# Distributive Justice, Promotion Instrumentality, and Turnover Intentions in Public Accounting Firms

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**ABSTRACT:** This study investigates turnover intentions in public accounting firms using organizational justice. In the proposed theoretical model, the key construct is promotion instrumentality, the belief that the organization rewards strong employee performance with promotions. Employee perceptions of distributive justice influence promotion instrumentality, which, in turn, influences turnover intentions. Further, the relation between instrumentality and turnover is moderated by job performance. When instrumentality is low, employees with high job performance are more likely to leave the firm. To investigate the theoretical model, a survey was administered to auditors in several public accounting firms. Statistical results support the model.

**Keywords:** public accounting firms; organizational justice; distributive justice; promotion instrumentality; turnover intentions.

## INTRODUCTION

Accounting researchers have long noted that turnover is a critical problem confronting public accounting firms. Consequently, they have expended considerable resources in attempts to understand the causes of turnover. In this quest, researchers have investigated a variety of factors related to turnover, including mentoring (e.g., Scandura and Viator 1994), flexible work arrangements (e.g., Almer and Kaplan 2002), gender (e.g., Dalton et al. 1997), work-family conflict (e.g., Pasewark and Viator 2006), personality characteristics (e.g., Harrell and Eickhoff 1988), and stressors and burnout (Fogarty et al. 2000).

A theoretical framework that also may help explain turnover in the firms is organizational justice, i.e., the fairness of the organization as perceived by its employees. While few accounting researchers

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have used organizational justice to investigate turnover (e.g., Parker and Kohlmeyer 2005), many researchers in the related fields of management and applied psychology have done so. Previous studies in these fields consistently report a significant negative relation between different types of justice (such as distributive justice) and turnover (see meta-analysis by Colquitt et al. 2001).

The current study extends this literature by examining how turnover is influenced by employee perceptions of the fairness of promotions in public accounting firms. Most large accounting firms have pyramid hierarchies in which employee survival depends upon promotions ("move up or move out" career paths). As a result, perceptions of fairness in promotion decisions are critical to these employees. According to the proposed theory, employees believe that "fair" promotions are those based upon high job performance. Employees form their fairness perceptions based upon their personal experience with organizational rewards (i.e., distributive justice) and observations of how others within the organization are promoted. The employee's belief that the organization promotes individuals on the basis of performance is defined as promotion instrumentality. When instrumentality is low, employees, especially high performers, may leave the firm; therefore, our model predicts that job performance moderates the relation between promotion instrumentality and turnover intentions. As noted by a stream of research outside of accounting (e.g., Abelson and Baysinger 1984; Campion 1991; Dalton et al. 1982; Hollenbeck and Williams 1986), turnover may be functional or dysfunctional to the organization depending upon who is leaving. When high performers leave the organization, the turnover is dysfunctional, with obvious negative consequences for the organization.

To examine these issues, a survey was administered to auditors in Big Four and regional accounting firms in both the Northeastern and Southern United States. There were 110 usable responses with a corresponding response rate of 45 percent. The results of the statistical analysis support the theoretical model described in the paper.

This paper contributes to the literature in several ways. Results suggest that organizational justice influences employees in their decision regarding whether to stay with their firms. Two justice considerations are linked to turnover intentions: (1) distributive justice, the fairness of personal rewards; and (2) the fairness of company promotions across all employees. The relation between promotion fairness and turnover is particularly strong for employees with high job performance, the employees who are most valuable to the firms. The paper also makes a methodological contribution by demonstrating an approach for performing path analysis in a complex model with moderated mediation.

## LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The theoretical model we examine appears in Figure 1. As can be seen, promotion instrumentality is the keystone of the model, as it is proposed to mediate the relationship between distributive justice and turnover intentions. Further, job performance is proposed as moderating the relationship between promotion instrumentality and turnover intentions. This set of proposed relations represents what has been termed a *moderated mediation model* (Preacher et al. 2007, specifically Model 3, see page 194). In such a model, the focus is on estimating the extent to which the effect of a proposed causal agent (distributive justice) on an outcome (turnover intentions), through an intervening variable (promotion instrumentality), is contingent on a moderator (job performance). Such a process is mathematically modeled by estimating "conditional indirect effects." In the theoretical section of the current paper, we first discuss the mediated relations, then the moderated ones.

### Distributive Justice and Promotion Instrumentality

Organizational justice involves the perceptions of organizational members regarding the fairness of the organization. While several types of justice have been conceptualized (see meta-analyses by

**FIGURE 1**
**Theoretical Model**
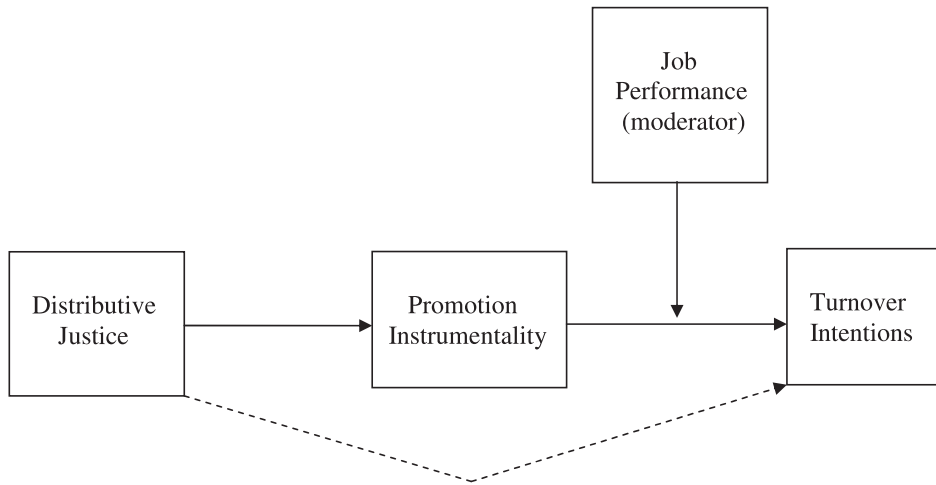


Cohen-Charash and Spector [2001] and Colquitt et al. [2001]), distributive justice is the most relevant to the current study. Distributive justice within a work organization is the "perceived fairness of the outcomes or allocations that an individual receives" from the organization (Folger and Cropanzano 1998, xxi). It is grounded in the equity theory of Adams (1965). In the Adams (1965) framework, employees and their organizations exchange resources for mutual benefit. Employees use their effort, skill, and experience on behalf of the employer in return for organizational rewards such as pay and promotions. An employee judges organizational fairness by examining the ratio of the outcomes received by the employee (e.g., pay) to employee inputs (e.g., effort and skill). In evaluating the fairness of the ratio, employees use social comparisons. They compare their ratios against the ratios of referents, such as coworkers or individuals in other companies who have similar jobs. As Leventhal (1976) notes in his review of equity theory, underlying the theory is the belief that individuals should be rewarded by the organization in proportion to their contributions to the organization. Leventhal (1976) agues that this belief is an example of an "allocation norm," which he defines as a social rule that specifies the fair and just distributions of resources within a social group. According to equity theory, individuals within social groups (such as firms) understand that the allocation of resources within the group is contentious and potentially ruinous for the group; consequently, individuals understand the need for allocation norms that members of the group accept as fair (Taylor and Moghaddam 1987, Chapter 5).

