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Abstract

There are both practical and theoretical reasons to measure lump-sum bonus satisfaction. The practical need for such a measure stems from its increased use as a component in modern compensation practices. Based on the means of administering and allocating lump-sum bonuses, a theoretical case can be built suggesting that lump-sum bonus satisfaction constitutes a separate component of pay satisfaction fitting into the Pay Satisfaction Questionnaire's (PSQ) theoretical framework. We develop 4 questions that complement the PSQ, and use a series of techniques to test the convergent and discriminant validity of the measure. Empirical evidence shows that bonus-related items are more related to the lump-sum bonus satisfaction measure than other PSQ dimensions. We also demonstrate that the dimension of lump-sum bonus satisfaction has a substantive relationship with attitudinal variables beyond that provided by pay level variables and the PSQ. The development of this measure should foster greater accuracy when assessing pay satisfaction levels and the effects of lump-sum bonus pay policies.

Keywords

lump-sum bonus satisfaction, compensation, employee satisfaction, human resource management, Pay Satisfaction Questionnaire, PSQ

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Lump-Sum Bonus Satisfaction: Testing the Construct Validity of a New Pay Satisfaction Dimension

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There are both practical and theoretical reasons to measure lump-sum bonus satisfaction. The practical need for such a measure stems from its increased use as a component in modern compensation practices. Based on the means of administering and allocating lump-sum bonuses, a theoretical case can be built suggesting that lump-sum bonus satisfaction constitutes a separate component of pay satisfaction fitting into the Pay Satisfaction Questionnaire's (PSQ) theoretical framework. We develop 4 questions that complement the PSQ, and use a series of techniques to test the convergent and discriminant validity of the measure. Empirical evidence shows that bonus-related items are more related to the lump-sum bonus satisfaction measure than other PSQ dimensions. We also demonstrate that the dimension of lump-sum bonus satisfaction has a substantive relationship with attitudinal variables beyond that provided by pay level variables and the PSQ. The development of this measure should foster greater accuracy when assessing pay satisfaction levels and the effects of lump-sum bonus pay policies.

Pay practices and policies frequently change, and the past few decades have seen the development of a number of new practices that are currently being employed over a wide range of organizations (e.g., Lawler, Mohrman, & Ledford, 1995; Nadel, 1998). As research has long been concerned with the effects of pay (e.g., Lawler, 1971; Opsahl & Dunnette, 1966), compensation research on pay satisfaction has also developed over this period of time (for a review, see Heneman & Judge, 2000). A notable stream of research on pay satisfaction has focused on the development and verification of a multidimensional measure of pay satisfaction: the Pay Satisfaction Questionnaire (PSQ; Heneman & Schwab, 1985). Although there has been abundant research examining the factor structure of the PSQ (e.g., Carraher, 1991; Heneman, Greenberger, & Strasser, 1988; Heneman & Schwab, 1985; Judge, 1993; Judge & Welbourne, 1994; Scarpello, Huber, & Vandenberg, 1988), as noted by Heneman and Judge (2000), there has been little research aimed at developing the PSQ to keep pace with changes in pay practices. This gap is notable, as the PSQ may not capture individual satisfaction with sizable and important portions of individuals' modern pay packages.

It is not surprising that the PSQ, published in 1985, may not capture satisfaction with components of pay prevalent in pay plans on the cusp of the 21st century. Indeed, it is likely that many of the changes in pay practices over the past 15 years were impossible to anticipate. It is the intent of this paper to provide a measure that complements the PSQ to help reflect a significant and increasingly important component of modern pay packages: lump-sum bonuses. In the process of describing this measure, we (a) defend the need for such a measure for both theoretical and practical purposes, (b) present evidence toward the construct validity of this measure, and (c) provide evidence of the value of such a measure in substantive research on the effects of the various dimensions of pay satisfaction. We recognize that lump-sum bonuses, like other potential dimensions of pay satisfaction, may not be present in all compensation packages; nonetheless, when present within a compensation package, we hypothesize lump-sum bonus satisfaction constitutes an additional dimension of pay satisfaction. Thus, this new measure may enhance the validity of pay satisfaction research by fostering improved measurement specificity.

Lump-Sum Bonuses and its Satisfaction

The first steps in providing evidence in support of the construct validity of a new measure are to precisely define the construct and articulate how the logic behind the arguments for its existence forms a consistent and coherent nomological network (Cronbach & Meehl, 1955; Schwab, 1980). In other words, it is important to specify hypothetical, theory-based linkages between the construct of interest and measures of other constructs. This specifies the construct's definition, establishes how it relates to other constructs, and foreshadows how the measure's variance should relate and diverge from other constructs. It is also important to demonstrate the practical importance of the construct, both for implementation in substantive research (Schwab, 1980) and due to the applied nature of compensation research (Gerhart & Milkovich, 1992).

Lump-Sum Bonuses Defined

Lump-sum bonuses are cash payments to employees that are not added to employees' base wages (Milkovich & Newman, 1999). Thus, lump-sum bonuses are allocated when the organization can afford (or chooses) to distribute the rewards, and do not cause larger fixed labor costs in the long run (Martocchio, 1998; Milkovich & Newman, 1999). In addition, lump-sum bonuses are a part of an individual's compensation that is not guaranteed, and are usually paid in recognition of some goal achievement, such as individual performance, team performance, or organizational performance (Milkovich & Newman, 1999). It is important to note, though, that despite differences in how

organizations may determine lump-sum bonuses, our definition focuses on the distributed reward: contingent cash payments. Thus, although the type of bonus (e.g., individual-based, team-based, organizational based) may vary, much like the type of benefits may vary (e.g., flexible benefits, types of benefits provided, etc.) or type of raises may vary (e.g., COLA, merit, across-the-board increase), lump-sum bonus satisfaction focuses on the affective reaction to the compensation received, although it certainly may be influenced by the determination process.

In the development of the PSQ, Heneman and Schwab (1985) made a point to articulate how different aspects of compensation would yield different dimensions of pay satisfaction. Because various components of pay are administratively independent, they are likely to be managed by organizations separately and thus perceived by the employees as distinct. In line with this reasoning, it is important to describe why lump-sum bonuses are conceptually different from other components of pay (pay level, raises, and benefits) whose satisfaction is captured by the PSQ.

Lump-sum bonuses differ from raises because bonuses do not permanently change the individual's level of base pay, and raises (e.g., merit raises, cost-of-living raises, and/or across-the-board raises) alter individuals' fixed pay (e.g., hourly wage or salary). Although employees' contracts may clearly articulate the individual's eligibility for lump-sum bonuses, the actual rewards are contingent upon individual and/or group performance criteria. Lump-sum bonuses are also different from benefits because bonuses are paid as cash (Milkovich & Newman, 1999). In sum, lump-sum bonuses form a separate portion of total compensation, and are administered independently of the other pay components.

