

RESEARCH REPORT

More Than Just the Mean: Moving to a Dynamic View of Performance-Based Compensation

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Compensation decisions have important consequences for employees and organizations and affect factors such as retention, motivation, and recruitment. Past research has primarily focused on mean performance as a predictor of compensation, promoting the implicit assumption that alternative aspects of dynamic performance are not relevant. To address this gap in the literature, we examined the influence of dynamic performance characteristics on compensation decisions in the National Basketball Association (NBA). We predicted that, in addition to performance mean, performance trend and variability would also affect compensation decisions. Results revealed that performance mean and trend, but not variability, were significantly and positively related to changes in compensation levels of NBA players. Moreover, trend (but not mean or variability) predicted compensation when controlling for future performance, suggesting that organizations overweighted trend in their compensation decisions. Theoretical and practical implications are discussed.

Keywords: compensation, dynamic performance, performance trend, pay for performance

Compensation decisions are arguably among the most important decisions that organizations make. How much to pay their employees has important implications for both employees (e.g., their motivation, satisfaction, perceived fairness, and turnover intentions,) and organizations (e.g., their effectiveness, ability to recruit and retain talent, and financial performance; Lawler, 1971, 1981; Milkovich & Newman, 1996). There are negative consequences for both undercompensation and overcompensation: Paying too little can result, for example, in increased turnover and reduced motivation, whereas paying too much can result, among others, in higher cost and poorer financial performance.

To make effective compensation decisions, organizations often tie compensation to performance (pay for performance). Indeed, a large literature shows a substantial positive link between performance and compensation (see Jenkins, Mitra, Gupta, & Shaw, 1998). Moreover, research indicates more specifically that previous task performance is utilized in compensation decisions (Zhou & Martocchio, 2001). Linking pay to performance can provide

motivation, direction, and reinforcement for employees and should thus facilitate future performance (e.g., Locke, Bryan, & Kendall, 1968; Podsakoff, Bommer, Podsakoff, & MacKenzie, 2006; Shaw, Duffy, Mitra, Lockhart, & Bowler, 2003).

Whereas a large portion of the literature on the relation between performance and compensation has been cross-sectional in nature, researchers are now calling for an examination of dynamism in performance and compensation (Gerhart, Rynes, & Fulmer, 2009; Sturman, 2007). This is consistent with the fact that employees work over extended periods of time during which their performance and compensation tend to change. In the present study, we answer this call and extend existing research on the link between performance and compensation by addressing an important gap in the existing research literature: the role of performance dynamics in compensation decisions.

Hypotheses Development: The Influence of Dynamic Performance Characteristics on Changes in Compensation Level

Typically, true performance has been defined as the average performance over a certain time horizon or number of performance episodes, generally treating anything other than the average of performance as noise (Lecerf, Ghisletta, & Jouffray, 2004). Consistent with this notion, most research on pay for performance has implicitly assumed that performance means average performance. However, research on dynamic criteria has shown that task performance tends to be dynamic, that is, lacking stability and being subject to changes over time (e.g., Deadrick & Madigan, 1990;

This article was published Online First January 16, 2012.

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Hofmann, Jacobs, & Gerras, 1992; Hulin, Henry, & Noon, 1990; Sturman, 2007; Thoresen, Bradley, Bliese, & Thoresen, 2004). There is now a growing recognition that performance can have stable and dynamic characteristics (Sturman, Cheramie, & Cashen, 2005) and that dynamic performance represents theoretically interesting and practically important aspects of performance, rather than simply being noise (Lecerf et al., 2004; Reb & Greguras, 2008; Sackett, Zedeck, & Fogli, 1988; Sturman, 2007). Indeed, examinations of dynamic performance have been helpful in predicting turnover (Harrison, Virick, & William, 1996).

In examining performance dynamics, past research has paid particular attention to three characteristics of dynamic performance: performance mean, variation, and trend (DeNisi & Stevens, 1981; Reb & Cropanzano, 2007; Sturman, 2003). These characteristics reflect the fact that the stability/dynamic of performance over time is influenced by stable factors (e.g., personality) as well as longer term (e.g., learning) and shorter term (e.g., moods) changes in employees. Research on performance appraisals has shown that raters take dynamic performance characteristics into account when evaluating employee performance (Reb & Cropanzano, 2007; Reb & Greguras, 2010).