A stream of research has demonstrated the importance of distributive justice in organizational behavior. Distributive justice has been linked to a number of employee outcomes such as turnover, trust, commitment, and job satisfaction (e.g., see meta-analysis by Colquitt et al. 2001). A few studies argue that distributive justice also is linked to instrumentality—the belief that higher job performance leads to higher rewards for the individual (Colquitt 2001; Dubinsky and Levy 1989). The instrumentality construct originated within the expectancy theory of motivation first developed by Vroom (1964). According to this theory, if an employee believes that high job performance is rewarded, the employee is motivated to achieve high performance. The expectancy model, including its instrumentality component, has appeared in numerous accounting studies (e.g., Ferris 1977; Ferris et al. 1980; Jiambalvo 1979; Murray and Frazier 1986).

Dubinsky and Levy (1989), borrowing extensively from Tyagi (1982), argue that if an employee perceives that the organization rewards the employee fairly (high distributive justice), the employee will tend to believe that the company has high instrumentality. For their sample of retail clerks, Dubinsky and Levy (1989) report a significant relation between the perceived fairness of pay administration (a dimension of distributive justice) and the belief that increasing personal performance (e.g., increasing sales) results in greater extrinsic rewards for the employee. Colquitt (2001) reports a relation between a global measure of distributive justice and instrumentality among manufacturing employees who work in teams. Colquitt's (2001, 395) instrumentality measure focuses on how closely the individual's rewards are tied to performance (e.g., "If I perform well for my team, I am usually rewarded").

Extending these prior studies (i.e., Colquitt 2001; Dubinsky and Levy 1989), the current study examines the instrumentality of a specific reward—promotion—which may be particularly important to employees in public accounting. In the pyramidal organizational hierarchies of large accounting firms, promotion is the key to employee survival. Several researchers have noted that employee career paths in such firms are "up or out," i.e., employees are either promoted or they leave the firm (Cohen and Single 2001; Collins 1993). Congruent with the allocation norm of equity theory, the current study proposes that employees believe that promotions should be based upon employee contribution to the organization, and those who contribute the most to the organization are those with the highest job performance. Accordingly, individuals with high performance should be promoted. Such promotions are considered fair.

Distributive justice may influence promotion instrumentality (the belief that the company promotes employees with high performance). Distributive justice involves the fairness of rewards (such as pay, promotions, work assignments, perks) received by the employee. If an employee perceives that distributive justice is high (i.e., that he/she is rewarded fairly), the individual will likely conclude that the organization rewards its employees in a fair manner. A fair organization determines promotions based upon job performance. These arguments lead to the following hypothesis, stated in alternative form:

**H1:** Distributive justice and promotion instrumentality have a positive relation.

Distributive justice, as usually conceptualized in the organizational justice literature, involves the individual's perceptions of the fairness of all rewards received by the individual. The current study proposes that the individual's fairness experiences influence the individual's perceptions about the fairness of company promotions for all individuals. In making a judgment about the fairness of the firm's promotions (i.e., promotional instrumentality), the individual will examine not only personal experiences with rewards but the experience of others within the firm.

## Promotion Instrumentality and Turnover

There are several advantages to the individual when allocation norms are clear and the organization adheres to them. Allocation norms afford individuals "a sense of predictability" (Folger and Cropanzano 1998, xx). Individuals know how allocation decisions are made and what outcomes the individual is likely to receive in the long run. Further, norms provide the individual with the opportunity to pursue self-interest, as the norms clarify the relation between individual behavior and social rewards. For example, if the allocation norm is to promote based upon performance, employees desiring a promotion know that they must focus on performance-enhancing behavior such as working diligently and gaining trust of clients.

Based upon equity theory, the current study argues that employees believe that promotions should be based upon performance. When an organization violates this norm, the predictability of future promotions declines, and the connection between employee behavior and rewards becomes

muddled. Further, the violation may signal that the organization does not protect the rights of the individual. If the employee's current firm does not adhere to the norm, the individual may leave to find another organization that presumably does. The following hypothesis summarizes the arguments:

**H2:** Promotion instrumentality and turnover intentions have an inverse relation.

## The Mediating Role of Promotion Instrumentality

H1 proposes that distributive justice increases promotion instrumentality, while H2 proposes that promotion instrumentality decreases turnover intentions. Together, these hypotheses suggest that distributive justice reduces turnover indirectly by increasing promotion instrumentality. In other words, the relation between distributive justice and turnover intentions is indirect, i.e., mediated by promotion instrumentality. The corresponding hypothesis appears below:

**H3:** Promotion instrumentality mediates the relation between distributive justice and turnover intentions.

## The Moderating Role of Job Performance

While the current study proposes a direct effect between promotion instrumentality and turnover intentions (H2), the study also proposes that instrumentality interacts with job performance in its effect on turnover. In other words, job performance moderates the effect of instrumentality on turnover.[1] If high-performing employees perceive that promotion instrumentality is low, then they are more likely to leave the firm as they may believe that their high performance will go unrewarded. Accordingly, they will attempt to find firms that do reward high performance with promotions. This leads to the following hypothesis:

**H4:** There is an interaction between job performance and promotion instrumentality in their effect on turnover intentions. The inverse relation between promotion instrumentality and turnover intentions is stronger for employees with relatively high job performance compared to employees with relatively low performance.

If job performance moderates the relation between instrumentality and turnover, it follows that job performance moderates the magnitude of the indirect effect of distributive justice on turnover. Specifically, H3 and H4 when combined suggest that the indirect effect of distributive justice on turnover intentions through promotion instrumentality is larger for employees with high job performance than for employees with low job performance. The corresponding hypothesis appears below:

**H5:** The indirect relation between distributive justice and turnover intentions (via promotion instrumentality) is moderated by job performance. The indirect relation is larger for employees with relatively high job performance compared to employees with low performance.

