypothesis as a step towards enhanced understanding of the psychology of pay level effects by highlighting one process through which pay level influences employee performance.

As discussed above, employee pay level signals value and importance to the organization. Over time, employees with high pay levels come to believe that they are significant, worthy and valuable to the organization and this message becomes integrated into beliefs about the self. As argued above, we have proposed that employees with high pay levels are motivated by self-consistency to maintain a positive self-image. Accordingly, they put forth goal-directed effort that results in high performance. Even under adverse role conditions, those with a positive self-image persist in their efforts and sustain their motivation, which in turn enhances job performance. Our model, therefore, suggests that pay level affects self-evaluations of organization-based self-esteem, with a subsequent impact upon work performance.

In summary, we propose pay level is one key indicator of employee value to the organization and thus it strengthens employee organization-based self-esteem that then affects future job performance. In other words, we hypothesize that pay level influences performance through the mediating effect of organization-based self-esteem:

H4: Organization-based self-esteem mediates the effects of pay level on employee performance.

Method

Study design, participants and data collection

We tested our hypotheses on data from employees (N=91) in a construction company located in the upper midwestern region of the USA. Participants represented all job levels in the organization hierarchy including managerial, supervisory, professional and support staff. One third of the sample was female.

The design of this field study involves three time periods. At Time 1, we obtained pay level data, the yearly compensation received by each of the study participants. At Time 2, three months later, employees completed a self-report questionnaire. At Time 3, nine months after Time 2, performance appraisals were conducted for the 12-month period following measurement of employee pay level. Performance data were available for 62 of the study participants (due to turnover and missing records in the host organization). Univariate F statistics reveal no significant differences between participants with performance data and those with missing performance data on the two other primary study variables—pay level and organization-based self-esteem. In addition, there were no significant differences on the control variables (see below)—change in pay and organizational tenure.

While our study design includes lagged data, the actual timing of each data collection period was determined more by the host organization's requirements and by its existing performance appraisal schedule than by extant theory. The design of this study does, however, permit a time-lagged investigation of all hypotheses, with independent sources of data. Thus, we are able to examine time-lagged pay level effects on self-esteem and on subsequent performance and avoid problems associated with common methods variance (Cook & Campbell, 1976).

Measures

Measurement of the study variables is free of common source and common method effects. Pay level data were collected from personnel records of the host company. Employee participants provided self-report of their organization-based self-esteem, and supervisors assessed employee performance as part of the company's performance evaluation system.

Pay level is the total compensation earned by each study participant for the 12-month period preceding our investigation. Pay level data were collected from the company's personnel records.

Organization-based self-esteem was measured with the scale developed and validated by Pierce *et al*. (1989). Organization-based self-esteem (OBSE) reflects an employee's evaluation of his or her personal adequacy and worthiness as an organizational member (Gardner & Pierce, 1998) and was measured by 10 items (such as I COUNT around here; I am an IMPORTANT PART OF THIS PLACE; I am a VALUABLE PART OF THIS PLACE; 1=strongly disagree to 5=strongly agree).

Employee performance was assessed with the host organization's 5-point scale (1=very poor performance, 2=poor performance, 3=satisfactory performance, 4=very good performance, and 5=excellent performance). Supervisors had first-hand knowledge of individual performance, a second level of supervision reviewed the performance ratings before they were finalized, and the chief administrative officer had final review before they were implemented. The mean (3.55), standard deviation (1.13), and a non-significant skewness parameter (−.454) show that these ratings differentiated performance between individuals and that ratings were not uniform across employees. Although scholars recognize that measurement of performance is a flawed and controversial process (Cummings & Schwab, 1973; Murphy & Cleveland, 1991), some research indicates that performance ratings can be good indicators of relative productivity (Medoff & Abraham, 1980). In addition, performance appraisal systems can be viewed as the organization's communication system regarding employee performance (Cummings & Schwab, 1973; Murphy & Cleveland, 1991).

