

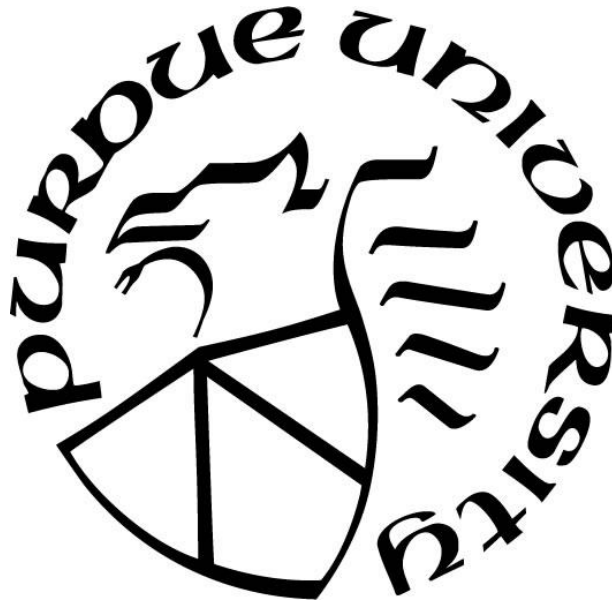
**“CAN YOU HEAR ME NOW?” – “GOOD”: EXAMINING THE
CONTRIBUTING ROLE OF VOICE IN PERCEPTIONS OF JUSTICE &
PAY SATISFACTION IN A PAY-FOR-PERFORMANCE SYSTEM.**

by
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ABSTRACT

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Title: “Can You Hear Me Now?” - “Good”: Examining the Contributing Role of Voice in Perceptions of Justice & Pay Satisfaction in a Pay-for-Performance System.

Major Professor: Jane Williams

This paper aims to reproduce the voice effect in a pay-for-performance (PFP) environment, ultimately to uncover how affective measures can be leveraged in analyzing the effectiveness of PFP programs. Historically, the effectiveness of PFP programs has been measured by readily available metrics like sales quotas or widgets produced such that effective PFP programs would increase the amount of sales or widgets produced. Using affective measures like pay satisfaction and perceptions of fairness can supplement objective measures in the future. 410 participants with a percentage of their pay involved in PFP participated in this study via MTurk. Employee voice was hypothesized to positively influence perceptions of pay system satisfaction and pay level satisfaction through the mediating effects of procedural (PJ) justice and distributive justice (DJ) respectively. Results yielded significant, positive relationships between voice, PJ, and pay system satisfaction as well as voice, DJ, and pay level satisfaction. Relationships were stronger the more pay the employee had that was variable in the PFP program. These findings suggest that employees are more likely to be satisfied with their pay and the amount of pay in the PFP program as their opportunity to voice their opinions about PFP increase.

INTRODUCTION

Is pay for performance (PFP) is an effective pay system? Does it make people work harder? Does it encourage higher individual and organizational performance? These are questions that have been long debated in research, and the answers to them have not always been consistent (Werner & Asch, 2005). Researchers have typically assessed these questions using objective criteria (Rosenthal & Dudley, 2007). For instance, the effectiveness of PFP systems is often assessed by measuring levels of performance before and after implementation of the system. Although these types of assessments are important, another important criterion, employee reaction, has been largely ignored in the PFP literature. Specifically, little research has examined the affective and cognitive reactions that individuals have towards PFP systems compared to the objective outcomes of the system. The current study will more closely examine the factors that predict individual's satisfaction with the pay system overall and satisfaction with their own pay level.

Two important reactions to PFP include satisfaction with the pay system overall and satisfaction with the level of pay. These reactions are relevant in organizations because they are both related to important outcomes such as organizational citizenship behavior (OCB), organizational commitment, and organizational trust (Lee, 1995; Currall, Towler, Judge, & Kohn, 2005; Vandenberghe and Tremblay, 2008). Organizational commitment, now generally considered aligned with job engagement, is top of mind for most executives today. Early research on pay satisfaction identified "participation" as an effective predictor of pay system satisfaction (Lawler, 1977). Participation may be defined as employee input, but exactly *how* participation may impact pay level satisfaction is still largely unknown. In addition, when participation is examined in research, it is often loosely defined, or on occasion, not defined at

all. For example, participation in one instance was simply defined as ‘information exchange’ (Lawler, 1977) and in others was defined as providing information. In the current study, we will examine participation through two types of voice – instrumental and noninstrumental – to better identify what components of participation are effective in influencing pay level and pay system satisfaction.