The Use of Lump-Sum Bonuses

Lump-sum bonuses have gained popularity in many organizations, with recent evidence indicating greater use in the future. Simply put, most organizations offer lump-sum bonuses to at least some employees. Nearly 94% of companies offer bonuses to executives (Buck Survey, 1998), but many organizations are offering bonuses to more employees at lower ranks in their companies (Parus, 1999; Watson Wyatt Data Services, 1995; Wyatt Data Services, 1994). For example, a survey of Fortune 1000 companies reported that 78% offered bonus programs for exempt employees in 1999, up from 73% in 1998; the number of companies offering bonuses to nonexempt employees increased from 40% in 1998 to 45% in 1999 (Buck Survey, 1998). In addition, more organizations are considering using bonuses (Parus, 1999), and many of those with bonuses are increasing the amount of money devoted to them (William M. Mercer, Inc., 1999).

The significance of lump-sum bonuses is also noteworthy as they appear to be supplanting, and in some cases outright replacing, the use of more traditional pay increases. Some companies have at least temporarily instituted lump-sum merit-based bonuses in lieu of all or a major portion of salary increases (Sturges, 1994). A 1998 survey revealed that lump-sum payments were used in lieu of salary increases for 24% of executives, 36% of management, 38% of technical/professional employees, 38% of nonexempt clerical employees/technicians, and 27% of nonunion hourly workers (William M. Mercer, Inc., 1998b). Furthermore, for those employees still potentially receiving merit increases, the size of such increases has been diminishing over time. Merit increase budgets have dropped from double digit levels in the 1980s to under 5% in the early 1990s (Sturges, 1994), and there is much evidence that salary increases will continue to remain, on average, modest (Beatty, 1994; Buck Survey, 1998; Lissy & Morgenstern, 1995; William M. Mercer, Inc., 1998a, 1998b, 1999; Parus, 1999; Tully, 1995). In the place of merit raises, organizations are more frequently relying on lump-sum bonuses to retain top performers and motivate employees (Buck Survey: Pay Raises to Remain Flat in 1999, 1998; William M. Mercer, Inc., 1998b; Tully, 1995).

In sum, although lump-sum bonuses are certainly not present in all compensation packages, they are an increasingly significant part of total compensation. Without current pay satisfaction measures that capture the various components of modern pay administration, research will not be able to inform practice on the effects associated with varied pay policy designs. Consequently, it is important for research aimed at understanding the implications of pay policies to be provided with a measure of lump-sum bonus satisfaction.

The Need for Research Targeting Lump-Sum Bonus Satisfaction

Failure to measure satisfaction with lump-sum bonuses limits compensation research in two ways. First, the lack of a valid measure of lump-sum bonus satisfaction hinders research into its antecedents and effects. As mentioned above, the dollars associated with lump-sum bonus plans relative to total compensation is growing; however, research has yet to examine how such plans can be designed and/or implemented to maximize employees' satisfaction with such rewards. Similarly, it is unclear how employees perceive such rewards and the effects of such perceptions. Second, by having an incomplete measure of pay satisfaction, research evaluating the effectiveness of organizational pay policies is limited. A valid measure of lump-sum bonuses is of practical importance for organizations wishing to assess the effects of their own variable pay plans. Furthermore, research examining any

organizational intervention would have questionable validity if a lump-sum bonus plan were in place but the investigators ignored the potential effects of such a plan.

The widespread and growing use of bonuses has made them a necessary target for organizational researchers; however, the literature on pay, pay satisfaction, and its measurement has not produced a measure of lump-sum bonus satisfaction. Agency theory (Jensen & Meekling, 1976) has been the dominant theoretical framework for examining the effects of contingent pay in general (Barkema & Gomez-Mejia, 1998), and particularly the use of lump-sum bonuses, as a means of tying individual rewards to organizational performance. Agency theory suggests that by linking pay to organizational performance, such as through the use of lump-sum bonuses tied to organization success, companies encourage behavior that is aligned with the organization's interests (Eisenhardt, 1988; Jensen & Meckling, 1976). Most research examining bonuses has focused on their use as a portion of executive pay (e.g., Gray & Cannella, 1997; Stroh, Brett, Baumann, & Reilly, 1996), thus demonstrating a gap in research because the use of bonuses needs to be addressed at other organizational levels. However, even in the domain of executive compensation, empirical investigations have shown weak or statistically insignificant relationships between executive pay and organizational performance (Baker, Jensen, & Murphy, 1988; Barkema & Gomez-Mejia, 1998; Jensen & Murphy, 1990). One explanation for these findings is that applications of agency theory have examined only the use or size of bonuses (e.g., Eisenhardt, 1988; Gray & Cannella, 1997; Stroh et al., 1996) rather than affective reactions to pay. Consequently, little is known about how individuals react to bonuses, such as how executives feel about the structure and size of their bonuses (Gomez-Mejia & Wiseman, 1997). Because lump-sum bonus satisfaction has not been directly measured, research may have failed to capture important relationships associated with this compensation form. A construct valid measure of lump-sum bonus satisfaction is thus needed to advance work in agency theory, as well as increase understanding of lump-sum bonuses' effects on individual attitudes and behaviors. That is, through the use of a lump-sum bonus satisfaction measure, specification error in agency theory research may be reduced by specifically examining how lump-sum bonuses relate to individual attitudes and behaviors, and then how such attitudes and behaviors are related to outcomes of interest to organizations.

Exploring the Construct Validity of Lump-Sum Bonus Satisfaction

In sum, lump-sum bonuses are practically and conceptually different from other forms of compensation, with the rewards ultimately being allocated in a manner different from the other rewards examined by the PSQ. The increasing use of bonuses by organizations makes knowledge of their

effects important in our applied field. In addition, bonuses have played a prominent role in investigations and theoretical applications of agency theory. Yet, because lump-sum bonuses are obviously a component of total compensation, they should be examined in conjunction with the other components of pay satisfaction.

In this paper, we develop a measure of lump-sum bonus satisfaction using items similar in phrasing to those in the PSQ. We then begin the process of examining the construct validity of our measure of lump-sum bonus satisfaction in a manner consistent with the suggestions of Cronbach and Meehl (1955) and Schwab (1980) by demonstrating (a) the measure's reliability, (b) factor analyses which show the measure's discriminant and convergent validity with respect to the existing PSQ dimensions, (c) convergence of the measure with logically related variables, and (d) differential predictive validity as shown by the measure's ability to predict variance of logically related outcomes beyond that predicted by the other measures of pay satisfaction components.

Reliability

If a theoretical case (and arguably, in an applied field, a practical case) can be made for the existence of a specific construct, focus then shifts to ascertaining the extent to which an instrument purported to measure the construct exhibits construct validity. A basic first step in ascertaining the construct validity of a new instrument is to demonstrate its reliability (Cronbach & Meehl, 1955; Kerlinger, 1986; Schwab, 1980). The standard for "satisfactory" reliability depends on how a measure is being used, but a modest standard of 0.70 has often been cited, with a suggestion that reliabilities above 0.90 are ultimately desirable (Nunnally & Bernstein, 1994). Given that pay satisfaction measurement is not novel, we expect that our instrument of lump-sum bonus satisfaction should achieve this 0.90 standard.