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[1] While the current study examines job performance as a moderator, typically, in behavioral accounting research, job performance is the dependent variable as researchers attempt to examine factors that influence employee performance (e.g., Chong and Chong 2002; Fisher 2001; Hyatt and Prawitt 2001; Parker and Kyj 2006; Wentzel 2002).

## METHOD

### Data Collection

Data were collected using a survey of public accounting firms. The authors contacted large firms, both Big Four and regional, with strong ties to their schools. The firms were located in large metropolitan areas of the Northeast and Southern United States. Distribution of the surveys occurred through the internal mailing of the firms. Each questionnaire was accompanied by a cover letter explaining the research and instructions for completing the survey. To minimize potential response bias, respondents were asked to complete the survey independently and mail it directly to the researchers in postage-paid return envelopes. Respondents were informed that responses were anonymous. Questionnaires were distributed to 243 auditors. As the study focuses on turnover issues for lower-level employees, managers and partners were excluded. Of those auditors contacted, 116 returned the survey. Six respondents were eliminated as they either failed to complete the form or reported that they were part-time employees. The remaining 110 respondents represent an effective response rate of 45 percent.

### Measures

The variables in this study include turnover intentions, distributive justice, promotion instrumentality, and job performance. The related scales appear in Appendix A. Regarding turnover intentions, this study uses a three-item measure adopted from London and Howat (1978). A sample item from the scale is: "Barring unforeseen circumstances, I intend to stay with my current firm." The response scale has seven points ranging from 1 (strongly disagree) to 7 (strongly agree). The measure was reversed to reflect turnover intentions so that a high score indicates the respondent intends to leave the firm. Responses were averaged across items to produce the measure of turnover intentions (Cronbach's $\alpha = 0.94$).

To measure distributive justice, this study uses a scale developed by Colquitt (2001). As Colquitt (2001) notes, distributive justice and other justice constructs have been measured using a variety of scales. However, few scales have been examined for their construct validity. To remedy this measurement issue, Colquitt (2001) developed justice measures based upon theoretical arguments and then assessed their construct validity with independent samples. The Colquitt (2001) scale for distributive justice consists of four items, such as "My rewards reflect my contribution to the organization." Responses range from 1 (strongly disagree) to 7 (strongly agree). Responses were averaged across items to produce the measure of distributive justice (Cronbach's $\alpha = 0.98$).

Promotion instrumentality was measured using a three-item scale that is a modified version of the instrumentality scale developed by Colquitt (2001, 395). A sample item is: "In my firm, if you increase your performance, you increase chances for promotion." The response scale has seven points ranging from 1 (strongly disagree) to 7 (strongly agree), and responses were averaged across items (Cronbach's $\alpha = 0.84$).

To measure job performance, the current study adopted the scale developed by Day and Silverman (1989). Through their analysis of work in public accounting firms, Day and Silverman (1989) determined that the job performance of accountants consists of several dimensions: (1) technical ability, (2) completing assignments in timely manner, (3) work ethic, (4) successful client interactions, and (5) successful interactions with others within the firm (i.e., cooperation). In the current study, survey participants were asked to self-rate each dimension in comparison to others at the same level in the firm. Responses ranged from 1 (below average) to 5 (near the top).

Responses were averaged across items to produce the measure of job performance (Cronbach's α = 0.83).[2]

A principal axis factor analysis was performed on the 16 items described above, using promax (oblique) rotation following extraction. The Kaiser criterion (eigenvalue greater than 1) and the parallel analysis approach to assessing dimensionality (see Reise et al. 2000) both reveal the expected four-factor solution, which explained over 70 percent of the variance. All items loaded on the appropriate factors with standardized loadings of at least 0.50. No cross loadings occurred except one item on the job performance scale that marginally cross loaded on the promotion instrumentality scale.[3]

Given the sensitive nature of the questions in the survey, the current study attempts to assess several potential response biases such as social desirability response (SDR), positive affectivity, and negative affectivity. SDR bias occurs if survey participants answer questions so that their responses appear socially acceptable (Arnold et al. 1985; Ganster et al. 1983; Smith 1967). Such bias may produce spurious relations between variables (Ganster et al. 1983). Individual propensity for SDR was measured in the current study with a scale adopted from Crowne and Marlowe (1964) that appears in Appendix A. Using the techniques proposed by Anderson et al. (1984), the SDR scores were used to adjust the variable measures. The adjusted measures then were used in the regression equations that assess the hypotheses. The adjusted measures yielded the same findings as the unadjusted measures, which suggests that SDR is not a problem. Results for the unadjusted measures are reported in the analysis.

Positive affectivity is the individual's tendency to perceive situations positively, while negative affectivity is the tendency to see situations negatively (Agho et al. 1992; Iverson and Erwin 1997). Individual tendencies for positive and negative affectivity were measured using scales from Agho et al. (1992) that appear in Appendix A. Using the techniques of Anderson et al. (1984), variable measures were adjusted for the affectivity scores, and regression results using adjusted and unadjusted measures were compared. The same findings occur, which suggests that affectivity is not a problem. Results for the unadjusted measures are reported in the current study.

## Data Analysis

Although an indirect effect between two variables via a third can exist absent evidence of a simple association between the two (c.f. Hayes 2009; Shrout and Bolger 2002), and unmoderated mediation is not a prerequisite to moderated mediation, we nevertheless approach the analysis by building the model from simple to more complex. We start first by examining the associations between variables to test H1 and H2, using measures of simple association and ordinary least squares (OLS) regression. We then estimate a mediation model to test H3, focusing primarily on the estimation of the indirect effect as discussed by Preacher and Hayes (2004, 2008) and Hayes (2009), again using OLS regression and relying on a bootstrap method for inference (Hayes 2009; Shrout and Bolger 2002). H4 is examined by estimating a moderated OLS regression model (see e.g., Aiken and West 1991; Hayes and Matthes 2009). H5 is examined by estimating the indirect

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[2] Several accounting studies have used self-reported measures of job performance (e.g., Donnelly et al. 2003; Fisher 2001; Fogarty et al. 2000; Viator 2001). As Fogarty et al. (2000) argues (citing Churchill et al. 1985), such measures are subject to bias; however, such bias is unlikely to influence correlations between the measure and other variables. Further, as argued in Fogarty et al. (2000, 42), a performance measure that asks respondents to evaluate their performance relative to others "minimizes the leniency tendencies of self-reported measures."