The purpose of this study is to examine the influence of performance dynamics on compensation decisions. Specifically, we address the question whether characteristics of dynamic performance other than the mean (in particular, trend and variation) affect compensation decisions. In so doing, we address an important gap in the pay-for-performance literature, which has implicitly assumed that performance is best represented by a single variable (mean performance). Furthermore, if indeed compensation decisions are influenced by aspects of dynamic performance other than the mean, as we expect, the question arises as to whether compensation managers give a disproportionately low or high weight to any of the dynamic performance characteristics.

Influence of Performance Mean on Compensation Decisions

Among the three dynamic criteria, mean performance is perhaps the most salient indicator of an employee's contribution to an organization (Reb & Cropanzano, 2007). Average performance smooths out deviations from the mean that might be due to transitory factors beyond the control of the employee or random fluctuations that are not informative. Indeed, decision makers may view such fluctuations as noise to be ignored (Lecerf et al., 2004), instead placing the focus on the more stable mean.

Consistent with this reasoning, past research found that average performance strongly predicts variance in pay and reward allocation (Barnes & Morgeson, 2007; Zhou & Martocchio, 2001). This may not come as a surprise, as typical, or average, performance represents the dominant conceptualization of performance (Rushton, Jackson, & Paunonen, 1981). Because of these reasons and consistent with past findings, we hypothesize that higher mean performance will lead to positive changes in compensation level.

Hypothesis 1: Performance mean will be positively related to compensation change.

Influence of Performance Trend on Compensation Decisions

In addition to mean level, performance over time often shows some systematic, directional changes. Long-term changes can be due, for example, to changes in employee skills, knowledge, or experiences (e.g., Deadrick, Bennett, & Russell, 1997; Kanfer & Ackerman, 1989; Quiñones, Ford, & Teachout, 1995; Schmidt & Hunter, 1998). For example, an employee may learn more efficient ways of approaching a task and improve his or her task performance over the course of months (Sturman, 2003; Sturman & Trevor, 2001). Such long-term changes can be captured as trends in performance over time.

There are reasons to posit that organizations will compensate upward trends more favorably than downward trends even given the same mean level of performance. Reb and Cropanzano (2007) argued that performance trend is a highly salient gestalt characteristic of dynamic performance and therefore affects raters' heuristic appraisals of employees. Furthermore, raters may extrapolate an improving (deteriorating) performance into strong (weak) future performance. This can result in more favorable evaluations and higher compensation for employees who show an improving trend, as organizations might expect a higher future return from such employees, assuming that the trend does not reverse. Thus, those who perceive a trend in performance will expect that trend to continue into expected future performance, a phenomenon called naïve extrapolation (Ariely & Carmon, 2003).

Moreover, people view upward performance trends as suggesting an ability to learn and develop skills (Reb & Greguras, 2010) or perhaps to adapt over time to a more successful strategy. Given the value that many organizations place on learning, skill development, and adaptation (Kraiger, Ford, & Salas, 1993; LePine, 2003), it is reasonable to expect that employees who show an improving trend of performance will be viewed as more valuable employees than those with a deteriorating trend and should be compensated accordingly.

Finally, research indicates that performance trend influences attributions regarding effort and locus of causality. Reb and Greguras (2010) found that positive trends influenced raters to indicate such employees as putting forth the greatest effort. Those with high levels of effort will likely be judged as highly motivated people. In contrast, those with negative trends were judged as putting forth low levels of effort (Reb & Greguras, 2010). Moreover, Reb and Greguras found that raters attributed a positive trend to internal factors, such that characteristics of the employee were determined to drive their high performance. This suggests that people view a positive trend as an indication of positive mastery over the task, whereas a negative trend is viewed as an indication of being more at the whim of external factors.

Thus, those making compensation decisions will expect positive trends to continue upward and will judge those with positive trends as more able to learn, more motivated, and more in control over performance outcomes. In contrast, those making compensation decisions will expect negative trends to continue downward and will judge those with negative trends as less able to learn, less motivated, and less in control over performance outcomes.

Consistent with this reasoning, performance appraisal research has found that employees who show improving trends are evaluated more favorably than employees whose performance deteriorated.

rates over time (with employees who show a flat trend falling in between; DeNisi & Stevens, 1981; Reb & Greguras, 2010). The effect of trend on evaluations of performance has been established in both student and manager samples and in Western (U.S.) and Eastern (Singapore) samples (Reb & Cropanzano, 2007; Reb & Greguras, 2010).