Evidence of Discriminant and Convergent Validity

Research on the dimensionality of the PSQ has received considerable attention since its development (e.g., Carraher & Buckley, 1996; Judge, 1993; Judge & Welbourne, 1994; Orpen & Bonnici, 1987; Scarpello et al, 1988). These studies have debated the appropriateness of the PSQ's hypothesized factor structure, generally arguing about the extent to which the hypothesized dimensions captured by the PSQ constitute discriminantly valid (i.e., separate) constructs. Although evidence contradicting Heneman & Schwab's (1985) hypothesized structure has resulted from exploratory factor analyses (Judge & Welbourne, 1994), more recent research by Judge (1993) and Judge and Welbourne (1994) used theory-driven confirmatory factor analysis and provided evidence that the PSQ captures the four

dimensions of pay satisfaction originally demonstrated by Heneman & Schwab (1985). Although there is still some debate about the generalizability of the factor structure, (Carraher & Buckley, 1996; Scarpello et al., 1988), the recent confirmatory factor analyses lend strong support to the hypothesized 4-factor structure.

Convergent validity for a lump-sum bonus satisfaction instrument should be observed by associations with other conceptually related attitudinal measures. It is logical and expected that the dimensions of the PSQ are related because the dimensions of compensation are not independent (Judge, 1993). Thus, we expect there to be significant correlations between the various dimensions of pay satisfaction. However, these relationships do not necessarily detract from the PSQ's discriminant validity (Judge, 1993). We expect there to be separate and unique variance from other pay satisfaction measures. Thus, we do not expect these correlations to be so large as to indicate that the lump-sum bonus satisfaction measure is conceptually equivalent to any of the other constructs (or a linear combination thereof).

Using a more structured method, confirmatory factor analyses present evidence of the measure's convergent and discriminant validity. Convergent validity can be inferred from the loading of the items on the hypothesized dimensions (Judge, 1993; Morrison & Phelps, 1999). Each item should be associated with its posited latent construct. Examination of the factor structure can also help ascertain discriminant validity. We argue that lump-sum bonus satisfaction constitutes a dimension of pay satisfaction different from those already captured by the original PSQ. We therefore predict that when we ask individuals to evaluate their lump-sum bonus satisfaction, lump-sum bonus satisfaction constitutes a dimension of pay satisfaction separate from pay level satisfaction, benefits satisfaction, raise satisfaction, and structure/administration satisfaction.

Following the example of Judge (1993), further evidence of construct validity can also be established by demonstrating that each of the dimensions of pay satisfaction has predictably different relationships with pay-related variables. For example, salary level relates most strongly to pay satisfaction (Judge, 1993), and raise size and history most strongly relate to raise satisfaction (Judge, 1993; Heneman et al., 1988). We predict similar results with lump-sum bonus satisfaction. Specifically, bonus-related variables (e.g., bonus level, the expectation of receiving a bonus) should be related to lump-sum bonus satisfaction. Similarly, this association should be greater than the relationships between the bonus-related variables and the other PSQ dimensions. These relationships should exist for actual lump-sum bonus level data (i.e., archival data from a company database), recalled lump-sum

bonus levels (i.e., self-report data), and individual expectations (i.e., expectations of future lump-sum bonuses).

Discriminant Explanatory Power

Although the above steps can present evidence regarding the construct validity of an instrument, it has also been suggested that investigations of new measures demonstrate that the instrument has a valuable practical impact when used in substantive research (Schwab, 1980). This is particularly true for research on pay satisfaction for two reasons. First, as part of an applied field, measurement-type research in this area should be able to make a substantive contribution, such as by helping organizations evaluate their own pay plans. Second, PSQ research has been criticized for neglecting to examine the consequences of the separate pay satisfaction dimensions (Deckop, 1992; Heneman & Judge, 2000; Judge, 1993; Judge & Welbourne, 1994; Miceli & Lane, 1991). Although this paper focuses on presenting evidence of the construct validity of the lump-sum bonus satisfaction instrument, it is also important that such a demonstration shows the measure has some predictive power beyond that of the other PSQ dimensions or other related constructs. To make this illustration, we examine the substantive impact of lump-sum bonus satisfaction on the prediction of two salient outcomes: organizational commitment and intent to turnover. Although there are potentially many relationships for pay satisfaction measures (Heneman & Judge, 2000), the examination of these relationships with organizational commitment and intent to turnover is a valuable first step because of their extensive attention in organizational studies and their demonstrated importance on outcomes such as turnover and job performance (e.g., Horn, Caranikas-Walker, Prussia, & Griffeth, 1992; Mathieu & Zajac, 1990).

First, we examine the effect of lump-sum bonus satisfaction on affective commitment, defined as "the relative strength of an individual's identification with and involvement in a particular organization" (Mowday, Porter, & Steers, 1982, p. 27). Organizational commitment is characterized by "(a) a strong belief in and acceptance of the organization's goals and values; (b) a willingness to exert considerable effort on behalf of the organization; and (c) a strong desire to maintain membership in the organization" (Mowday et al., 1982, p. 27). A number of studies have examined the relationship between overall pay satisfaction and affective organizational commitment (see Mathieu & Zajac, 1990); however, there has not been research into how subdimensions of pay satisfaction (let alone lump-sum bonus satisfaction) affect this construct. Past precedent of organizational commitment's importance

combined with the research gap in how multidimensional pay satisfaction relates to organizational commitment makes this a valuable area to explore the lump-sum bonus satisfaction measure's explanatory power. Furthermore, characteristics of lump-sum bonuses make a particular case for why we should expect a relationship with organizational commitment.

Because lump-sum bonuses are determined in a number of ways, such as based on individual and/or organizational performance, lump-sum bonuses may help create a greater level of awareness as to the organization as a whole. This organizational effect should be reflected by affective reactions toward the entity. Thus, we would expect that lump-sum bonus satisfaction will have unique predictive effects on organizational commitment, even after controlling for the effects of job satisfaction, pay levels, and the other dimensions of the PSQ.

Second, we also expect lump-sum bonus satisfaction to relate to intent to turnover, even after controlling for the effects of job satisfaction, organizational commitment, pay levels, and the other dimensions of pay satisfaction. That is, lump-sum bonuses are a form of compensation that, if managed properly, rewards high performance. Research has shown that without a link between pay and performance, the likelihood of high performer turnover increases (Trevor, Gerhart, & Boudreau, 1997). Furthermore, regardless of individual performance, additional pay strengthens the calculative commitment of an individual. That is, satisfactory bonuses make the cost associated with turnover greater; thus, greater bonus satisfaction should be associated with lower turnover intentions.