Control variables

While the focus of our study is on the mediating role of organization-based self-esteem in the relationship between pay level and performance, we also acknowledge the potential role of other factors that can influence pay levels. Organizational tenure may contribute to the level of an employee's pay (because pay increases compound over time). As a result, pay level effects can be confounded with organizational tenure. Also, as much prior research indicates (e.g. Gerhart & Milkovich, 1992; Jenkins *et al*., 1998), contingent (merit) pay provides a potent alternative explanation for effects of pay on

Table 1. Descriptive statistics and intercorrelations for study variables

	M	*SD*	1	2	3	4	5
1. Pay level	34,795	19,003	—				
2. Change in pay (abs.)	1 641	5 301	.17	—			
3. Change in pay (%)	.060	.16	.04	.85**	—		
4. OBSE	4.00	.59	.45**	.09	.05	(.87)	
5. Performance	3.55	1.13	.33**	.09	.00	.41**	—
6. Tenure	157.71	20.24	.55**	−.01	−.12	.27*	.28*

*$p < .05$; ** $p < .01$ (one-tailed).
Notes. Statistics reported are based on listwise deletion of data. Listwise $N = 56$.
Key. OBSE = Organization-based self-esteem; Tenure = Organizational tenure; Change in pay (abs.) = Absolute value (in dollars) of change in pay; change in pay (%) = Percentage change in pay.
Coefficient alpha is reported in the diagonal for OBSE.
Organizational tenure ranged between 117 (9+ years) and 260 months (+21 years).

subsequent performance. Thus, we measured and statistically controlled for organizational tenure and change in pay in our analyses so we could examine the effect of pay level on organization-based self-esteem and performance over and above the effects of these controls. *Organizational tenure* data (i.e. the number of months employed) were collected from personnel records. *Change in pay* (the change in total compensation received by the study participants from the previous year) was collected from the company's personnel records at the same time as pay level data were collected. We assessed change in pay as both the absolute change in dollars as well as the percentage change in pay as discussed in the analyses below.

Analyses

We used partial correlations to test the direct effect hypotheses (*H1* to *H3*) and to examine the preconditions for mediation (Baron & Kenny, 1986). We tested the mediating effects of organization-based self-esteem with a series of hierarchical regression analyses (Cohen & Cohen, 1983) where we regressed performance on the control variables (organizational tenure and change in pay) in step 1, the independent variable (pay level) in step 2, followed by entry of the mediator (organization-based self-esteem) in step 3. The statistical significance of the variance uniquely attributed to the mediator (organization-based self-esteem) after accounting for the variance attributed to the controls (organizational tenure and change in pay) and exogenous variable (pay level) is a test of the mediation hypothesis (Lindenberger & Potter, 1998).

Results

Table 1 presents the descriptive statistics and intercorrelations for the study variables. The coefficient alpha for the only multiple item measure (OBSE) was acceptable at .87.

Direct effects

The correlations presented in Table 1 provide initial support for each of the three direct effect hypotheses. All of the relevant product moment correlations are statistically significant. More importantly, after partialling out the variance attributable to the

Table 2. Test of mediation hypothesis with control variables

Dependent variable: performance	$\Delta R^2(p)$	*df*	*F(p)*	*B*	*SE B*	$\beta(p)$
Step 1: Org tenure	.09**	2, 53	2.49*	.35	.17	.28**
Change in pay				.10	.14	.10
Step 2: Pay level	.04*	3, 52	2.47**	.26	.17	.24*
Org tenure				.18	.20	.14
Change in pay				.12	.14	.12
Step 3: OBSE	.09**	4, 51	3.40**	.28	.12	.33**
Pay level				.11	.18	.10
Org tenure				.17	.19	.13
Change in pay				.08	.13	.07

*$p < .10$; ** $p < .05$ (one-tailed).
Key. $\Delta R^2(p)$ = Change in squared multiple correlation for equation and significance; *df* = Degrees of freedom; *F(p)* = *F* ratio for equation and significance; *B* = Unstandardized regression coefficient; *SE B* = standard error of B; $\beta(p)$ = Standardized regression coefficient and significance; Org tenure = Organization tenure; OBSE = Organization-based self-esteem.
Note. Variables were standardized before analyses.

control variables (organizational tenure and change in pay), the partial correlations remain statistically significant between: (a) pay level and performance (*H1*: r=.21, p=.067), (b) pay level and organization-based self-esteem (*H2*: r=.36, $p < .01$), and (c) organization-based self-esteem and performance (*H3*: r=.36, $p < .01$). We compared results using absolute (dollar) change in pay and percent change in pay and found no differences. For space reasons, we report results only for absolute change in pay. Inspection of the correlations in Table 1 also reveals that change in absolute pay was not significantly related to either organization-based self-esteem (r=.09, p=.25) or performance (r=.09, p=.25). Thus, there is empirical support for hypotheses 1, 2 and 3.