On the basis of the above, we hypothesize that performance trend will be positively related to changes in compensation level.

Hypothesis 2: Performance trend will be positively related to compensation change.

Influence of Performance Variation on Compensation Decisions

Long-term or directional changes over time can be distinguished from short-term fluctuations, or unsystematic variation of performance (Sturman, 2007). Such fluctuations may be described as performance variation around a longer term trend. Within-person performance variation can be due a variety of factors, including affective state (Weiss & Cropanzano, 1996) and amount of sleep (Barnes, 2011). Between persons, some individuals may show large variation in performance, that is, are inconsistent, whereas others show little variation, that is, perform consistently around the mean level or a long-term trend.

There are several reasons to posit that larger performance variation is associated with smaller compensation. By definition, it is easier to predict the performance of employees who show little performance variability as compared to those who show high variability. Organizations tend to value predictability. Employees performing inconsistently can create uncertainty and disruptions for team members and other parties dependent on the employee, sometimes making it difficult to plan and perform interactively. This increases the risk of performance failures, coordination problems, and disrupted activities for other employees who are downstream in interdependencies. Depending on the context, especially poor episodes of performance may result in lost clients, lost revenue, lost credibility, destroyed equipment, injuries, or other forms of loss. Consistent with this reasoning, Hinds, Carley, Krackhardt, and Wholey (2000) found that employees prefer predictable work-group members.

Furthermore, inconsistent performance has been found to lead to attributions of negative traits (Fox, Bizman, Hoffman, & Oren, 1995). Indeed, the word *undependable*, which one would expect to be linked to high variability, is generally considered a pejorative label. Empirically, at least one study has found high performance variability to be associated with lower pay (Barnes & Morgeson, 2007). Organizations may pay higher compensation to more consistent performers in an effort to reward and retain these valued employees. Accordingly, we contend that performance variability will be negatively related to changes in compensation level.

Hypothesis 3: Performance variability will be negatively related to compensation change.

Method

Sturman (2007) highlighted some of the difficulties in designing studies to capture dynamic performance trends, as well as the

difficulties in measuring dynamic performance components. A proper setting to test our hypotheses requires well-defined performance objectives, precise measures that minimize measurement error (which might otherwise mask performance variability), data that are meticulously collected over a meaningful period of time to capture the dynamic components of performance, and compensation managers who clearly have access to such performance data. Fortunately, the National Basketball Association (NBA) provides exactly this type of setting. While this sample and certainly its compensation amounts are not typical of regular employees, the sample has several distinct advantages for the purpose of testing our hypotheses. First, conceptually, performance can be clearly defined over discrete performance episodes (a game). Second, from a measurement perspective, the available performance data are objective, comprehensive, and tracked over time (a crucial factor for this study). Furthermore, compensation data are available from both before and after the performance, allowing us to examine whether performance dynamics predict changes in performance. Third, the performance data are transparently available to team managers who make the actual compensation decisions used as dependent variables in this study.

Design and Sample

Past performance data included individual performance drawn from a sample of NBA players in each regular-season game played from the 2000–2001 season through the 2003–2004 season. A season consists of 82 games. The range of games a player participated in ranged from 42 to 244. To detect longer term performance trends in addition to variation, we considered the three seasons before a player signed a new contract. Thus, players with fewer than three seasons of performance data were not included. Compensation-level data were based on contracts signed in the off-seasons ([NBA Basketball Statistics], 2005). Each contract signed during this time span was matched with the performance data in the 3 years immediately prior to the new contract. Data were available indicating when a contract expired as well as the length of that contract, allowing us to determine when a new contract was signed. We could only include players in the sample who had already played on an earlier NBA contract because our dependent variable was change in performance. We also included only the first new contract signing per player to avoid dependency in the sample created through repeat entries.

Our final sample included 131 new contracts over this time period that met our inclusion criteria. These employee contracts were nested within 29 franchises. Average age of players in our sample was 29 years, and average experience playing in the NBA was 6.85 years.

Measures

Barnes and Morgeson (2007) found that although there are multiple behaviors that are important in basketball, points scored accounted for over half of the variance in compensation. This indicates that these organizations focus on points scored as the primary criterion on which NBA players are evaluated and compensated. Accordingly, we used points scored as our main measure of performance.

Performance mean. We operationalized performance mean as the mean number of points scored per game over the three seasons preceding the compensation decision.