Method

Participants and Setting

The current data come from five organizations headquartered in a southeastern U.S. city. Participants were employed in organizations in medical fields or medical provider services; however, employees were employed in a diverse set of occupations, and included blue collar workers, clerical workers, administrative personnel, office managers, medical technicians, nurses, and doctors. Analysis of these organizations' pay plans and policies revealed that all employees (a) had some form of (nongovernment mandated) benefits coverage, (b) could have potentially received raises in the past, and (c) were eligible for some form of cash bonus. Thus, we determined it was appropriate to administer the complete PSQ in addition to our items on lump-sum bonus satisfaction.

The lump-sum bonus pay policies ranged across the organizations. Two companies provided individuals with cash bonuses based on organizational profits. Another company provided lump-sum bonuses based on a gainsharing plan. The other two organizations paid lump-sum bonuses from a profit

sharing pool, but were distributed based on a combination of job salary and individual job performance evaluations. Across the organizations, not all employees actually received bonuses in any given time period. However, they all knew they could potentially receive a bonus if their individual performance and/or organizational performance were above certain thresholds. It is important to note that despite the process differences in how bonuses were determined across organizations, when bonuses were provided, they were in the form of cash payments. Thus, although the determinants of lump-sum bonuses were different across organizations, the resulting type of pay (cash, as opposed to stock options, benefits, or nonmonetary rewards) was equivalent.

Employees completed a survey that included the items from the PSQ, additional questions about lump-sum bonus satisfaction, and other employee attitudes. Archival data were also available from some company information systems. Specifically, payroll data were collected from three of the organizations, and specified individuals' actual base pay and bonus levels. When archival data was unavailable, employees were asked to self-report their pay and bonus levels in the questionnaire. Data were not collected on both self-report and archival pay level data from the same individuals.

Managers provided the questionnaire to employees. After the participants completed the surveys, they mailed them directly to the authors of this study. The participants were assured that the data in the questionnaire were completely confidential. A total of 895 questionnaires were administered, and employees returned 416 completed usable questionnaires for an overall response rate of 46%. ¹Employee population data were available for four of the five organizations, and there were no significant differences between respondents and nonrespondents with regard to age, sex, salary level, bonus level, or occupation.

Participants' base pay (based on archival data and the self-reported values when archival data were not available) ranged from \$6,750 to \$320,000 ($M = \$31,057$; $SD = \$33,540$). Sixty-seven percent of the sample reported expecting a bonus. Bonuses ranged from \$0 to \$300,000 ($M = \$3,581$; $SD = \$23,931$). The proportion of bonuses of total cash compensation ranged from 0% to 83%, although the distribution was heavily skewed. Over 90% of the sample had a bonus proportion less than 14% of total compensation, and only three individuals had a proportion above 50%. Respondents' ages ranged from

¹ Complete data were available for 380 employees. For 36 employees, some items in the PSQ were not filled out. In these cases, the employees' mean scores for the completed items were used as the measure. For example, if an employee completed benefits satisfaction items 1, 2, and 3, but left number 4 blank, the mean from the three items was used as the overall measure. This method has been shown to be the most effective technique for handling missing data when some items are missing on multi-item scales (Roth, Switzer, & Switzer, 1999). Not only does this technique provide the best estimates of covariation compared to other missing data techniques, but it preserves sample size and thus power in subsequent analyses (Roth, 1994; Roth & Switzer, 1995; Roth et al., 1999).

19 to 76 years old, with a mean age of 36 years ($SD = 10.22$) and a mean organizational tenure of 3.3 years ($SD = 3.90$). Eighty-one percent of the participants were female, 79% were Caucasian, and 62% were married.

Measures

Pay satisfaction questionnaire. The 18-item version of the PSQ (Heneman & Schwab, 1985) was used to measure the four original dimensions of pay satisfaction. Using a 5-point scale ranging from 1 = *very dissatisfied* to 5 = *very satisfied*, respondents indicated their satisfaction with the 18 statements describing their compensation. Scale scores were computed by averaging the items' values. The coefficient alpha levels, 0.96, 0.94, 0.90, and 0.90 for pay level, benefits, raise, and structure/administration satisfaction respectively, are similar to those in other studies investigating the PSQ (e.g., Heneman & Schwab, 1985; Judge, 1993; Judge & Welbourne, 1994; Scarpello et al., 1988).

Lump-sum bonus satisfaction. To measure lump-sum bonus satisfaction, we created a measure similar in the phrasing and style to the original PSQ. Using the same 5-point Likert scale described above, respondents were asked to rate their satisfaction in response to the following questions: (a) my most recent bonus, (b) the influence that others have on my bonus, (c) the bonuses I have typically received in the past, and (d) how my bonuses are determined. In the confirmatory factor analyses, each item was analyzed separately; however, in the correlational and regression analyses, the measure was constructed by averaging the responses to the four items.

Other attitudinal measures. The survey also collected measures of affective organizational commitment, intent to turnover, and overall job satisfaction. Organizational commitment was measured using the 9-item Mowday, Porter, and Steers (1982) instrument, with a resultant reliability of 0.88. Intent to turnover was measured with a 5-item measure used in previous research (e.g., Bluedorn, 1982; Hendrix, Nestor, & Troxler, 1985; Netemeyer, Boles, & McMurrian, 1996), and had a reliability of 0.91.

Overall job satisfaction was measured with three items, used by Judge, Cable, Boudreau, and Bretz (1995). First, the Gallup Poll measure of job satisfaction was used, where the respondents answered "yes" or "no" to the question, "All things considered, are you satisfied with your job?" Second, the single-item job-in-general scale was used, which was adapted by Scarpello and Campbell (1983) from the G.M. Faces Scale. For this question, respondents responded to the question "How satisfied are you with your job in general?" using the same 5-point Likert scale described above. The third question was an adapted version of the Fordyce percent time satisfied item, originally used by Diener (1984). For this item, respondents were asked to report the percent of time they are happy with their job on

average. Because the three items had different response formats, they were standardized before computation of a composite measure. The three standardized scores were then averaged for use in subsequent analyses. The alpha of the composite measure was 0.80.

Confirmatory Factor Analyses

To test if the PSQ and lump-sum bonus satisfaction items load on their hypothesized dimensions, we employed confirmatory factor analysis using LISREL VIII (Joreskog & Sorbom, 1996). As discussed by Judge (1993), confirmatory factor analysis is particularly well suited to investigate dimensionality because it allows direct investigation of the degree that specific items jointly load on their hypothesized constructs (convergent validity) and the degree to which purportedly different constructs are distinguishable from each other (discriminant validity). Although strict guidelines for minimum sample sizes do not exist (Anderson & Gerbing, 1988), our sample of 416 exceeds the minimum of 200 recommended by Boomsma (1982), and our sample size to parameter ratios of at least 8:1 exceed the suggested minimum of 5:1 for reliable maximum likelihood estimation (Bentler, 1985). Our analyses follow the comprehensive approach used to test PSQ dimensionality used by Judge and Welbourne (1994). This involves testing the hypothesized model against multiple logical alternative models with fewer dimensions. We expect the 5-factor model should have significantly better fit than all of the alternative models.