[3] As requested by an anonymous reviewer, we also performed confirmatory factor analysis on the measures for distributive justice and promotion instrumentality. We compared fit indices (e.g., CFI and RMSEA) for a one-factor measurement model versus a two-factor model. The two-factor model has a better fit. Results of a likelihood ratio test also demonstrate that the two-factor model fits better than the one-factor model ($\chi^2$ (1) = 87.3, p < 0.001).

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effect first examined when testing H3, but conditioned on the moderator, again using OLS regression to estimate all effects of interest and a bootstrapping procedure for inference about conditional indirect effects. H3, H4, and H5 were tested using computational tools described in Preacher and Hayes (2004), Preacher et al. (2007), and Hayes and Matthes (2009).[4]

## RESULTS

### Simple Associations

Table 1 provides descriptive statistics for the measures in this study as well as the intercorrelations between all variables, expressed as Pearson's r. As can be seen, and as hypothesized, distributive justice is positively related to promotion instrumentality ($r = 0.558$, $p < 0.01$), and promotional instrumentality is inversely related to turnover ($r = -0.525$, $p < 0.01$). These results support H1 and H2. Although not directly hypothesized, the pattern of H1 and H2 predicts a negative association between distributive justice and turnover intentions. Indeed, this association is negative as would be expected and statistically different from zero ($r = -0.551$, $p < 0.01$). The correlation between job performance and turnover intentions is not significant ($r = -0.127$), a finding congruent with Fogarty et al. (2000), who also report a non-significant correlation.[5]

### Tests of Simple Mediation

H3 proposes that distributive justice affects turnover intentions indirectly through promotion instrumentality. The indirect effect was estimated using standard path analysis methods and then tested using two approaches. First, the "traditional" Sobel (1982) test was used. This approach has limitations (see e.g., Hayes 2009; MacKinnon et al. 2004; Preacher and Hayes 2004), as it assumes that the sampling distribution of the indirect effect is normal. The indirect effect is a product of random normal variables and, as such, its sampling distribution is not normal. Researchers who have noted this limitation of the Sobel test have recommended alternatives for inference such as *bootstrapping*. Bootstrapping generates a sampling distribution for the indirect effect empirically by repeatedly estimating the indirect effect after sampling from the existing data set with replacement and estimating the model in each resample. The estimates of the indirect effects in repeated bootstrap samples can then be used to generate confidence intervals for the purpose of inference that are more valid and powerful than the Sobel test. For details, see Preacher and Hayes (2004, 2008).

The indirect effect, which is of primary interest in a simple mediation model, is quantified as the product of the direct effect of distributive justice on promotion instrumentality and the direct effect of promotional instrumentality on turnover while controlling for distributive justice. In causal modeling, unstandardized effects are the standard metric. Thus, in this analysis, the former direct effect is estimated as the unstandardized regression coefficient in an OLS regression model estimating promotional instrumentality from distributive justice. Here, that effect is 0.476 (path *a* in the notation of Preacher and Hayes [2004]) and statistically different from zero (see Table 2). The latter direct effect is estimated as the unstandardized OLS regression coefficient for promotion instrumentality in a model estimating turnover intention from both promotion instrumentality and

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[4]  For examples in the organizational behavioral literature of the analytical approach we took, see: Cole et al. 2008; van Dijke and De Cremer 2010. Also, as an alternative approach, we estimated the corresponding models using structural equation modeling, specifying each variable as a latent factor with indicators-as-effects (using M-plus). The results were substantially the same as the OLS regression results reported in the current study. Tests of moderated mediation using structural equation modeling have not been widely evaluated or disseminated.

[5]  Viator (2001) reports a significant relation between performance and turnover intentions for managers, a group that that the current study does not examine.

**TABLE 1**

**Descriptive Statistics and Pearson's Correlations between Variables**

| | Mean | SD | Observed Range | Theoretical Range | Cronbach's $\alpha$ | Pearson's r | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | | PI | JP | DJ | TO |
| Promotion Instrumentality (PI) | 5.912 | 1.096 | 1.67–7.00 | 1.00–7.00 | 0.84 | 1.000 | | | |
| Job Performance (JP) | 4.127 | 0.575 | 233–.5.00 | 1.00–5.00 | 0.83 | 0.133 | 1.000 | | |
| Distributive Justice (DJ) | 5.527 | 1.23 | 2.00–7.00 | 1.00–7.00 | 0.98 | 0.558* | 0.160 | 1.000 | |
| Turnover Intention (TO) | 2.124 | 1.297 | 1.00–7.00 | 1.00–7.00 | 0.94 | −0.525* | −0.127 | −0.551* | 1.000 |

\* p < 0.01.
n = 110.

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## TABLE 2

### Regression Results for Simple Mediation

**Panel A: Variables**

|                                                                                                           | Coeff. | t      | p       |
|-----------------------------------------------------------------------------------------------------------|--------|--------|---------|
| Turnover intentions regressed on distributive justice ($c$)                                                | −0.556 | −6.853 | <0.001  |
| Promotion instrumentality regressed on distributive justice ($a$)                                          | 0.476  | 6.979  | <0.001  |
| Turnover intentions regressed on promotion instrumentality controlling for distributive justice ($b$)      | −0.374 | −3.428 | <0.001  |
| Turnover intentions regressed on distributive justice controlling for promotion instrumentality ($c'$)     | −0.378 | −4.055 | <0.001  |

**Panel B: Sobel Test of Indirect Effect ($a \times b$) and Percentile Bootstrap Confidence Interval Based on 5,000 Bootstrap Samples**

|                 |        |       |        |       | 95% Confidence Interval Limits | |
|-----------------|--------|-------|--------|-------|--------|--------|
|                 | Value  | SE    | Z      | p     | Lower  | Upper  |
| Indirect effect | −0.178 | 0.058 | −3.052 | 0.002 | −0.362 | −0.028 |

n = 110.

Unstandardized regression path coefficients are reported. $a$, $b$, $c$, and $c'$ correspond to path label notation for this method as discussed in Preacher and Hayes (2004). $R^2 = 0.372$ for the model of turnover intentions including both distributive justice and promotion instrumentality. Of the total variance in turnover intentions, 9.6 percent is uniquely explained by distributive justice and 6.9 percent is uniquely explained by promotion instrumentality.

distributive justice. Here, that effect is −0.374 (path $b$ in Preacher and Hayes [2004]) and statistically different from zero.