Mediated effects

Results presented in Table 2 reveal that when performance was regressed on organization-based self-esteem and pay level in step 3, organization-based self-esteem had a statistically significant relationship with performance (β=.33, $p < .05$). The pay level–performance relationship failed to reach significance (β=.10, $p > .05$) in step 3, even though it had previously been marginally significant (β=.24, p=.067) at step 2. This supports our mediation hypothesis (*H4*), suggesting that organization-based self-esteem mediates the pay level–performance relationship.

Discussion

The majority of prior research on the effects of pay has focused on attitudinal consequences (e.g. Heneman & Judge, 2000; Sturman & Short, 2000). In contrast, the purpose of this study was to advance understanding about how pay level affects employee performance. Given the importance of pay level and the large expense that pay represents to most organizations, understanding how and why pay level influences the behaviour of employees in organizations provides important theoretical and practical insights (Shaw & Gupta, 2001). In addition, this research responds to calls for research on individual differences and pay. For example, Mitchell and Mickel (1999) argued that 'an individual-difference perspective in assessing the meaning of money is important and necessary in management research' (p. 568). Our research shows that organization-based self-esteem represents one possible process by which individual differences link pay and performance.

Based on Thierry (2001), who suggested that pay level can communicate an individual's value to the organization, we theorized that pay level influences performance via the psychological processes of self-evaluation involving self-esteem. We proposed that pay level signals employee worth to the organization and influences beliefs about personal adequacies and worthiness as an organizational member which, in turn, influence employee performance. Our results support this hypothesis. After controlling for organizational tenure and change in pay, results supported mediation of the pay level–employee performance relationship by organization-based self-esteem (though sample size limits this conclusion; see below). In addition, our results demonstrate that pay level was significantly related to both organization-based self-esteem and performance. In sum, this study demonstrates that employees who receive higher amounts of pay (pay level) feel more highly valued by the organization (OBSE), and those who feel valued highly (OBSE) are rated as higher performers.

It should be noted that there may be alternative explanations for this mediated relationship. In particular, perceptions of distributive and/or procedural justice may account for our results. If participants perceived high pay levels as being fair and low pay levels as being unfair, this could produce the effects we obtained in this study (positive effects of pay level on performance, via justice perceptions; Cropanzano & Greenberg, 1997). On the other hand, OBSE may still mediate or moderate this relationship, for at least two reasons. First, we would expect perceptions of fairness to have a positive effect on OBSE, which in turn would affect performance as argued here. High pay can lead to strong fairness perceptions and fairness can connote trust and valuing of employees, so it should have a positive effect on OBSE (see Brockner, *et al.*, 2003 and Koper, Van Knippenberg, Bouhuijs, Vermunt, & Wilke, 1993).

Secondly, OBSE may moderate the effects of justice judgments. Whether an employee perceives pay as fair or unfair might precipitate different reactions depending on high or low OBSE. Self-consistency motivations (Korman, 1976) would suggest that high OBSE employees respond to high pay and high fairness perceptions with positive attitudes and behaviours and low OBSE employees react negatively (or not at all) to the same conditions. Alternatively, pay levels might be perceived as unfair or arbitrary. In such situations, high pay may not induce high performance from high OBSE employees, but it might influence performance of low OBSE employees. Because we did not measure fairness or justice perceptions in the current study these are interesting questions for future research. Indeed the whole issue of how pay level and perceptions of justice (distributive, procedural, interactional and informational; Ambrose, 2002) relate to OBSE remains to be fully explored theoretically and empirically.

We did observe one unexpected finding in our results. There was no statistically significant relationship between change in pay and subsequent performance. This is counter to a number of other studies that have found that when financial incentives are made contingent upon previous performance, subsequent performance is enhanced

(Jenkins *et al.*, 1998). We can surmise that the performance appraisal ratings used in our analyses contained a large quality component (as opposed to quantity). That is, supervisors (the performance raters) were influenced more by the quality of performance of subordinates than the quantity of their performance. Jenkins *et al.* (1998) concluded that pay changes are related to quantity of performance measures (mean r=.34), but were unrelated to quality measures. This conclusion would explain the non-significant relationship between pay change and performance in our study.[1]

Strengths and limitations

We note several strengths of our study: three different sources of data, inclusion of two control variables (organizational tenure and change in pay), and time-lagged data for pay level, self-esteem, and performance. In addition, the lack of common source and common method variance indicates relatively robust relationships that are not a function of measurement artifacts. There are nevertheless several limitations to our conclusions.