The hypothesized model includes the items loading on the appropriate five dimensions: the four PSQ pay satisfaction dimensions and hypothesized lump-sum bonus satisfaction. We compare this model to 10 alternative models. The first alternative model is the null model, where the satisfaction items are not allowed to load on the five factors and the dimensions are not allowed to intercorrelate. The second alternative model is the orthogonal model, which assumes zero correlations among the PSQ dimensions. The third alternative model is the single-factor model, which would suggest that pay satisfaction is not multidimensional.

If lump-sum bonus satisfaction does not constitute a unique dimension of pay satisfaction, it is unclear where its items would load. Because past research suggests that the pay level, raise, and structure/administration dimensions are the most related (Judge, 1993), the fourth alternative model tests a 2-factor structure, where the benefits scale behaves as hypothesized but the remaining items load on a single dimension. In this alternative model, the lump-sum bonus satisfaction items would load with the other cash-related items. The fifth alternative model tests a 3-factor solution, where pay level and benefits satisfaction are distinct, and the other dimensions are combined. The sixth alternative

model tests a 3-factor solution that combines pay level and lump-sum bonus, and raise and structure/administration. The seventh alternative model tests a 3-factor model where the items for pay level, raise, and lump-sum bonus satisfaction are combined.

The remaining four alternative models test 4-factor solutions. The eighth alternative model combines pay level and lump-sum bonus satisfaction. The ninth alternative model tests a 4-factor solution where lump-sum bonus satisfaction loads with raise satisfaction. The tenth alternative model loads lump-sum bonus satisfaction with structure/administration satisfaction.

TABLE 1
Reliabilities and Correlations of Dimensions of the Pay Satisfaction Questionnaire, Lump-Sum Bonus Satisfaction, and Other Attitudinal Measures

Satisfaction dimension	M	SD	1	2	3	4	5	6	7	8
1. Pay level	2.83	1.09	(.96)							
2. Benefits	3.52	0.97	.39	(.94)						
3. Raise	2.81	0.94	.65	.43	(.90)					
4. Structure	2.82	0.78	.62	.50	.76	(.90)				
5. Lump-sum bonus	2.66	1.05	.42	.39	.65	.66	(.93)			
6. Job satisfaction	0.00	0.78	.39	.29	.45	.42	.35	(.80)		
7. Organizational commitment	3.89	0.73	.31	.36	.43	.47	.46	.65	(.88)	
8. Intent to turnover	2.04	1.08	-.38	-.28	-.37	-.34	-.27	-.62	-.60	(.91)

Notes: N = 419. All correlations are significant at $p < .01$. Coefficient alpha reliability estimates are in parenthesis on the main diagonal.

Several fit indices are used to evaluate the models. The most common method of comparing model fit involves performing chi-squared difference tests. We also examine Joreskog & Sorbom's (1996) goodness of fit index (GFI), Bender's (1990) comparative fit index (CFI), and the Tucker Lewis Index, or "Nonnormed Fit Index" (NNFI). For the GFI, good fit is exhibited by levels of 0.90 or higher. Because the GFI may be subject to inconsistencies from sampling characteristics, and because the CFI and NNFI seem to be less affected by such characteristics (Hu & Bentler, 1995), they are included here. Good fit for these indexes is also exhibited by levels above 0.90. Another useful measure of fit is the root mean square error of approximation (RMSEA) that assesses fit per degree of freedom. RMSEA values of 0.08 or less represent a close fitting model (Browne & Cudeck, 1993).

Results

Table 1 presents the correlations and scale reliabilities for the PSQ scales, the lump-sum bonus satisfaction instrument, and the other attitudinal measures of interest in this study. Supporting the first

step of providing evidence for construct validity, the reliability of the lump-sum bonus satisfaction measure was 0.93, which is quite acceptable for practical and research applications (cf. Nunnally & Bernstein, 1994), and is comparable to the reliabilities of the other PSQ dimensions (i.e., 0.96, 0.94, 0.90, 0.90).

The intercorrelations among the PSQ dimensions are consistent with past research (e.g., Judge, 1993; Judge & Welbourne, 1994; Scarpello et al, 1988), and provide some support for convergent and discriminant validity of the lump-sum bonus satisfaction measure. As expected, lump-sum bonus satisfaction is practically and statistically significantly related to other attitudinal measures. It is most notably correlated with pay structure/administration satisfaction ($r = .66$) and pay raise satisfaction ($r = .65$). For the nonpay related attitudinal measures, lump-sum bonus satisfaction correlated 0.35 with job satisfaction, 0.46 with organizational commitment, and -0.27 with intent to turnover. As a whole, these levels indicate some degree of convergence, with the pay variables being generally more similar than the nonpay variables. However, these values certainly do not indicate equivalence of lump-sum bonus satisfaction with any of the other scales. A multiple regression (results available upon request) with lump-sum bonus satisfaction as the dependent variable and the original PSQ dimensions as the independent variables explains 49% of the variance of lump-sum bonus satisfaction. Thus, half of the variance in lump-sum bonus satisfaction is not explained by current PSQ measures.

The examination of the correlation matrix provides some information on the convergent and discriminant validity of the lump-sum bonus satisfaction measure, but a more rigorous investigation of its factor structure could provide stronger evidence of construct validity. Table 2 presents the fit indices from confirmatory factor analyses for the alternative models.² The next best fitting model is the 4-factor model, which combines the items for lump-sum bonuses and raise satisfaction. The 5-factor model had significantly better fit than this solution ($\Delta X^2 = 307.41$; $df = 4$, $p < .0001$), and thus all other models. The fit statistics from the confirmatory factor analyses also indicate that the hypothesized five-factor model provides a good fit to the data. The result that the lump-sum bonus satisfaction constitutes a dimension of pay satisfaction separate from the existing PSQ measures presents evidence of the measure's discriminant validity.

² Although we rely primarily on the confirmatory factor analyses to test our hypothesized structure, we also performed exploratory factor analyses. Results of a principle components analysis, available upon request, revealed that the pay satisfaction items loaded on five factors with eigenvalues greater than 1.0, thus supporting our view of a 5-factor model. We then performed a rotated factor analysis assuming five factors to confirm our hypothesized loadings. These results, also available upon request, revealed that the four bonus satisfaction items loaded on the same factor with no other items loading on the same factor. The results also confirmed the overall expected factor loadings, with each item loading most strongly with the other items from the same subscales.

Although we had no hypothesized solutions for more than five factors, we used exploratory factor analyses to test 6-, 7-, and 8-factor solutions (analyses available upon request). In all cases, the lump-sum bonus satisfaction items loaded on the same factor and no other items loaded on that factor. This result suggests that even if a structure with more dimensionality was sought, the lump-sum bonus satisfaction measure would still exhibit convergent and discriminant validity with regard to the other PSQ dimensions.