The product of these two paths is the indirect effect of distributive justice on turnover intentions through promotion instrumentality: $0.476 \times -0.374 = -0.178$. So someone who scores one unit higher on the distributive justice scale is estimated to score 0.178 units *lower* in turnover intentions through the effect of distributive justice on instrumentality, which in turn affects turnover intentions. This indirect effect is statistically different from zero, as a 95 percent bootstrap confidence interval for the indirect effect using 5,000 bootstrap samples was entirely below zero (−0.362 to −0.028). This bootstrap-based inference provides results consistent with the more familiar but less trustworthy Sobel test (z = −3.052, p = 0.002). Thus, H3 is supported.

This analysis also yields quantification of the direct effect of distributive justice on turnover intentions, independent of promotion instrumentality. As can be seen in Table 2, the direct effect (path $c'$ in Preacher and Hayes [2004]) is negative (−0.378), statistically significant, and congruent with several studies that report a significant link between these variables (e.g., Brashear et al. 2005; Hendrix et al. 1998; Robbins et al. 2000; Roberts et al. 1999; Zhang and Agarwal 2009). So independent of its effects on promotion instrumentality, those who perceive greater distributive justice report reduced likelihood of leaving the organization. When the direct and the indirect effect are added together, the result is the total effect (path $c$ in Preacher and Hayes [2004]) of distributive justice on turnover intentions: $-0.378 + -0.178 = -0.556$. This is the unstandardized regression coefficient estimating turnover intentions from only distributive justice. As can be seen in Table 2, this effect is statistically different from zero.

## TABLE 3
## Results for Moderated Mediation

**Panel A: Regression Results**

|  | Coeff. | t | p |
|---|---|---|---|
| Promotion instrumentality regressed on: | | | |
|   Constant | –2.633 | –6.800 | <0.001 |
|   Distributive justice (DJ) | 0.476 | 6.979 | <0.001 |
| $R^2 = 0.311$, p < 0.001 | | | |
| Turnover intentions regressed on: | | | |
|   Constant | 4.273 | –8.638 | <0.001 |
|   Distributive justice (DJ) | –0.378 | –4.297 | <0.001 |
|   Promotion instrumentality (PI) | –0.338 | –3.290 | 0.001 |
|   Job performance (JP) | –0.001 | –0.005 | 0.996 |
|   Interaction (instrumentality $\times$ job performance) | –0.752 | –4.090 | <0.001 |
| $R^2 = 0.459$, p < 0.001 | | | |

**Panel B: Sobel Tests for Conditional Indirect Effects of Distributive Justice at Values of Job Performance, with Bias-Corrected Bootstrap 95 Percent Confidence Intervals (5,000 Bootstrap Samples)**

| Job Performance | | Indirect Effect | SE | Z | p | 95% Confidence Limits | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower | Upper |
| –1 SD | (3.552) | 0.045 | 0.074 | 0.605 | 0.545 | –0.160 | 0.283 |
| Mean | (4.127) | –0.161 | 0.055 | –2.951 | 0.003 | –0.343 | –0.044 |
| +1 SD | (4.702) | –0.367 | 0.086 | –4.269 | <0.001 | –0.639 | –0.164 |

To facilitate interpretation, promotion instrumentality and job performance were mean centered in this analysis.
The above model for moderated mediation corresponds to "Model 3" in Preacher et al. (2007).

### The Moderating Effect of Job Performance on Turnover Intentions

H4 predicts that job performance moderates the effect of promotion instrumentality on turnover intentions. This hypothesis was tested in a moderated multiple regression analysis estimating turnover intentions (TO) from: promotion instrumentality (PI); job performance (JP); and their product (JP $\times$ PI), the latter term allowing for the effect of promotion instrumentality on turnover intentions to vary with job performance. To remain consistent with the analysis of moderated mediation (discussed next), we also included distributive justice (DJ) as a predictor. Though not mathematically necessary, job performance and promotion instrumentality were mean centered prior to the computation of the product so as to render regression coefficients for these variables that would be interpretable within the range of the data.

The results of this analysis are presented in Panel A of Table 3 in the model of turnover intentions. Most pertinent is the coefficient for the interaction, which is negative and statistically significant ($-0.752$, p < 0.01). Thus, the effect of promotion instrumentality on turnover intentions does depend on job performance, as predicted by H4. This interaction uniquely accounts for 8.6 percent of the total variance in turnover intentions, independent of all other variables in the model.

As discussed in Aiken and West (1991), Hayes and Matthes (2009), and Bauer and Curran (2005), the moderating effect of job performance can be expressed mathematically by taking the

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**FIGURE 2**
**Interaction between Job Performance and Promotion Instrumentality**
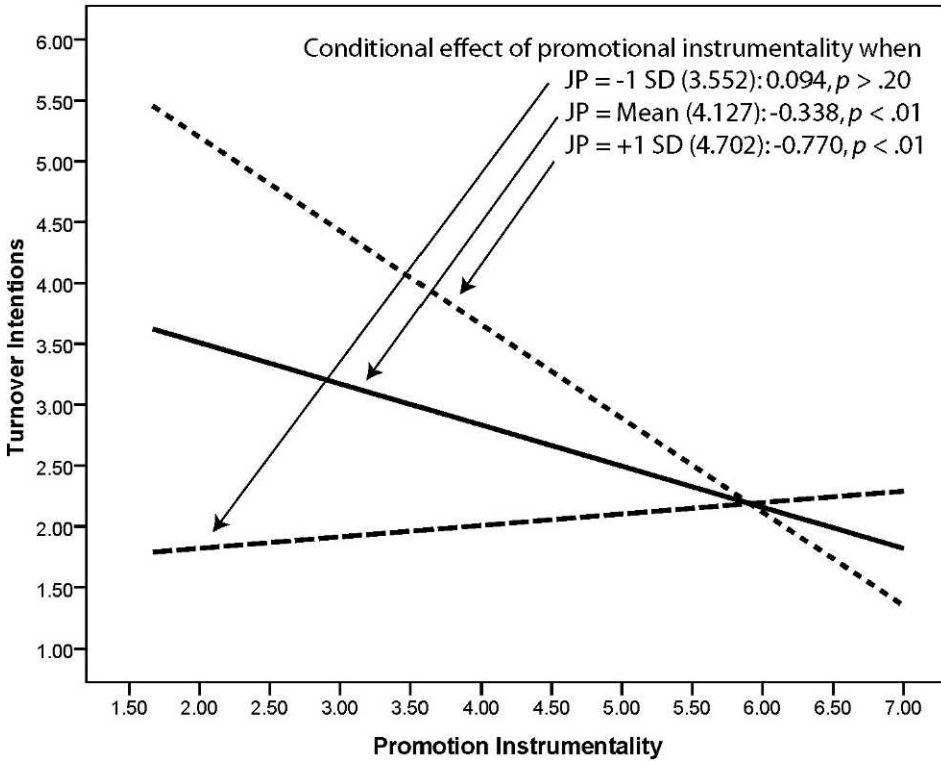


estimated regression model (Table 3):

$$TO = 4.273 - 0.378DJ - 0.338PI - 0.001JP - 0.752JP \times PI$$

and rearranging terms to express the coefficient for promotion instrumentality as a linear function of job performance (in bold, corresponding to partial derivative $\partial TO/\partial PI$):

$$TO = 4.273 - 0.378DJ + (-\mathbf{0.338} - \mathbf{0.752JP})\mathbf{PI} - 0.001JP.$$