Voice is defined as a contribution (e.g., opinions, data, relevant information) by a stakeholder in a given process (Lind, Kanfer, & Earley, 1990). Voice has previously been examined in areas such as conflict resolution and performance management, but little research has examined it within PFP. Assessing how voice may predict pay system and pay level satisfaction has implications for both research and practice. In practice, offering employees the opportunity to voice their ideas around the pay system may bolster feelings of pay satisfaction when other avenues such as pay increases are not feasible. Examining how voice influences reactions to PFP in the pay literature allows researchers an opportunity to evaluate pay systems with additional criteria. Furthermore, although the effectiveness of PFP systems is often questioned in practice, particularly in complex work environments, assessing them on an affective level in addition to objectively may equip practitioners better in making educated decisions about pay. Practically, this study may help guide how human resource managers and executives design, implement, and measure the effectiveness of pay systems, specifically PFP systems.

As stated above, the current study will examine the relationship between voice and pay system and pay level satisfaction. Voice has two acting components: 1) instrumental, and 2) noninstrumental (Thibaut & Walker, 1975; Lind & Tyler, 1988). These components will be examined individually to assess the amount of variance they each account for in predicting pay

system and pay level satisfaction. It is expected that instrumental and noninstrumental voice will influence pay system and pay level satisfaction differently. Specifically, we expect that voice will influence the pay outcomes through different forms of organizational justice.

The current study proposes that the relationship that voice may have with pay system and pay level satisfaction potentially occurs through organizational justice (Schreurs Guenter, Schumacher, Van Emmerik, & Notelaers, 2013). Within the justice literature, researchers have found evidence that a person's perception of control over a process can bolster their perceptions of procedural justice (Thiabut & Walker, 1975). This phenomenon, titled the control model, argues that the degree to which an individual perceives a process as fair depends on whether they are able to contribute input into the decision-making process (Thiabut & Walker, 1975). This relationship has more recently been specifically referred to as the voice effect (Shapiro & Brett, 2005). Although voice has been shown to predict procedural justice in conflict resolution literature, how voice relates to justice in the pay literature is not as well known. In addition, the relationship between voice and distributive justice has largely been unexamined. Therefore, the current study will examine the mediating effect of procedural and distributive justice on the relationship between voice and pay system and pay level satisfaction (see Figure 1).

In the paragraphs below I will begin by outlining the literature on PFP systems and voice, followed by a review of the organizational justice literature to support the mediating effects of justice on the relationships between pay system and pay level satisfaction.