Performance trend. We measured performance trend as the linear change over the three seasons prior to the new contract. We first gathered points scored per game over this time span. We then subjected these data to a linear regression for each player, with game number as predictor of points scored each game. If scores improved (deteriorated) over the three seasons, this resulted in a positive (negative) regression coefficient. We used each player's unstandardized regression coefficient as a measure of performance trend.

Performance variability. We measured performance variability as the standard error in the regression utilized to obtain performance trend. A high standard error indicates high variability in the game-to-game performance of each player, whereas a low standard error indicates low variability.

Change in compensation level. Each player signs a contract to work for an organization specifying his salary. To capture percent change in salary, we subtracted the salary of the old labor contract for each player from the salary of the new contract for each player and divided the total by the salary of the old labor contract.

Control variables. We also included the control variables of age and number of years in the league, which were significantly related to NBA salaries in previous research (Barnes & Morgeson, 2007). Additionally, we included the salary from the previous year for each player as a control variable. Players signing labor contracts could either re-sign with the same team or sign a contract with a different team, so we controlled for whether or not the contract was with a new team. Finally, to account for differences in opportunity to score, we also included team role. The same database providing the performance data also indicate whether

each player played the position of guard, forward, or center; we created dummy variables for forward and center.

Analysis

In our sample, individuals were nested within teams. Because teams may differ in how they make compensation decisions, this violates ordinary least squares regression analysis assumptions about independence of observations. Indeed, there was a significant ICC(1) value for percentage change in compensation (.20, $p < .01$), indicating significant differences between teams. Accordingly, we conducted a multilevel analysis, with players nested within teams. We used hierarchical linear modeling (Raudenbush & Bryk, 2002), with a variable at Level 2 indicating which individual signed with which team and all other variables at Level 1.

Results

Table 1 shows the means, standard deviations, and correlations of the study variables. As can be seen, across all players, compensation increased about 1% from previous contracts. Mean performance was close to 10 points per game, and there was no strong upward or downward trend over time when averaged across all players ($M = 0.004$). Performance mean and trend showed significant zero-order correlations with change in compensation of .19 ($p < .05$) and .59 ($p < .01$), respectively. This is consistent with Hypotheses 1 and 2 and also suggests that performance trend may have a stronger influence on change in compensation than performance mean.

Hypothesis Tests

Hypothesis 1 states that mean performance positively influences change in compensation level. Consistent with Hypothesis 1, our

Table 1
Means, Standard Deviations, and Intercorrelations of Study Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. New team ^a	0.55	0.50	—													
2. Guard ^b	0.41	0.49	.14	—												
3. Forward ^c	0.39	0.49	-.16	-.67**	—											
4. Center ^d	0.20	0.40	.03	-.42**	-.40**	—										
5. Age (years)	29.00	4.16	.23**	.03	.00	-.03	—									
6. Experience (years)	6.85	3.42	.14	.07	-.02	-.06	.89**	—								
7. Previous salary (millions)	4.12	4.75	-.09	-.15	.10	.06	.32**	.40**	—							
8. Performance mean T-1 ^e	9.82	6.19	-.34**	.08	.04	-.15	-.24**	-.09	.49**	—						
9. Performance mean T-2 ^f	9.62	6.16	-.32**	.12	.02	-.17	-.05	.10	.60**	.85**	—					
10. Performance mean T-3 ^g	9.37	6.28	-.22**	.16	-.02	-.17	.04	.18*	.63**	.77**	.89**	—				
11. Performance mean overall	9.84	5.85	-.31**	.12	.04	-.20*	-.13	.02	.57**	.93**	.95**	.92**	—			
12. Performance variability	0.008	0.005	.17*	.09	-.07	-.03	-.19*	-.18*	-.06	-.08	-.08	-.06	-.05	—		
13. Performance trend	0.004	0.03	-.18*	-.10	.06	.05	-.41**	-.40**	-.18**	.33**	-.06	-.31**	.03	.10	—	
14. Percentage change in compensation	0.98	2.17	-.25**	-.10	.17	-.08	-.48**	-.45**	-.29**	.36**	.09	-.06	.19*	.04	.59**	—

Note. Performance mean, variability, and trend are calculated from points scored per game. $n = 131$.