This interaction was statistically probed using the pick-a-point approach (Bauer and Curran 2005; Hayes and Matthes 2009), where an arbitrary set of values along the moderator continuum is chosen to define relatively low, moderate, and relatively high values in the distribution. At these points (usually one standard deviation below the mean, the mean, and one standard deviation above the mean), the effect of interest is estimated using the complete multiple regression model and all the cases contributing to that model. Use of this approach with a computational tool described by Hayes and Matthes (2009) reveals that among those relatively low ($-1$ SD $= 3.552$ or $-0.575$ after mean centering) in job performance, there is no evidence of an association between promotion instrumentality and turnover intention (conditional effect $= -0.338 - 0.752 * -0.575 = 0.094$, p > 0.20). But among those average (mean $= 4.127$ or 0 after mean centering) or relatively high ($+1$ SD $= 4.702$ or 0.575 after mean centering) in job performance, the effect of promotion instrumentality on turnover intention is negative and statistically different from zero (conditional effect $= -0.338$

(derived from $-0.338 - 0.752 \times 0$) and $-0.770$ (derived from $-0.338 - 0.752 \times 0.575$), respectively, both $p < 0.002$). These conditional effects are depicted graphically in Figure 2.

**Moderated Mediation**

According to H5, the size of the indirect effect of distributive justice on turnover intentions through promotion instrumentality depends on job performance. As discussed by Preacher et al. (2007), in a model of this form, interest is on estimation of *conditional indirect effects*—the value of the indirect effect conditioned on one or more values of a moderator. In our model, the conditional indirect effect of distributive justice on turnover intentions via promotion instrumentality is estimated as the product of the effect of distributive justice on promotion instrumentality (0.476, Table 3) and the effect of promotion instrumentality on turnover intentions ($-0.338 - 0.752$ JP, Table 3 and our previous discussion of H4). Using this formula (i.e., $0.476 *$ ($-0.338 - 0.752$ JP), where JP is mean-centered job performance), the conditional indirect effect can be derived at any desired value of job performance, and an inferential test conducted for the conditional indirect effect at that value. As discussed by Preacher et al. (2007), bootstrap confidence interval (CI) for the conditional indirect effect is the preferred inferential method, but we also report a Sobel test. These conditional indirect effects and inferential tests, computed using the computational tool described in Preacher et al. (2007), can be found in Panel B of Table 3. As can be seen, among those relatively low in job performance ($3.552 =$ one SD below the mean; JP $=$ $-0.575$ after mean centering), there is no evidence that distributive justice indirectly affects turnover intentions through promotion instrumentality (conditional indirect effect $= 0.045$, 95 percent CI $= -0.160$ to 0.283). However, among those average ($4.127 =$ mean; JP $= 0$ after mean centering) or relatively high ($4.702 =$ one SD above the mean; JP $= 0.575$ after mean centering) in job performance, the indirect effect is negative and statistically different from zero (conditional indirect effects $= -0.161$, 95 percent CI $= -0.343$ to $-0.044$, and $-0.367$, 95 percent CI $= -0.639$ to $-0.164$, respectively). That is, among those moderate to high in job performance, higher distributive justice is associated with reduced turnover intentions via distributive justice's positive effect on promotion instrumentality, which in turn reduces turnover intentions. These results support H5.

## DISCUSSION

A stream of accounting research has examined turnover in public accounting firms, as both practitioners and academics note that turnover is an ongoing problem for the firms. The current study examines turnover intentions in the firms using organizational justice. This theoretical perspective has been largely ignored in prior turnover studies in the accounting literature. Results of the current study suggest that distributive justice, a type of organizational justice, influences turnover both directly and indirectly through a mediating variable, promotion instrumentality. Regarding the indirect effect, employees who believe that distributive justice is high (i.e., they believe that the organization rewards them fairly) are likely to conclude that promotion instrumentality is high (i.e., the organization promotes its employees fairly) on the basis of performance. Results also suggest that as a generalization, beliefs about promotion fairness influence turnover intentions. Employees who believe that the firm does not promote fairly are likely to leave the firm. In addition, the effect of promotion instrumentality on turnover is moderated by job performance. The effect is stronger for employees with average or high performance. Results suggest that low performers may not care about instrumentality. In terms of the indirect effect of distributive justice on turnover intentions, it is conditional based upon job performance. The indirect effect is stronger for those with high performance.

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To summarize, the results of the current study suggest that employees in public accounting firms consider the fairness of organizational rewards in deciding whether to stay with a firm in the long run. This includes the overall fairness of personal rewards received by the individual (distributive justice) and the fairness of promotions across the firm's employees (promotion instrumentality). The fairness of promotions represents a largely neglected topic in the business literature. This study argues that promotions that are not fair (i.e., not based upon performance) increase the unpredictability of future promotions and may signal that the firm does not respect the rights of the individual. While the current study focuses on the consequences of unfair promotions on turnover intentions, other employee decisions and behaviors also may be adversely affected.

The results imply that public accounting firms, to maximize their interests, should carefully consider employee viewpoints regarding allocation norms and the fairness of their administration. This includes clearly communicating to employees how rewards are determined. The findings regarding job performance, that employees with high job performance are most sensitive to the fairness of promotions, may be particularly important to executives who manage accounting firms. As noted by several researchers (e.g., Abelson and Baysinger 1984; Dalton et al. 1982; Hollenbeck and Williams 1986), turnover is a complex phenomenon that may hinder or help the organization depending upon the contribution of the departing employee to the organization. The departure of low performers is considered "functional," as it offers the organization the opportunity to replace the low performer with a better employee. When high performers leave, this is considered "dysfunctional" from the perspective of the organization. Accordingly, organizations should focus retention efforts on these employees.