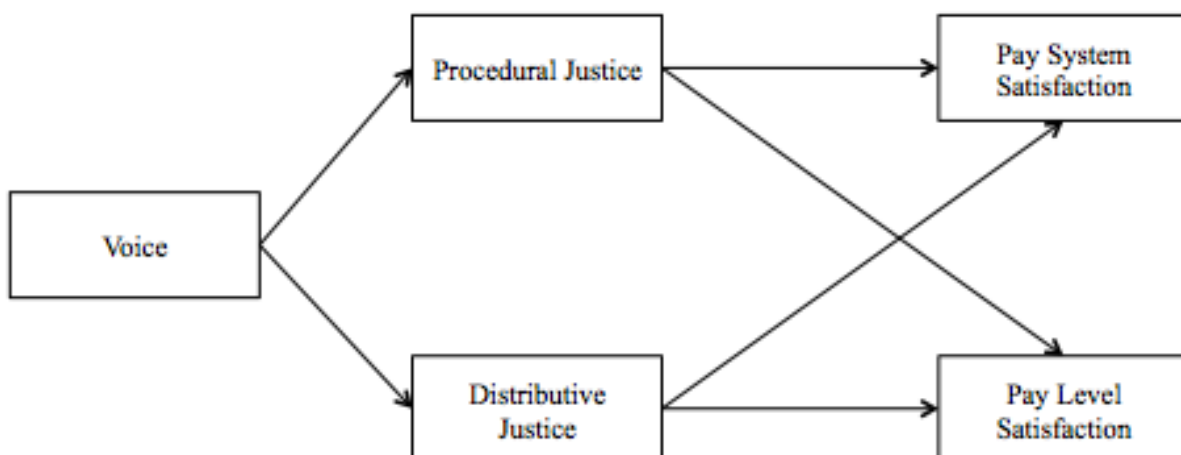


Figure 1. Proposed model

PAY-FOR-PERFORMANCE

PFP is a form of compensation that aims to motivate employees by offering incentives based on performance, contingent on a specified outcome (Durham & Bartol, 2000). PFP began to be used as a pay design frequently during the beginnings of the assembly line (1900s) and has been established as an effective pay structure in appropriate contexts, but more recently has found its way into many other types of occupations (Rosenthal, Frank, Li, and Epstein, 2005; Glickman et al., 2007). For instance, increasingly medical institutions have begun to compensate physicians in a way that is more contingent on their performance outcomes (Petersen et al., 2006). It has been demonstrated that an average of 10% of physician's annual income is involved in a PFP system (Millenson, 2004). Rosenthal and colleagues (2005) purport that more than half of commercial medical care facilities are using PFP. With this growth, it is important to understand how PFP plans affect employee outcomes such as perceptions of procedural justice, pay system and pay level satisfaction. Although PFP is becoming a more common pay system in across industries, there is not necessarily a standardized procedure as to how to implement and design them. Below I will introduce some common elements found in PFP systems.

Aspects of PFP

It is difficult to describe simply what is included in PFP plans organizations universally, but there are certain elements of PFP that are included in most programs. For example, PFP plans in the medical field typically offers bonuses to physicians depending on the quality and cost-efficiency of the care they provide (Ellwing, 2012). Toward that end, the quality and cost-efficiency of the care is usually determined by what is referred to as a "quality profile". The quality profile is created by measuring a number of factors including, but not limited to: patient

outcome measures, patient satisfaction surveys, measures taken by the physician to prevent avoidable injuries and infections, and performance relative to peers in the field (Ellwing, 2012).

In the technology industry, PFP plans are occasionally designed to encourage the writing of “solid” code. In other words, software developers are incentivized to ensure there are limited errors or bugs in the code they write and are rewarded for reducing these code deficiencies.

In their study reviewing PFP plans, Rynes and colleagues (2005) posit that there are at least three key choices to be made when deciding on performance measures for a PFP plan. These include: (1) the amount of emphasis put on results-oriented performance measures relative to behavior-based measures, (2) how intensive the incentives should be and the effect of risk aversion on their effectiveness, and (3) to consider individual and collective contributions of performance. Although there are guidelines to implementing PFP plans, most organizations tailor the PFP plan to fit the goals of the organization. In other words, PFP plans are not a one-size-fits-all compensation solution (Trude, Au, & Christianson, 2006). The design of a PFP plan although variable, is nonetheless very important in ensuring the longevity and success of it.

Objective outcomes of PFP

When implemented well, and deliberately designed for the organization at hand (i.e., specific culture) PFP plans encourage higher performance in organizations (Perry, Engbers, & Yun Jun, 2009; Reiter, Nahra, Alexander, & Wheeler, 2006). Evidence of this is documented in a variety of research studies. In their natural experiment, which utilized data from over 300 physician groups, Rosenthal and colleagues (2000) demonstrated that when a performance threshold was put in place for physicians to reach so that they would receive an established bonus, physicians that were 10% below the threshold at baseline measure had the largest increase

in performance compared to physicians that were closer to and/or equal to the threshold at baseline. In other words, those who were farthest from the performance threshold increased their performance the most. Performance was measured by examining the differences in clinical quality scores pre and post implementation of the incentive program. This finding has important implications because the PFP plan not only increased performance overall, but those that were far below the threshold were more motivated to reach the set threshold and receive the bonus, which therefore raised the standard of performance for the hospital overall. Furthermore, hospitals that incorporated a PFP plan offering 1-2% bonuses for reaching performance goals experienced improvement in each measure of performance and demonstrated significant improvement increases over hospitals that did not incorporate PFP (Lindenauer, Remus, Roman, Rothberg, Benjamin, Ma, & Bratzler, 2007). Similarly, Rosenthal and colleagues (2007) demonstrate that PFP plans are linked to higher quality of care and increased levels of motivation in addition to their ability to attract higher-quality applicants to the organization. Although we have evidence of the effectiveness of PFP, it is also important to understand *why* these plans are effective. In addition, while these objective measures of PFP appear to be positive, other neglected criteria like reactions to PFP may tell a different tale of the effectiveness of such systems.

What makes PFP an effective compensation system?