^a New team is dummy coded as 0 if the player re-signed with the same team and 1 if the player signed with a new team. ^b Guard is dummy coded 1 for guards and 0 for all other positions (forwards and centers). ^c Forward is dummy coded 1 for forwards and 0 for all other positions (guards and centers). ^d Center is dummy coded 1 for centers and 0 for all other positions (guards and forwards). ^e Performance mean T-1 refers to the season's performance mean 1 year prior to signing the contract. ^f Performance mean T-2 refers to the season's performance mean 2 years prior to signing the contract. ^g Performance mean T-3 refers to the season's performance mean 3 years prior to signing the contract.

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

analysis showed that performance mean had a positive effect on change in compensation level ($\beta = .35, p < .001$; see Table 2).

Hypothesis 2 states that performance trend has a positive effect on change in compensation level. As Table 2 indicates, performance trend positively influenced change in compensation level ($\beta = .35, p < .01$). This is consistent with Hypothesis 2.

Hypothesis 3 states that performance variability negatively relates to change in compensation level. As indicated by Table 2, this prediction was not supported ($\beta = .04$).

Supplemental Analysis

An interesting question that can be addressed with this sample is whether or not compensation managers place an irrationally high amount of weight on any of the conceptualizations of performance in making compensation decisions. We assume that compensation managers are trying to match compensation to future performance. We were able to obtain actual future performance (throughout the duration of the new labor contract of each player). Therefore, we entered future performance as a control variable and examined the influence of each conceptualization of performance on change in compensation. As indicated by Table 3, controlling for future performance eliminated the effect of performance mean, which dropped from a moderately strong effect ($\beta = .35, p < .01$) to nonsignificant ($\beta = .04$). However, controlling for future performance only partly eroded the effect of performance trend, which dropped very little, from .35 ($p < .01$) to .31 ($p < .01$). Thus,

Table 2
Hierarchical Linear Modeling Results Predicting Change in Compensation Level

Predictor	β	SE	t
Fixed effects			
Intercept	.04	.12	0.34
New team ^a	-.17	.08	-2.07
Forward vs. guard ^b	.06	.09	0.61
Center vs. guard ^c	.08	.11	0.74
Age	.05	.12	0.42
Experience	-.12	.09	-1.26
Previous salary	-.32	.05	-6.43**
Performance mean	.35	.06	5.54**
Performance variability	.04	.06	0.69
Performance trend	.35	.08	4.16**
	SD	Variance component	χ^2
Random effects			
Intercept	.32	.10	47.54**
Performance mean	.05	.00	14.00
Performance variability	.11	.01	28.10*
Performance trend	.35	.12	37.89**

Note. Performance mean, variability, and trend are calculated from points scored per game. $n = 131$.

^a New team is dummy coded as 0 if the player re-signed with the same team and 1 if the player signed with a new team. ^b Forward vs. guard is dummy coded 1 for forwards and 0 for all other positions (guards and centers) and refers to the difference between forward and guard. ^c Center vs. guard is dummy coded 1 for centers and 0 for all other positions (guards and forwards) and refers to the difference between center and guard.

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

Table 3
Hierarchical Linear Modeling Results Predicting Change in Compensation, Controlling for Future Performance

Predictor	β	SE	t
Fixed effects			
Intercept	.01	.11	0.11
New team ^a	-.18	.07	-2.46*
Forward vs. guard ^b	.10	.09	1.16
Center vs. guard ^c	.20	.10	1.95
Age	.15	.13	1.20
Experience	-.12	.10	-1.22
Previous salary	-.28	.04	-6.34**
Future performance	.39	.12	3.11**
Performance mean	.04	.10	0.35
Performance variability	.10	.06	1.58
Performance trend	.31	.08	4.01**
	SD	Variance component	χ^2
Random effects			
Intercept	.32	.10	51.71**
Performance mean	.06	.00	14.45
Performance variability	.13	.02	28.61*
Performance trend	.33	.11	36.15**

Note. Performance mean, variability, and trend are calculated from points scored per game. $n = 131$.

^a New team is dummy coded as 0 if the player re-signed with the same team and 1 if the player signed with a new team. ^b Forward vs. guard is dummy coded 1 for forwards and 0 for all other positions (guards and centers) and refers to the difference between forward and guard. ^c Center vs. guard is dummy coded 1 for centers and 0 for all other positions (guards and forwards) and refers to the difference between center and guard.

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

managers were weighting performance trend above and beyond any link with actual future performance.