As an additional contribution to the accounting literature, the current study introduces a new method to perform path analysis with complex theoretical models involving moderated mediation. To the knowledge of the authors, no accounting studies have examined such models with the techniques discussed in this study. We believe that these techniques, which we borrowed from related fields, advance accounting research.

The current study has the usual limitations found in survey research. The results may be specific to the participating firms. There may be measurement error in the scales used to measure the constructs. Results of surveys like the current study do not prove causal direction between constructs. Finally, the theoretical model may be more complex than proposed (possible omitted variables).

Despite these limitations, the findings involving distributive justice, and turnover intentions represent a contribution to not only the accounting literature but also the related fields of management and applied psychology. While many studies in these related fields report a negative relation between distributive justice and turnover (see meta-analysis by Colquitt et al. 2001), the nature of this relation is often unclear. The current study reports evidence of a complex relation that involves promotion fairness and job performance.

## REFERENCES

Abelson, M., and B. Baysinger. 1984. Optimal and dysfunctional turnover: Toward an organizational level model. *Academy of Management Review* 9: 331–341.

Adams, J. 1965. Inequity in social exchange. In *Advances in Experimental Social Psychology,* Vol. 2, edited by L. Berkowitz, 267–299. New York, NY: Academic Press.

Agho, A., J. Price, and C. Mueller. 1992. Discriminant validity of measures of job satisfaction, positive affectivity and negative affectivity. *Journal of Occupational and Organizational Psychology* 65: 185–196.

Aiken, L., and S. West. 1991. *Multiple Regression: Testing and Interpreting Interactions.* Newbury Park, CA: Sage.

www.

Almer, E., and S. Kaplan. 2002. The effects of flexible work arrangements on stressors, burnout, and behavioral job outcomes in public accounting. *Behavioral Research in Accounting* 14: 1–34.

Anderson, C., J. Warner, and C. Spencer. 1984. Inflation bias in self-assessment examinations: Implications for valid employee selection. *Journal of Applied Psychology* 69: 574–580.

Arnold, H., D. Feldman, and M. Purbhoo. 1985. The role of social-desirability response bias in turnover research. *Academy of Management Journal* 28: 955–966.

Bauer, D., and P. Curran. 2005. Probing interactions in fixed and multilevel regression: Inferential and graphical techniques. *Multivariate Behavioral Research* 40: 373–400.

Brashear, T., C. Manolis, and C. Books. 2005. The effects of control, trust, and justice on salesperson turnover. *Journal of Business Research* 58: 241–249.

Campion, M. 1991. Meaning and measurement of turnover: Comparisons of alternative measures and recommendation for research. *Journal of Applied Psychology* 76: 199–212.

Chong, V., and K. Chong. 2002. Budget goal commitment and informational effects of budget participation on performance: A structural equation modeling approach. *Behavioral Research in Accounting* 14: 65–86.

Churchill, G., N. Ford, S. Hartley, and O. Walker. 1985. The determinants of salesperson performance: A meta-analysis. *Journal of Marketing Research* 22: 103–118.

Cohen, J., and L. Single. 2001. An examination of the perceived impact of flexible work arrangements on professional opportunities in public accounting. *Journal of Business Ethics* 32: 317–328.

Cohen-Charash, Y., and P. Spector. 2001. The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes* 86: 278–321.

Cole, M., F. Walter, and H. Bruch. 2008. Affective mechanisms linking dysfunctional behavior to performance in work teams: A moderated mediation study. *Journal of Applied Psychology* 93: 945–958.

Collins, K. 1993. Stress and departures from the public accounting profession: A study of gender differences. *Accounting Horizons* 7 (1): 29–38.

Colquitt, J. 2001. On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology* 86: 386–400.

Colquitt, J., D. Conlon, M. Wesson, C. Porter, and K. Ng. 2001. Justice at the millennium: A meta-analysis review of 25 years of organizational justice research. *Journal of Applied Psychology* 86: 425–445.

Crowne, D., and D. Marlowe. 1964. *The Approval Motive*. New York, NY: John Wiley & Sons.

Dalton, D., J. Hill, and R. Ramsay. 1997. Women as managers and partners: Context specific predictors of turnover in international public accounting firms. *Auditing: A Journal of Practice & Theory* 16: 29–50.

Dalton, D., W. Todor, and D. Krackhardt. 1982. Turnover overstated: The functional taxonomy. *Academy of Management Review* 7: 117–123.

Day, D., and S. Silverman. 1989. Personality and job performance: Evidence of incremental validity. *Personnel Psychology* 42: 25–36.

Donnelly, D., J. Quirin, and D. O'Bryan. 2003. Auditor acceptance of dysfunctional audit behavior: An explanatory model using auditor's personal characteristics. *Behavioral Research in Accounting* 15: 87–110.

Dubinsky, A., and M. Levy. 1989. Influences of organizational fairness on work outcomes of retail salespeople. *Journal of Retailing* 65: 221–252.

Ferris, K. 1977. A test of the expectancy theory of motivation in an accounting environment. *The Accounting Review* 52: 605–615.

Ferris, K., J. Dillard, and L. Nethercott. 1980. A comparison of V-I-E model predictions: A cross-national study in professional accounting firms. *Accounting, Organizations and Society* 5: 361–368.

Fisher, R. 2001. Role stress, the type A behavior pattern, and external auditor job satisfaction and performance. *Behavioral Research in Accounting* 13: 143–170.

Fogarty, T., J. Singh, G. Rhoads, and R. Moore. 2000. Antecedents and consequences of burnout in accounting: Beyond the role stress model. *Behavioral Research in Accounting* 12: 31–67.

American
Accounting
Association

www.

Folger, R., and R. Cropanzano. 1998. *Organizational Justice and Human Resource Management*. Thousand Oaks, CA: Sage.

Ganster, D., H. Hennessey, and F. Luthans. 1983. Social desirability response effects: Three alternative models. *Academy of Management Journal* 26: 321–331.

Harrell, A., and R. Eickhoff. 1988. Auditors' influence-orientation and their affective responses to "big eight" work environment. *Auditing: A Journal of Practice & Theory* 7: 105–118.

Hayes, A. 2009. Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs* 76: 408–420.

Hayes, A., and J. Matthes. 2009. Computational procedures for probing interactions in OLS and logistic regression: SPSS and SAS implementations. *Behavior Research Methods* 41: 924–936.