Table 3 provides the factor loadings of the items on their respective constructs for the hypothesized 5-factor pay satisfaction model. All factor loadings for the five dimensions of pay satisfaction are relatively strong (average loading = .87) and significant ($p < .01$). The fact that lump-sum bonus items all relate most strongly to their posited factor provides evidence of the measure's convergent validity.

TABLE 2
Fit Statistics of Hypothesized and Alternative Models

Model	χ^2	df	GFI	NNFI	CFI	RMSEA
Null model	7401.02	231	–	–	–	–
Orthogonal model	1827.43	209	.69	.75	.77	.14
Single-factor	3109.52	209	.53	.55	.60	.18
2-factor: Combining bonus, level, raise, and structure/administration	2138.03	208	.60	.70	.73	.15
3-factor: Combining bonus, raise, and structure/administration	1215.59	206	.78	.84	.86	.11
3-factor: Combining bonus and level. Combining raise and structure/administration	1806.59	206	.67	.75	.78	.14
3-factor: Combining bonus, level, and raise	2020.71	206	.60	.72	.75	.15
4-factor: Combining bonus and level	1766.51	203	.67	.75	.78	.14
4-factor: Combining bonus and raise	1121.38	203	.79	.85	.87	.10
4-factor: Combining bonus and structure/administration	1121.98	203	.79	.85	.87	.10
5-factor (hypothesized)	813.97	199	.85	.90	.91	.08

Evidence suggesting construct validity for the lump-sum bonus satisfaction measure was also assessed by examining the relationship of lump-sum bonus satisfaction with logical (arguably causal) antecedents of the measure. Specifically, we looked at the relationships of lump-sum bonus satisfaction with actual bonus level (from archival data), self-reported bonus level, the combined set of bonus level data (both archival and self-report), and expectations of future bonus amounts. The correlations between the antecedents of lump-sum bonus satisfaction and the dimensions of pay satisfaction are

shown in Table 4. Because the distribution of bonus scores was highly skewed, like other studies on compensation (e.g., Daily, Johnson, Ellstrand, & Dalton, 1998), we transformed the measure using a natural logarithm. We tested if the correlations with lump-sum bonus satisfaction were higher than the correlations with the other PSQ dimensions using the formula developed by Steiger (1980) and recommended by Cohen and Cohen (1983, p. 57) for testing the significance of the difference between dependent correlations.

TABLE 3
LISREL Estimates of Factor Loadings for the Pay Satisfaction Questionnaire

Item	Pay level	Benefits	Raise	Structure/ admin.	Lump-sum bonus
My take home pay	.93				
My current salary	.97				
My overall level of pay	.98				
Size of my current salary	.94				
My benefit package		.88			
Amount the company puts toward my benefits		.92			
The value of my benefits		.99			
The number of benefits I receive		.91			
My most recent increase			.96		
Influence my supervisor has over my pay			.76		
The raises I have typically received in the past			.84		
How my raises are determined			.85		
The company's pay structure				.76	
Information the company gives about pay issues of concern to me				.76	
Pay of other jobs in the company				.70	
Consistency of the company's pay policies				.88	
Differences in pay among jobs in the company				.68	
How the company administers pay				.69	
My most recent bonus					.98
The influence that others have on my bonus					.86
The bonuses I have typically received in the past					.91
How my bonuses are determined					.98

Note: All loadings are significant at $p < .01$.

The logarithm of individuals' most recent bonuses (obtained from payroll records) was significantly related to lump-sum bonus satisfaction ($p < .05$) and was larger than the relationship with the existing PSQ facet measures. Furthermore, the relationship between bonus level and lump-sum bonus satisfaction was significantly greater than the relationship between bonus level and benefits satisfaction ($p < .01$), raise satisfaction ($p < .05$), and structure/administration satisfaction ($p < .05$). Self-reported bonus levels exhibited similar relationships. The correlation between self-reported bonuses

and lump-sum bonus satisfaction is significant ($p < .05$) and is larger than the correlation between the bonus level and any of the other dimensions of pay satisfaction; however, this correlation is not significantly larger, except compared to the relationship for structure/administration satisfaction ($p < .01$). The combination of self-report and archival bonus level data was more related to lump-sum bonus satisfaction than for all of the other pay satisfaction measures (all at $p < .01$). Individuals' expectations of receiving bonuses equal to or greater than the previous year's bonuses was most related to lump-sum bonus satisfaction, significantly more than to the other facets of pay satisfaction (stronger than with raise satisfaction at $p < .05$, and stronger than with the other measures at $p < .01$)

TABLE 4
Correlations Between Pay Satisfaction Questionnaire Dimensions and Hypothesized Related Variables

Related variables	N	PSQ Dimensions			Structure/ admin.	Lump-sum bonus
		Pay level	Benefits	Raise		
<i>ln</i> bonus (payroll data)	101	.13	-.05	.08	.06	.24 ¹
<i>ln</i> bonus (self report)	318	.07	.08	.09	.02	.13 ²
<i>ln</i> bonus (both self-report and payroll)	419	.14	.12	.14	.15	.28 ³
Will receive equal or greater bonus than last bonus	367	.21	.09	.25	.23	.34 ⁴

¹The correlation between *ln* bonus (data obtained from payroll records) and lump-sum bonus satisfaction is significantly greater than zero ($p < .05$), and is significantly greater than the correlation with benefits ($p < .01$), raise ($p < .05$), and structure/administration satisfaction ($p < .05$). The correlation between lump-sum bonus level and lump-sum bonus satisfaction was not significantly greater than the correlation with pay level satisfaction at $P < .05$.

²The correlation between the self-reported bonus level (transformed with natural logarithm) and lump-sum bonus satisfaction is significantly greater than zero ($p < .05$), but is only significantly greater than the correlation with structure/administration satisfaction ($P < .01$).

³The correlation between the combined set of *ln* bonus data (both the 101 subjects for whom archival data was available, and the 318 subjects for who self-reported their bonus level) and lump-sum bonus satisfaction is significantly greater than zero ($p < .01$) and is significantly greater than the other correlations (all at $p < .01$).

⁴The correlation between individuals' perception that they will receive a bonus equal to or greater than last year's bonus and lump-sum bonus satisfaction is significantly greater than zero ($p < .01$) and its relationship with the other facets of pay satisfaction (with raises at $p < .05$, and all others at $p < .01$). Note that the sample size is reduced to 367 because of missing data on this item.

As the final step in evaluating our measure, we performed a set of regression analyses to demonstrate the practical significance of using the lump-sum bonus satisfaction instrument over (a) only pay level data, (b) nonpay based attitudinal measures and pay level information, (c) the other

dimensions of the PSQ, and (d) nonpay based attitudinal measures, pay level information, and the other PSQ dimensions. We expected that, in all four cases (for both organizational commitment and intent to turnover), the beta coefficient for the lump-sum bonus satisfaction measure and the increase in the regressions' R-squares will be statistically significant.