Discussion

The present study extends our understanding of the relation between performance and pay. The pay-for-performance literature has implicitly assumed that performance means average performance only. Drawing on work on dynamic performance (Reb & Cropanzano, 2007; Sturman, 2007), we have challenged this assumption and argued, first, that dynamic performance is characterized by important aspects other than the mean and, second, that these other aspects of dynamic performance influence compensation decisions. Specifically, we predicted that performance mean, variability, and trend would all influence change in compensation level. We used a particularly well-suited sample, NBA players, to test our hypotheses, utilizing the benefits of well-defined, objectively and comprehensively measured performance and compensation data that were captured over an extended period of time and clearly available to compensation managers.

Replicating past research (e.g., Barnes & Morgeson, 2007; Zhou & Martocchio, 2001), we found that average performance affected compensation level such that the higher the average performance, the higher the percentage increase in compensation from the previous contract. Most interestingly, the present study showed that performance trend positively influenced compensation level change over and above performance mean. The more a player's

performance improved (deteriorated) over time, the more (less) compensation he received.

By showing how an increasing trend leads to higher compensation awards in new contracts, the present research contributes to our understanding of how organizations use dynamic performance information to make important decisions. Thus, these findings provide empirical evidence to reject the implicit assumptions in the pay-for-performance literature that performance can be captured entirely via mean performance and that the only aspect of performance that matters in compensation decisions is the performance mean. These findings also link to and complement research on performance appraisals. Similar to our research, research on performance appraisals has begun to examine the influence of dynamic performance characteristics. This research has shown that performance trend affects subjective ratings of performance as well as attributions of employee ability and effort (e.g., DeNisi & Stevens, 1981; Reb & Cropanzano, 2007; Reb & Greguras, 2010). We consider the consistency in results across these domains as encouraging, especially given the differences in methodology used: Whereas research on the effects of dynamic performance on appraisals has relied on laboratory experiments using hypothetical performance data, the present study examined how actual dynamic performance influenced real compensation decisions amounting to millions of dollars.

The present study did not find an effect of performance variability on compensation changes. This finding is inconsistent with the results reported in Barnes and Morgeson (2007), who did find such an effect in a similar study of NBA players' contractual compensation levels. One possible explanation is the different lengths of time involved in these studies. Whereas Barnes and Morgeson examined a single season, our study examined three consecutive seasons. It may be possible that performance variability plays out differently over longer periods of time, such that performance sampling error that might appear in the short term as variability washes out over more time. However, it should also be noted that when considering the literature on the effects of dynamic performance on performance appraisals, the results concerning performance variability have been similarly mixed. Whereas some studies (e.g., Reb & Cropanzano, 2007; Scott & Hamner, 1975) found little support for an effect of variability when studied together with mean and trend, other studies (e.g., Reb & Greguras, 2010) did find an effect, such that small variation led to more favorable evaluations. Clearly, more research is needed to examine the conditions under which performance variability significantly affects organizational decisions.

In addition to testing specific hypotheses, we also conducted supplemental analyses for research questions for which we did not have enough grounds to posit theoretically derived hypotheses. An especially interesting finding from these supplemental analyses is that performance trend seemed to be given an undeservedly high amount of weight in compensation decisions. Specifically, in these analyses, we controlled for future performance when predicting change in compensation level. To avoid overpaying, an increase in compensation based on a higher performance mean or an improving trend is only justified by a matching future performance. This implies that when statistically controlling for future performance, the effects on compensation change observed for performance mean and trend should become nonsignificant. Consistent with this reasoning, controlling for future performance did eliminate the

effect of performance mean on change in compensation. This suggests that compensation managers gave appropriate weight to performance mean. However, controlling for future performance only slightly eroded the influence of performance trend on change in compensation. This suggests that compensation managers, on average, placed an inappropriately high amount of weight on performance trend. Thus, taken together, our results suggest that not only are compensation managers taking performance trend into account (Hypothesis 2) but, unlike the influence of performance mean, this weight is larger than deserved. This finding is exploratory in nature, so caution should be taken in making strong inferences from it. Clearly, more research is needed to replicate and extend these suggestive initial findings.