Although there is sufficient evidence indicating the positive effects PFP can have on motivation and performance, more recently researchers have been interested in *what* about PFP plans influences increased performance (Kim, 2016). In other words, what are the components of a PFP plan that contribute to its success? This interest in the makeup of PFP likely sparked from

research that tends to contradict the utility of PFP plans. Consistent with theories of procedural justice and control, Miceli and colleagues (1991) argue that there are three factors that predict pay-system reactions: (1) opportunity for employee participation, (2) consistency of allocation procedures over time, and (3) ensuring accurate information influences decisions. Toward that end, the purpose of this study is to assess just how much influence voice (i.e., opportunity for employee participation) has on reactions to PFP plans as it relates to pay level and pay system satisfaction. These factors are especially important in PFP plans when considering the amount of attention to detail that is necessary when designing the plan (Trude, Au, & Christianson, 2006). With these factors in mind, historically, organizations that implement PFP plans experience success with the plan when they implement them properly and tailor them to be consistent with organizational goals (Durant, Perry, Mesch & Paarlberg, 2006). In relation to proper implementation, a common theme of successful PFP plans is the inclusion of just procedures.

To review, we've defined PFP and discussed in what context it is successful as a compensation system. In the next section, I will define and explain each of the variables of our study and the proposed outcomes (see Figure 1).

VOICE

Voice is a phenomenon that has been researched frequently by experts in procedural justice (Thibaut & Walker, 1975). Voice is defined as a contribution (e.g., opinion, data, relevant information) by a stakeholder in a given process (Lind, Kanfer, & Earley, 1990). For example, in an end-of-year pay discussion with a manager, you might exercise ‘voice’ when you present your self-review to your manager. In effect, you are providing information that may have an impact on the pay you receive. Researchers suggest that the notion of voice drives what is known as the voice effect. The voice effect is defined as the bolstered feelings of procedural justice due to an opportunity to voice an opinion during a process (Lind & Tyler, 1988).

Historically, many terms have been used to describe aspects of the voice effect. These include process control, group-value, voice behavior, voice opportunity, and the control model. Most research, though, has divided voice into two coexisting types: noninstrumental and instrumental (Thibaut & Walker, 1975; Lind & Tyler, 1988).

Noninstrumental voice, also referred to as the group-value model, purports that individuals who are provided an opportunity to present information feel like valued, seasoned members of the group legislating the procedure (Lind & Tyler, 1988; Robbins, Summers, Miller, & Hendrix, 2000). This form of voice is coined noninstrumental because the feelings a person has after providing input result regardless of the outcome of the decision (Shapiro & Brett, 1993). In other words, simply having the opportunity to offer information or input results in positive outcomes, regardless of whether the voice-contributor altered the outcomes of the decision. In a study comparing the potential underlying process of procedural justice judgments, Shapiro and Brett (1993) examined voice and found that when individuals expressed their views

and felt as if they were taken into consideration it led to positive feelings and a sense of group status.

Instrumental voice, also referred to as process control theory (Thibaut & Walker, 1975), is conceptualized as an individual's perception that their voiced opinion will help control their outcomes and subsequently persuade the decision-maker to make a more informed decision (Lind, Kanfer, & Earley 1990). For instance, in a decision-making process regarding pay raises, one might contribute instrumental voice by suggesting that pay raises be based on performance ratings with the intent of persuading the actual decision-maker. Differing from noninstrumental voice, individuals who voice instrumentally not only want to be listened to, they want to influence the decision-makers who are listening (Shapiro, 1991).

Together and incrementally, recent evidence demonstrates the coexistence of these two forms of voice (Tyler, 1987; Lind et al., 1990). For example, Shapiro (1991) demonstrates qualitatively that people provide both noninstrumental and instrumental examples of voice when asked, "what does it mean to have your views considered?" For example, some people responded with a noninstrumental example such as: "someone has thought about what you said" (p. 62). Conversely, some people responded with instrumental examples such as: "someone accepts your point of view as a realistic option or course of action" (p. 62).

Avery and Quinones (2002) describe four different components of voice: (1) voice opportunity, (2) perceived voice opportunity, (3) voice behavior, and (4) voice instrumentality. First, voice opportunity describes the actual chance a person has to present his or her opinion to a decision maker. Second, perceived voice opportunity differs in that it is a subjective measure of a person's perception of the amount of voice opportunity that has been given to them. Third, voice behavior is the display of a person's suggestions with the purpose of improving the topic under

consideration. Similarly, Hirschman (1970) defined voice behavior as any attempt to change a state of affairs. Finally, voice instrumentality refers to the influence of an individual's voice behavior on the outcome. For the purposes of this thesis, however, instrumental and noninstrumental voice will be analogous to, and measured as voice behavior and perceived voice opportunity respectively (see Table 1). By using this operationalization of the voice effect, we will be better able to distinguish the roles that voice opportunity and perceived voice behavior play in contributing to perceptions of procedural justice and pay system satisfaction.