Four sets of analyses were run to demonstrate lump-sum bonus satisfaction's effect on organizational commitment. In the first set of regressions, we examined lump-sum bonus satisfaction's ability to explain variance in organizational commitment beyond that explained by pay variables. Note that we used both self-report and archival data together in the same regressions when such models included bonus level and base pay level (comparisons 1, 2, and 4). That is, when we had archival data (24% of the sample) those values were used in the regressions; however, for the rest of the sample (76% of the sample), their self-reported bonus and base pay levels were used. We did not collect both archival and self-report pay level data from any single individual. Note, however, that when the regressions are run separately (analyses available upon request), there is no notable difference in the significance of the lump-sum bonus satisfaction measure. We then performed the same regression with the lump-sum bonus satisfaction measure included to determine its incremental validity.

In the second set of regressions, we wanted to demonstrate lump-sum bonus satisfaction's effect beyond that of pay variables and the attitudinal measure of job satisfaction. The first step of these comparisons thus included the self-report and archival pay level data and job satisfaction; the second step included these independent variables plus the lump-sum bonus satisfaction measure.

In the third set of regressions, we wanted to demonstrate lump-sum bonus satisfaction's effect beyond that of the existing PSQ measures. The first step of the regression thus included measures of pay level, benefits, raise, and structure/administration satisfaction. The second step included these four measures plus the lump-sum bonus satisfaction measure.

The fourth set of regressions included the PSQ measures, job satisfaction, and the pay level measures. Examining lump-sum bonus satisfaction's ability to predict variance in organizational commitment beyond these variables thus provides a conservative test of its substantive impact. The results of all four sets of regressions are shown in Table 5.

All four sets of regressions show that lump-sum bonus satisfaction predicts variance in organizational commitment, even after controlling for pay level variables, job satisfaction, and the other dimensions of the PSQ. The first set of regressions shows that measuring attitudes (i.e., satisfaction) toward pay explains significantly more variance than simply pay levels. Although pay level and bonus level were both significantly related to organizational commitment, adding the lump-sum bonus

satisfaction measure explained an additional 17% of variance and mediated the effects of the pay level variables.

As expected, the second set of regressions showed job satisfaction, base pay, and *ln* bonus level all significantly related to organizational commitment. However, adding the lump-sum bonus satisfaction measure as an independent variable (a) was statistically significantly related to organizational commitment ($p < .01$), (b) increased the .R-square of the regression by 0.06, and (c) mediated the effects of base pay and *ln* bonus level.

The third set of regressions also showed lump-sum bonus satisfaction to have a substantive impact. Of the PSQ's facets, benefits satisfaction, raise satisfaction, and structure/administration satisfaction all related to organizational commitment. However, the addition of lump-sum bonus satisfaction again related ($p < .01$) and increased the .R-square of the model ($p < .01$).

The fourth, and most conservative test of lump-sum bonus satisfaction's substantive impact also supported the use of the measure. Adding lump-sum bonus satisfaction to a regression containing job satisfaction, pay level items, and the four pay satisfaction measures from the PSQ was still significantly positively related to organizational commitment ($p < .01$) and increased the R-square of the regression ($p < .05$).

A similar group of regressions were run to demonstrate lump-sum bonus satisfaction's relationship with intent to turnover. Like before, the first regressions examined lump-sum bonus satisfaction's ability to explain variance in intent to turnover beyond that explained by pay variables. In the second regressions, we examined lump-sum bonus satisfaction's effect beyond that of pay variables and the attitudinal measures of job satisfaction and organizational commitment. The third set of regressions tested lump-sum bonus satisfaction's effect beyond that of the existing PSQ measures. The fourth set of regressions included the PSQ measures, job satisfaction, organizational commitment, and the pay level measures. Again, this final set of regressions which examines lump-sum bonus satisfaction's ability to predict variance in intent to turnover beyond these variables thus provides a conservative test of its substantive impact. The results of all four sets of regressions are shown in Table 6.

TABLE 5
Effect of Lump-Sum Bonus Satisfaction on Organizational Commitment

Independent variables	Comparison 1 (Pay)		Comparison 2 (Job sat. and pay)		Comparison 3 (PSQ)		Comparison 4 (Job sat, pay, & PSQ)	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Base pay	0.15**	0.07	0.10*	0.06			0.07	0.06
In bonus	0.21**	0.09	0.14**	0.07			0.11**	0.08*
Pay level satisfaction			0.60**	0.52**			0.49**	0.49**
Benefits satisfaction					-0.05	-0.03	-0.17**	-0.15**
Raise satisfaction					0.17**	0.15**	0.13**	0.13**
Structure/admin. satisfaction					0.19**	0.13	0.06	-0.01
Lump-sum bonus satisfaction		0.44**		0.27**	0.26**	0.17**	0.26**	0.20**
Adjusted R^2	0.07	0.24	0.41	0.47	0.24	0.22*	0.48	0.18**
Change in adjusted R^2		0.17**		0.06**		0.03**		0.02*

Notes: $N = 419$. For each set of comparisons, Step 1 presents the regression without lump-sum bonus satisfaction; Step two shows the results with the lump-sum bonus satisfaction instrument added. Values are standardized beta coefficients. The bonus was transformed using a natural logarithm to make it more normally distributed. A transformation was not necessary for the distribution of base salary. The base pay and bonus variables were based on archival data when available ($N = 107$), and self-report otherwise ($N = 318$). No information was available on the correlation between self-report and archival data on either pay variable. When analyzed separately, the effect of lump-sum bonus satisfaction was always significant at $p < .05$ or better when using the self-report data, and at $p < .01$ when using the archival data.

* $p < .05$ ** $p < .01$.

These regressions show that lump-sum bonus satisfaction in some cases does have substantive impact. That is, some regressions show that lump-sum bonus satisfaction predicts variance in intent to turnover; however, the results are not consistent for all four sets of regressions, and the direction of some effects are opposite of that previously hypothesized. As expected, the effect of lump-sum bonus satisfaction on intent to turnover is negative after controlling for the effects of In bonus and base pay. The size of one's bonus is negatively related to the presence of turnover intentions, but one's level of satisfaction had an additional negative relationship with turnover intentions. In the fourth set of

regressions, adding lump-sum bonus satisfaction to a regression containing job satisfaction, organizational commitment, pay level items, and the four pay satisfaction measures from the PSQ was still significantly related to intent to turnover and increased the R-square of the regression ($p < .05$), but the effect was in the opposite direction as expected. It should also be noted that lump-sum bonus satisfaction did not have a significant explanatory effect on intent to turnover in the second and third comparisons.

Conclusion

Lump-sum bonus satisfaction constitutes an additional dimension of pay satisfaction that fits into the framework of the PSQ. This study provides specific items that complement the PSQ to capture this additional dimension of pay satisfaction and presents a more accurate picture of multivariate pay satisfaction. Overall, based on a combined sample from five organizations, our study begins the process of providing evidence of the construct validity of our lump-sum bonus satisfaction measure. Specifically, we show (a) that the need exists to measure lump-sum bonus satisfaction, (b) how the construct fits into a relevant nomological network that is conceptually similar to the nomological network used to justify the creation of the PSQ, (c) the instrument exhibits reliability, (d) the instrument exhibits convergent validity, and (e) the instrument exhibits discriminant validity. Furthermore, we show the instrument can make a substantive contribution to research by demonstrating that it captures unique variance beyond that captured by the existing dimensions of the PSQ and other significant variables.