A second interesting finding from our supplemental analyses is the significant variance between franchises in the degree to which performance variability and performance trend influenced compensation decisions. This suggests interesting future research directions on moderating variables. For example, there may be rater effects that moderate the influence of performance attributes on compensation decisions. Moreover, aside from experience, some people making compensation decisions may naturally have an optimistic bias that leads them to overproject past performance trends into the future, whereas others may be less likely to project performance trends into the future. Additionally, there may be differences among organizational cultures in how highly performance trend is valued. Some organizations may be especially likely to highly weight an upward performance trend.

Limitations and Future Research

A limitation of this research is the nature of the sample. NBA players are quite different from regular company employees in both their compensation level and their ability to perform at very high levels. NBA players' performance is also publicly available and scrutinized more than performance in most other careers. Similarly, their compensation data are publicly available, which is not always the case with other types of employees. Some might also question whether or not inferences made from sports teams will generalize to other industries and jobs. All this puts potential limits on the generalizability of the findings from this sample to samples in other contexts. Future research is required to examine the effect of dynamic performance characteristics on compensation decisions in other samples.

The main purpose of our study was not, however, to generate a generalizable parameter estimate that can be applied to the full population of compensation managers. Instead, our purpose was to test the theoretically derived predictions that performance trend and variability would affect changes in compensation level. From this perspective, some of the limitations of our sample also serve as strengths. The data in our sample were highly objective and publicly available. The financial rewards for performing well were very large. The data were longitudinal, allowing for the study of real-world performance trends over a 3-year period (as compared to literature in evaluations of dynamic performance that used hypothetical performance data; e.g., Reb & Greguras, 2010). The performance periods were also temporally antecedent to compensation decisions, an important element in establishing causal direction. All these factors allowed for a clean test of our theoretical hypotheses.

Another characteristic of our sample that is both a strength and a weakness is that it used objective performance data. This is a strength because it allowed us to examine dynamism in performance in a very precise manner. However, it eliminated issues associated with the subjective performance evaluation that occurs in many organizations. Future research should examine a broad range of employee evaluation criteria, including subjective evaluations.

Performance data from our sample were publicly available. Such transparency in performance may help to strengthen the link between performance and pay not only within the organization but also across organizations. Indeed, one means by which a basketball player in the NBA can negotiate a higher compensation level is to leverage an offer from another team. Such offers from other organizations are likely facilitated by publicly available performance data. There are other types of careers and organizations for which performance data are either public or semi-public. For example, research productivity of professors is both monitored and public. However, there are other settings in which there is less transparency. Thus, how public and transparent performance rating systems are may be another important moderator of the relationships between performance and compensation.

In the NBA, there are limitations to how much players can be compensated. For any given player, there is a maximum salary. This restricts the range in compensation, which generally attenuates relationships between variables. Thus, our findings are likely a conservative test of our hypotheses. Moreover, teams have a salary cap limiting the total compensation that they can provide, with a few exceptions to the rules (such as the mid-level exemption). Teams can go above this salary cap but must pay a penalty to do so. Although other organizations do not have the same salary regulation system as the NBA, most organizations operate in a fiscally finite environment that places parallel limitations on salaries. Similarly, the complexity faced by NBA compensation managers trying to work within this system may not be identical to constraints faced by other organizations, but compensation managers in other organizations may also face high complexity in making compensation decisions.

Extending beyond this research, future research should examine other personnel decisions that are influenced by performance trends and variability. A logical next step would be to examine promotion decisions. It is reasonable to expect that promotion decisions would be influenced by performance trends in the same manner that performance evaluations and compensation decisions are. Those with positive and steep trends may be perceived as rising stars and thus promoted faster even though their improvement was due to a low starting level. Similarly, researchers should examine how trend and variability in other behaviors outside of task performance—like helping behavior (Barnes et al., 2008)—impact performance-based compensation.

Practical Implications

Our findings have several important practical implications. In the context of compensation, previous conceptualizations of performance were somewhat incomplete and should be modified to include performance trends. When making compensation decisions, managers need to understand what variables influence the decision-making process. Managers may not realize that they are

implicitly projecting performance trends into the future and basing their compensation decisions on such trends. Such projections may be overly optimistic, leading to inflated compensation of employees who initially show improvement. Finally, compensation policies are likely to shape employee behaviors and performance. Organizations that reward performance trends may encourage their employees to artificially lower their performance so as to leave room for improvement in the future. Organizations should closely examine their policies and patterns to make sure they are rewarding the types of behaviors that they want from their employees.

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Received November 24, 2010

Revision received December 6, 2011

Accepted December 12, 2011 ■