Table 1
Voice Terminology Comparison

<u>Avery & Quinone's Voice Definitions</u>	<u>Noninstrumental Voice vs. Instrumental Voice</u>
Voice Opportunity	Noninstrumental
Perceived Voice Opportunity	Noninstrumental
Voice Behavior	Instrumental
Voice Instrumentality	Instrumental

Evidence of the Voice Effect

Providing evidence of the co-existence of instrumental and non-instrumental voice, Earley and Lind (1987) credit noninstrumental explanations of voice when individuals view a procedure as just due to the finding that opportunity for expression alone was linked to enhanced justice judgments. Earley and Lind (1987) also found that even when a person had no possibility of influencing a decision after it had been made, and after seeing that the decision to which the person provided pre-decision voice was not affected by their input, people still had higher perceptions of control and justice than people with no input.

Subsequently, Lind, Kanfer, and Earley (1990) reported that people who did not expect a change in a procedure after voicing their opinion still were more likely to view the procedure as fair. This finding speaks to the importance of stakeholder input in decision-making. Even when the individuals did not expect the outcome of a decision to be affected by their voice, fairness perceptions were still higher than fairness perceptions of a decision without voice input.

Similarly, Shapiro and Brett (1993) discovered that instrumental voice accounted for 19% of the variance in procedural justice perceptions, and that non-instrumental voice contributed an additional 9% to the variance in procedural justice perceptions. This finding is important because it offers support for the notion that instrumental and non-instrumental forms of voice are different and each can account for significant variance in fairness perceptions.

More recent findings from Avery and Quinone's (2002) article demonstrate the individual contributions of each type of voice. As stated earlier, researchers often use voice terminology interchangeably, which can confuse the constructs (Avery & Quinones, 2002). To address this issue and to better distinguish among voice effect constructs, Avery and Quinones (2002) conducted an experimental study that effectively clarified the roles of voice opportunity, perceived voice opportunity, voice behavior, and voice instrumentality, in predicting procedural justice perceptions.

Participants in Avery and Quinones' (2002) experiment were split randomly into two groups: voice condition and no-voice condition. Participants were led to believe that they would be involved in a two-part task redesigning the university's student orientation process.

Participants in the voice condition were given the opportunity to voice their opinion on which activities to include in the first week of orientation and participants in the no-voice condition were not given this opportunity. After input had been given by the voice condition, the

researchers reconvened in a separate room and pretended like they were forming a list of the participants' input. In fact, they had already drafted the list of ideas for orientation week that included some participants' input, and did not include others. Therefore, some participants in the voice condition had their opinions included in the list and some participants did not.

Avery & Quinones found support for the importance of voice opportunity and voice instrumentality (2002). They demonstrated a positive relationship between perceived voice opportunity and procedural fairness, $\beta = 0.37, p < .001$. The relationship was strongest between perceived voice opportunity and procedural justice. This finding indicates that as long as individuals feel as if they've been given sufficient voice opportunity, fairness perceptions will be higher. Voice behavior's relationship with procedural justice was weaker than perceived voice opportunity, $\beta = -0.07, p > .05$, as was voice instrumentality, $\beta = 0.12, p > .05$. They also found that voice instrumentality moderated the relationship between voice behavior and procedural fairness meaning that the relationship between voice behavior and perceived fairness was negative when instrumentality was low. Avery and Quinones' (2002) results generally support the notion that perceived voice opportunity, voice behavior, and voice instrumentality account for significant incremental variance beyond that of voice opportunity alone.

In sum, having the ability to voice an opinion significantly increases perceptions of procedural fairness. In the current study the relationships between both types of voice and procedural justice will be examined.

ORGANIZATIONAL JUSTICE

Organizational justice concerns employees' perceptions of the actions, outcomes, and processes they experience in the workplace. One prominent model of justice is comprised of distributive justice, interactional justice, and procedural justice (Colquitt et al., 2005). Distributive justice primarily explains the feeling of fairness due to an outcome, separate from the actual *process* that led to the outcome (Colquitt et al., 2005). Interactional justice addresses the nature of interpersonal treatment received from others, primarily authority figures (Greenberg, 1993). Employees perceive high levels of interpersonal justice if they are treated with respect, empathy, and care by their supervisor. While these types of justice are strongly related to important outcomes, the research examining procedural justice has shown it to be particularly critical in predicting outcomes such as engagement, commitment, OCB, and trust in organizational contexts (Colquitt et al., 2001). Procedural justice can be defined as the perceived fairness of the means and processes used to come to a decision (Folger, 1977). In addition, while distributive justice literature explains outcomes, procedural justice research demonstrates that an individual can consider a process fair, regardless of if the outcome induces satisfaction (Colquitt et al., 2001).