Our goal was to provide insight into one factor (OBSE) that can link pay level and future performance. We recommend that future research consider additional factors (such as perceived organizational support, organizational commitment, particularly continuance commitment, and fulfilment of the psychological contract) that also may link pay level and performance. Additionally, we suggest the benefits of collecting longitudinal data and assessing causal relationships. We note that in our study, any inferences about causality are limited by the correlational nature of our data (snapshots from three points in time). Most likely, some effects are reciprocal. For example, past performance shapes an individual's organization-based self-esteem over time (e.g. Korman, 1976) and past performance influences future levels of pay in many organizations (Harris, Gilbreath, & Sunday, 1998). In addition, as pointed out by one reviewer, supervisor performance ratings may have been biased by current pay levels, such that those employees with high pay levels received high ratings regardless of their actual performance. In sum, our time-lagged data collection does not produce evidence of causality, but it does address one of the necessary conditions for examining causal links (namely, the independent variable precedes the dependent variable; Cook & Campbell, 1976). Our results thus suggest that one way in which pay level impacts performance is through its effects on organization-based self-esteem.

The relatively small size of our sample is another limitation of this investigation. Although our results indicate full mediation, it is possible that the pay level β failed to reach conventional levels of statistical significance at step 3 due to our sample size and consequent low statistical power. At the same time, however, sample size should not affect change in magnitude of the β coefficient. The β for pay level was reduced from .26 ($p < .05$) at step 2 to .11 (*ns*) at step 3, after the inclusion of OBSE in the equation. Accordingly, results provide evidence for a mediated relationship, but with uncertainty regarding whether it is full versus partial mediation. Another boundary condition of our research is the nature of our sample. The organization we studied used individualized management systems where employees worked relatively independently. Perhaps results would differ in team-based settings or in assembly line settings where pay is group-based or set by contract.

[1] *We thank an anonymous reviewer for suggesting this.*

Implications

There are several important implications of these findings. Pay level contributed to employees' sense of self-worth as organizational members and both pay level and OBSE were significantly related to future employee performance. This is important because it confirms an obviously 'hoped-for' by product of an organization's compensation system. Our research replicates and extends prior findings (Gardner & Pierce, 1998; Pierce *et al.*, 1989) by demonstrating a time-lagged relationship between organization-based self-esteem and performance. Employees with high organization-based self-esteem not only have more favourable work-related attitudes, but also have higher subsequent performance than their low self-esteem colleagues. If the findings reported here are supported in future investigations, a theory of pay level effects should acknowledge the effects of pay level on self-esteem and performance.

If managers want to increase the performance of employees, our study offers several suggestions. First, managers should ensure that employees perceive that they are receiving high pay (if true) and should make this a component of regular communication programmes. Secondly, organizations might consider implementing competency- or skill-based pay systems (Gerhart & Milkovich, 1992) where employees receive enhanced pay levels as they acquire new skills (e.g. programming) and/or competencies (leadership) that are job-related and potentially improve their job performance (Cira & Benjamin, 1998). This complements our view that pay level reflects employee value to the organization: as employees increase their value to the organization, their pay level should increase. Skill-based pay reinforces this relationship. Thirdly, managers should send signals (direct and indirect, verbal and non-verbal) that employees are valuable assets to the organization and that their contributions make a difference to the organization. Higher organization-based self-esteem should, based on our results, enhance performance.

Our findings, however, also have a 'dark side'. Although results show the positive consequences of high pay levels, this implies that some employees have low(er) pay levels. Over time, this may signal that some employees are less valued and less worthwhile to the organization. This, in turn, may dampen their organization-based self-esteem, motivation and subsequent performance. Self-enhancement theory (e.g. Dipboye, 1977) suggests that employees generally invest the effort needed to perform and that they expect their effort and performance will be acknowledged and reinforced by management. Since low pay level can be interpreted as signalling low value and can detract from self-enhancement, it is critical that managers clearly communicate other reasons for low pay (e.g. comparisons to other employees, economic conditions, cost pressures, or labour negotiations). Thierry (2001), for example, suggests emphasizing to these employees that some determinants of pay level cannot be influenced by employees (e.g. market conditions). To this end, Korman (1970, 1976) identified other sources of self-esteem (such as signals from significant others, successful work experiences and systems that indicate employees are trusted) that organizations may use to manage low pay level employees. Managers should make sure that these employees receive other messages suggesting they are a valuable part of the organization, but perhaps not as valuable as other employees who perform at a higher level or who have different job responsibilities.

In conclusion, our finding that pay level influenced employee performance through its effect on organization-based self-esteem indicates that organizations can increase the return-on-investment of their compensation dollars by reinforcing the connection between pay level and the employee's value to the organization.

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