Our results suggest that future research examining the effects of lump-sum bonuses (or other pay policies) should use appropriate measures of pay satisfaction rather than just pay characteristics. This should better represent individuals' reactions to their pay situation. Although this study shows that actual bonus levels are related to lump-sum bonus satisfaction, there is a large amount of variance left unexplained by simply examining only bonus level. In addition, our regression results show that this variance can mediate the effects of bonus level information on (and be more predictive of) organizational commitment. Furthermore, lump-sum bonus satisfaction explains variance in turnover intentions, although this relationship is somewhat more complex. Specifically, lump-sum bonus satisfaction does not completely mediate the effect of bonus level, and in fact had a positive relationship with turnover intentions in our most specified comparison. It is beyond the scope of this paper to delve into why this relationship was found. Indeed, these results actually suggest that future research into the effects of bonuses on individuals' attitudes and behaviors is warranted. Measurement of lump-sum bonus satisfaction will allow a better specification of the effects of bonuses than examining the size of

bonuses alone. The substantive effect of bonus satisfaction (as represented by an increase in R-squared) was greatest when only pay level variables were previously measured for both the prediction of organizational commitment and intent to turnover. As most studies examining bonuses have only included pay data (e.g., Daily et al., 1998), adding the relevant pay satisfaction measures (to both the theory and the analyses) would likely significantly increase the predictive power of these models. With a valid measure of lump-sum bonus satisfaction (and the use of other appropriate pay satisfaction measures), agency theory approaches to the study of pay will be better able to examine the implications of various compensation designs.

We also suggest that use of the PSQ and/or our measure of lump-sum bonus satisfaction should be flexible. Measures of different facets of pay satisfaction should be used only when they match organizations' pay policies and practices. Because the organizations in our sample offered benefits, raises, and lump-sum bonuses, all of the PSQ and lump-sum bonus items were appropriate. However, not all organizations have such practices. For example, some companies have used lump-sum bonus payments in lieu of salary increases (...While salary increase budgets remain in check, 1998). Thus, before other researchers employ any pay satisfaction measures, an analysis of targeted firms pay practices is merited. Along these lines, we also encourage future research to develop other pay satisfaction dimensions examining other forms of compensation that complement the PSQ. Compensation practices are changing (Lawler et al., 1995), and measures of pay satisfaction should keep pace with such changes (Heneman & Judge, 2000). For example, although less common than lump-sum bonuses, the growing use of stock ownership plans (Engel, 1999; Parus, 1999) suggests the need for a measure of this form of compensation to be used when appropriate. Other pay satisfaction dimension measures should also be developed as the need arises for the assessment of new compensation tools.

In addition to developing specific pay component satisfaction measures, future research should also examine views of total compensation. In part, this would facilitate cross-organizational examinations where different pay policies are in place. To date, overall measures of pay satisfaction have been shown to be comparable to pay level satisfaction (Heneman & Schwab, 1985). This may be because the constructs are equivalent, or simply perhaps because pay level satisfaction is most salient. If the latter is true, total compensation satisfaction and pay level satisfaction may diverge as other forms of compensation constitute greater portions of total pay. As more compensation forms are created, and as organizational pay policies become more diverse, it may be valuable for future research to consider total compensation satisfaction and its effects in addition to satisfaction with specific facets of pay.

TABLE 6
Effect of Lump-Sum Bonus Satisfaction on Turnover Intentions

Independent variables	Comparison 1 (Pay)		Comparison 2 (Job sat., org. commit., & pay)		Comparison 3 (PSQ)		Comparison 4 (Job sat., org. commit., pay, & PSQ)	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Base pay	-0.09	-0.05	-0.01	-0.01			0.02	0.01
<i>ln</i> bonus	-0.19**	-0.13**	-0.07	-0.08*			-0.06**	-0.08*
Job satisfaction			-0.40**	-0.41**			-0.36**	-0.35**
Organizational commitment			-0.33**	-0.35**			-0.34**	-0.36**
Pay level satisfaction					-0.20**	-0.21	-0.18**	-0.17**
Benefits satisfaction					-0.11*	-0.11*	-0.03	-0.03
Raise satisfaction					-0.17*	-0.16*	0.00	-0.04
Structure/admin satisfaction					-0.04	-0.03	0.10	0.06
Lump-sum bonus satisfaction		-0.23**		0.06		-0.02		0.11*
Adjusted <i>R</i> ²	0.04	0.08	0.45	0.46	0.18	0.18	0.47	0.48
Change in adjusted <i>R</i> ²		0.04**		0.01		0.00		0.01*

Notes: *N* = 419. For each set of comparisons, Step 1 presents the regression without lump-sum bonus satisfaction; Step two shows the results with the lump-sum bonus satisfaction instrument added. Values are standardized beta coefficients. The bonus measure was transformed using a natural logarithm to make it more normally distributed. A transformation was not necessary for the distribution of base salary. The base pay and bonus variables were based on archival data when available (*N*=101), and self-report otherwise (*N*=318). No information was available on the correlation between self-report and archival data on either pay variable. When analyzed separately, the effect of lump-sum bonus satisfaction had the same significant levels as above, except lump-sum bonus satisfaction was not significant in Comparison 4 when using only the self-report group.

p* < .05 *p* < .01.

In sum, research and practice have recognized that lump-sum bonuses are a separate and distinct component of pay. We demonstrate how lump-sum bonuses fit into the framework of the PSQ and develop a measure of lump-sum bonus satisfaction. The development of the lump-sum bonus construct yields a more complete conceptualization of pay and pay satisfaction, and provides a better tool to help examine individuals' reactions to pay. Note, however, that this paper represents but a first step in the process of construct validating the lump-sum bonus satisfaction measure and examining its substantive impact. An important aspect of construct validation is replication (Schwab, 1980), and although this study uses samples from multiple organizations with individuals performing many types of work, additional examinations of the construct would further reveal the value of the measure. It would also be useful to examine the substantive impact of the lump-sum bonus satisfaction measure in other domains and on other attitudinal and behavioral outcomes. Furthermore, future research should investigate the determinants of lump-sum bonus satisfaction. This should include examining how the method for determining bonuses (e.g., profit sharing, gainsharing, individual performance-based) affects the level of bonus satisfaction. Such findings may be valuable for understanding how pay policies should be designed. In all, our results suggest that studying pay satisfaction, including lump-sum bonus pay satisfaction, may yield insights into the effects of pay and pay policies on employees' attitudes and behaviors. We hope that the measure introduced in this study will provide a tool to facilitate such research.

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