Theory driving Procedural Justice

Driving the theory behind procedural justice, Thibaut and Walker (1975) developed the Control Model to help explain the contributions of voice in procedural justice perceptions. Thibaut and Walker (1975) purported that the extent to which people regard procedures as fair depends on whether they are able to contribute input into the decision-making process. Similarly,

Leventhal (1980) builds upon the Control Model to create six criteria procedures should meet to be perceived as fair.

Leventhal (1980) built upon the Control model to identify six criteria procedures should meet to be perceived as fair: (1) consistency across people and time, (2) free from bias, (3) accurate information used in making decisions, (4) mechanisms are in place to correct flawed decisions, (5) representative, and (6) opinions of those affected are considered.

Leventhal's (1980) 6th criterion for procedural justice is consistent with Thibaut and Walker's (1975) Control Model. Furthermore, this sixth criterion – opinions of those affected are considered – also closely relates to Tremblay, Sire, and Balking's (1998) procedural components. Tremblay and colleagues (1989) purport that there are two procedural components that are relevant from a compensation perspective in regards to procedural justice. The two components are: (1) the degree of control that an individual has over the processes leading to pay decisions, and (2) the degree of control that the individual has over those pay decisions (Tremblay, Sire, & Balking, 1998). As stated earlier, control theories have often been tested in legal settings (e.g., conflict resolution) and have largely been ignored in the pay systems literature. In this study, voice will be examined in a pay system setting to assess the generalizability of the theory and to look at other variables such as pay system satisfaction.

Theory driving Distributive Justice

Distributive justice can be defined as the perceived fairness of an outcome (Folger & Konovsky, 1989). Researchers suggest that individuals consider the rules of equality, equity and need when determining the fairness of outcomes given to them. For instance, most employees would invoke the equity rule when considering whether they regard their performance rating as

fair, but would use the equality rule when considering pay discrepancies between genders for equal jobs. Organizational outcomes can include performance ratings, employment decisions, and pay. In other words, an individual would deem an outcome fair when they perceive it appropriate and ethical. Individuals often make judgments about distributive justice by comparing their own outcomes to those of referent others (Folger & Cropanzano, 1998). This judgment-making process is driven by equity theory, which states that fairness is a result of the ratio between inputs and outputs (Adams, 1963). Inputs are defined as any and all factors perceived by an individual to be qualified for receiving some return on his or her personal investment (Pritchard, 1969). For example, inputs by an employee at an organization could be their education, years of prior experience, job-related skills, or effort. By contrast, outcomes are anything that individual receives that he or she deems of having utility or value from the organization (Pritchard, 1969). For example, outcomes can be tangible (i.e., compensation) or intangible (i.e., praise from a supervisor, feelings of belonging to a team, or feelings of accomplishment). It should be noted, however, that outcomes differ from person to person.

Equity theory purports that a person compares their ratio of inputs to outputs to others around them (i.e., referent others). In an organization, referent others could be a person's team member, a person performing a similar job in the organization, or even a person performing a similar job at a different organization. Equity occurs when the person perceives their ratio to be the same as a referent other. Inequity occurs when the person perceives their ratio to be different as a referent other. The most common form of inequity is referred to as underpayment (Jex & Britt, 2008). Underpayment occurs when a person perceives that their inputs to outcomes ratio is less favorable than a referent other's. This could occur if a person feels as if they put in much more effort than another employee but receive the same pay (Jex & Britt, 2008). There are four

general methods people can pursue to regain equity, however (Jex & Britt, 2008). One method a person could use to restore equity is to try and increase their own outcomes to match those of a referent other. For example, this person could go talk with their supervisor about getting a raise. This method would be used in the case of similar inputs, but dissimilar outcomes to a referent other. The next method of restoring equity could involve the person reducing their inputs to equal out their ratio. The third strategy involves reshaping one's own cognitive perceptions about their inputs and outcomes. In other words, this person could think of things to justify in their own mind why they are paid lower than others. For example, the person could take into account the fact that they haven't been at the company long enough, or that their cost of living is lower than a referent other. The fourth strategy is that a person could change their comparative standard (i.e., referent other) to match more of what their ratio is. Of all these methods, cognitively reshaping perceptions about equity requires the least amount of work and is the least risky.

A derivative of equity theory, discrepancy theory, can also help us understand the relationship between distributive justice and pay satisfaction. Discrepancy theory views pay satisfaction as an individual perception based on the balance of how much a person *does* receive and how much that person *should* receive (Lawler, 1971). Like the phenomenon of inequity described by equity theory, a person may feel negatively if they perceive a discrepancy between the amount they receive in compensation and how much they believe they should receive in compensation. In this sense, feelings of distributive justice are crucial if employees are to feel satisfied with their pay. This relationship was demonstrated across three studies conducted in the field.