Hendrix, W., T. Robbins, J. Miller, and T. Summers. 1998. Effects of procedural and distributive justice on factors predictive of turnover. *Journal of Social Behavior and Personality* 13: 611–632.

Hollenbeck, J., and C. Williams. 1986. Turnover functionality versus turnover frequency: A note on work attitudes and organizational effectiveness. *Journal of Applied Psychology* 71: 606–611.

Hyatt, T., and D. Prawitt. 2001. Does congruence between audit structure and auditors' locus of control affect job performance? *The Accounting Review* 76: 263–274.

Iverson, R., and P. Erwin. 1997. Predicting occupational injury: The role of affectivity. *Journal of Occupational and Organizational Psychology* 70: 113–128.

Jiambalvo, J. 1979. Performance evaluation and directed job effort: Model development and analysis in a CPA firm setting. *Journal of Accounting Research* 17: 436–455.

Leventhal, G. 1976. The distribution of rewards and resources in groups and organizations. In *Advances in Experimental Social Psychology,* Vol. 9, edited by L. Berkowitz and W. Walster, 91–131. New York, NY: Academic Press.

London, M., and G. Howat. 1978. The relationship between employee commitment and conflict resolution behavior. *Journal of Vocational Behavior* 13: 1–14.

MacKinnon, D., C. Lockwood, and J. Williams. 2004. Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research* 39: 99–128.

Murray, D., and K. Frazier. 1986. A within-subjects test of expectancy theory in a public accounting environment. *Journal of Accounting Research* 24: 400–404.

Parker, R., and J. Kohlmeyer. 2005. Organizational justice and turnover in public accounting firms: A research note. *Accounting, Organizations and Society* 30: 357–369.

Parker, R., and L. Kyj. 2006. Vertical information sharing in the budgeting process. *Accounting, Organizations and Society* 31: 27–45.

Pasewark, W., and R. Viator. 2006. Sources of work-family conflict in the accounting profession. *Behavioral Research in Accounting* 18: 147–165.

Preacher, K., and A. Hayes. 2004. SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, and Computers* 36: 717–731.

Preacher, K., and A. Hayes. 2008. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods* 40: 879–891.

Preacher, K., D. Rucker, and A. Hayes. 2007. Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research* 42: 185–227.

Reise, S., G. Waller, and A. Comrey. 2000. Factor analysis and scale revision. *Psychological Methods* 12: 287–297.

Robbins, T., T. Summers, and J. Miller. 2000. Using the group-value model to explain the role of noninstrumental justice in distinguishing the effects of distributive and procedural justice. *Journal of Occupational and Organizational Psychology* 73: 511–518.

Roberts, J., K. Coulson, and L. Chonko. 1999. Salesperson perceptions of equity and justice and their impact on organizational commitment and intent to turnover. *Journal of Marketing Theory and Practice* 7 (1): 1–16.

Scandura, T., and R. Viator. 1994. Mentoring in public accounting firms: An analysis of mentor-protégé relationships, mentorship functions, and protégé turnover intentions. *Accounting, Organizations and Society* 19: 717–734.

Shrout, P., and N. Bolger. 2002. Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods* 7: 422–445.

Smith, D. 1967. Correcting for social desirability response sets in opinion-attitude survey research. *Public Opinion Quarterly* 31: 87–94.

Sobel, M. 1982. Asymptotic confidence intervals for indirect effects in structural equations models. In *Sociological Methodology*, edited by S. Leinhart, 290–312. San Francisco, CA: Jossey-Bass.

Taylor, D., and F. Moghaddam. 1987. *Theories of Intergroup Relations*. New York, NY: Praeger.

Tyagi, P. 1982. Combining the equity/inequity model and the expectancy-valence model for predicting salesperson motivation and performance. *1982 American Marketing Association Educators' Proceedings*, 228–232. Chicago, IL: American Marketing Association.

Van Dijke, M., and D. De Cremer. 2010. Procedural fairness and endorsement of prototypical leaders: Leader benevolence or follower control? *Journal of Experimental Social Psychology* 46: 85–96.

Viator, R. 2001. The association of formal and informal public accounting mentoring with role stress and related job outcomes. *Accounting, Organizations and Society* 26: 73–93.

Vroom, V. 1964. *Work and Motivation*. New York, NY: John Wiley & Sons.

Wentzel, K. 2002. The influence of fairness perceptions and goal commitment on managers' performance in a budget setting. *Behavioral Research in Accounting* 14: 247–271.

Zhang, H., and N. Agarwal. 2009. The mediating roles of organizational justice on the relationships between HR practices and workplace outcomes: An investigation in China. *The International Journal of Human Resource Management* 20 (3): 676–693.

## APPENDIX A

### Survey Questions
*Turnover Intentions*

    (1) For the foreseeable future, I plan to stay with my current firm.

    (2) Barring unforeseen circumstances, I intend to stay with my current firm.

    (3) I plan to remain with my current firm for at least a few years.

*Distributive Justice*

    (1) My rewards reflect the effort that I have put into my work.

    (2) My rewards are appropriate for the work that I have completed.

    (3) My rewards reflect my contribution to the organization.

    (4) My rewards are justified given my performance.

*Promotion Instrumentality*

    (1) In my firm, if you increase your performance, you increase chances for promotion.

    (2) To get ahead in my firm, you must perform well.

    (3) In my firm, those who perform well get the promotions.

*Job Performance*

    (1) Technical ability—you understand the technical aspects of the job.

    (2) Timeliness of work—you complete work within time budgets.

    (3) Client relations—you gain confidence, respect, and cooperation of clients.

    (4) Work ethic—willingness to work hard and complete assigned tasks.

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(5) Cooperation with others within the firm—you demonstrate a positive and professional manner in working with personnel at all levels.

(6) How do you rate your overall performance?

### *Social Desirability Response*

(1) I have never intensively disliked anyone.

(2) No matter who I am talking to, I am always a good listener.

(3) I have never been irritated when people expressed ideas very different from my own.

(4) When I do not know something, I will readily admit it.

(5) I have never deliberately said something that hurt someone's feelings.

### *Positive Affectivity*

(1) I usually find ways to liven up my day.

(2) For me, life is a great adventure.

(3) I always seem to have something pleasant to look forward to.

(4) Most days I have moments of real fun or joy.

### *Negative Affectivity*

(1) Often I get irritated at little annoyances.

(2) My mood often goes up and down.

(3) I often lose sleep over my worries.

(4) There are days when I am "on edge" all the time.