Sweeney (1990) tested this relationship in the field due to the high volume of studies that have already looked at this relationship in lab settings. Sweeney (1990) looked at inequity in

both possible ratio discrepancies: underpayment and overpayment. As stated above, perceptions of underpayment occur when a person perceives that they provide more inputs to the organization than a referent other but receive less or equal outcomes. On the other hand, overpayment occurs when a person perceives that they receive more outcomes than a referent other for the same amount of input. Across three studies, Sweeney (1990) yielded main effects from distributive justice to pay level satisfaction ranging from .27-.42 ($p < .001$). These strong, positive relationships suggest that justice perceptions are strong predictors of pay level satisfaction. In the current study, we will examine whether distributive justice mediates the relationship between voice and pay level satisfaction. In other words, how much voice a person has during pay conversations, will likely influence their perception of how fair that conversation/process is.

PAY LEVEL SATISFACTION

Pay level satisfaction is defined as the amount of satisfaction an individual has with their base pay, and can have important consequences in organizational settings. These consequences are largely determined by a person's perception of equity (Miceli & Lane, 1991). As mentioned in the last section, researchers have leveraged equity theory and discrepancy theory to guide their research on pay level satisfaction (Williams, McDaniel, & Nguyen, 2006). Largely similar theories, they both state in similar words that if a discrepancy is perceived between the amount of pay one receives and what they believe they *should* receive, their pay level satisfaction will be affected (Williams, McDaniel, & Nguyen, 2006). More specific to equity theory, pay level satisfaction, like distributive justice, can also be influenced by the ratio of organizational inputs to outputs. That is, if a person perceives inequity between their inputs and outputs, their satisfaction with pay level will be affected. Based on this theory, research examining the relationship between distributive justice and pay level satisfaction has found a strong, positive correlation ($r=0.63$) (McFarlin & Sweeney, 1992). Additionally, procedural justice, although a weaker predictor, was significantly related to pay level satisfaction in a field study (Till & Karren, 2011).

Consequences of inequity and discrepancy in pay expectations involve various organizational outcomes including withdrawal behavior, turnover intentions, absenteeism, voluntary turnover, and decreases in job performance (Williams, McDaniel, & Nguyen, 2006).

Another primary determinant of pay level satisfaction stems from beliefs about pay policies and administration (i.e., pay system satisfaction). These feelings of distributive justice will likely impact how satisfied a person is with their pay level. Feelings of justice, however,

also may impact a person's satisfaction with their pay system and like distributive justice, equity theory and discrepancy theory play an important part in pay level satisfaction.

PAY SYSTEM SATISFACTION

Pay satisfaction is defined generally as the amount of overall positive or negative affect that individuals have toward their pay (Miceli & Lane, 1991). More specifically, pay system satisfaction refers to the reactions to the processes of setting pay rates within a job class and reactions to the processes of setting pay rates between job classes (Mulvey, 1991). In pay system satisfaction, one can have reactions to both the range of pay (e.g., within a job class) and the hierarchy of pay (e.g., between job classes).

There is evidence to suggest that participation in pay system design and administration can affect satisfaction, trust, and pay system effectiveness (Lawler, 1977) as cited in *Improving Life at Work*. Lawler (1977) defines participation as information exchange. It seems reasonable that one important component of information exchange could include an individual providing information to the organization (i.e., voice as an act of participation). This provides additional evidence that voice may be critical in predicting levels of pay system satisfaction. In Lawler's (1977) model, participation increases pay system satisfaction through increased feelings of control and commitment, increased information about the system, and higher perceived quality of the decision. These mediators, in turn, affect participant's trust in the system, which influences overall perceptions of the pay system and satisfaction with the system.

Subsequently, Jenkins and Lawler (1981) provided additional evidence to Lawler's (1977) claim that participation influences pay system satisfaction. Jenkins and Lawler (1981) demonstrated a positive link between involvement in compensation decisions and pay satisfaction. Specifically, they noted pay satisfaction increased when employees participated in the development of a new pay system. Although participation in pay systems seems to yield increased pay satisfaction, Miceli and Mulvey (1991) argue that since much of the research

regarding participation in pay systems has been in lab settings, there is still much to learn in field settings. This study will provide insight into the effect that voice (e.g., participation) has on pay satisfaction in a field setting, thus helping fill this gap.

More recently, researchers have begun to examine differences in pay level satisfaction and pay system satisfaction. Miceli and Mulvey (2000) hypothesized that pay system satisfaction would be positively related - more so than pay level satisfaction - to perceived organizational support, commitment to the employer, and organizational citizenship behavior. Miceli and Mulvey (2000) surveyed 507 employees of a Midwestern U.S. communications organization at two time points, with 4 months in-between each time point. They found significant support for each hypothesis, demonstrating the importance of pay system satisfaction for predicting important outcomes. With ample evidence of the contributing role participation has in predicting pay system satisfaction, we can expect that voice, a specific form of participation, may also account for some additional variance in pay system satisfaction.

In the past, variables such as pay system administration, actual pay, and equity have been researched as antecedents of pay system satisfaction. The influence voice has in determining pay system satisfaction has not been looked at as frequently (Dyer & Theriault, 1976). Therefore, voice in a PFP system will be examined as a potential antecedent of both procedural justice perceptions and perceptions of pay system satisfaction.

Hypothesis 1a: Procedural justice and distributive justice will significantly mediate the relationship between instrumental voice and pay system satisfaction.

Hypothesis 1b: Procedural justice and distributive justice will significantly mediate the relationship between noninstrumental voice and pay system satisfaction.

Hypothesis 2a: Distributive justice and procedural justice will significantly mediate the relationship between instrumental voice and pay level satisfaction.

Hypothesis 2b: Distributive justice and procedural justice will significantly mediate the relationship between noninstrumental voice and pay level satisfaction.

Although we expect the two forms of voice to influence justice, pay system satisfaction, and pay level satisfaction differently, we do not have information that would support a prediction about how exactly it will be different. We hope to gain insight into these differences in the current study.

METHODS

Participants

The sample for the present study included 410 individuals that received a percentage of their pay contingent on their performance, above and beyond that of their base-pay. Participants in the study participated through Amazon's Mechanical Turk. We asked participants to indicate the percentage of their pay that was variable based on their performance. In other words, the percentage of their pay involved in some sort of PFP system. 206 participants indicated that 5% or more of their pay was involved in PFP. Previous research indicates that levels of satisfaction differ insignificantly when less than 5% of pay is based on performance and the motivational factor of PFP is lost (McPhie, Sapin, Nelson, Crum, Ferentinos, & Tsugawa, 2006). We also discovered significant differences between participants who had >5% of their pay involved in PFP (Group 1; n=206) and participants who had <5% of their pay involved in PFP (Group 2; n=195). There were significant mean differences between groups in voice (Group 1 M= 3.48, SD = 0.81; Group 2 M= 2.43, SD= 0.94; $t(399) = -12.10, p= 0.00$), procedural justice Group 1 M= 3.70, SD= 0.80; Group 2 M=3.27, SD= 0.82; $t(397)= -5.33, p= 0.00$), and distributive justice (Group 1 M= 3.73, SD= 0.94; Group 2 M=2.80, SD= 1.03; $t(399)= -9.40, p= 0.00$). These results suggest that the actual amount of someone's pay does in fact affect their feelings about the utility of their voice in the pay process and how fair they perceive the system/process and outcomes to be. Specifically, those with less than 5% of their pay involved in a PFP program don't report feeling that having a voice in the process is as impactful as those with greater than 5% involved in PFP. Therefore, our mediated regression analyses were computed using only the 206 participants with 5% or more pay in PFP. 75% of the sample who had 5% or more of their pay involved in PFP held one job, and 16 % had two jobs. 80% of the sample indicated that they

worked full-time. 55% of our sample were paid in a salary structure and 33% indicated they were paid hourly in some form. There were 22 job industries that participants worked in. The most common industries in the study, making up 33% of the sample, were Computer and Mathematical Operations and Sales Occupations (see Table 3 in Appendix A)

Design

The present study used a cross-sectional survey research design to analyze how individuals' voice in a pay process influences their perceptions of pay level and pay system satisfaction through feelings of distributive and procedural justice. Survey respondents participated via Amazon's MTurk and were asked to complete an anonymous online survey about their past experiences using voice in a pay process. To be included in the study, participants had to meet two initial criteria including: 1) an MTurk HIT Approval rate great than or equal to 90 and indicating that they were employed. Participants were paid \$.75 for completing the entire survey.

Measures

The questionnaire used in this study began with instructions explaining to the participants that the survey will assess levels of voice and that all items should be answered honestly, and to the best of their ability.

Demographics

To control for demographic variables, the survey included questions concerning the participants' (1) number of jobs currently held, (2) work schedule (i.e., part-time, full-time, or

unemployed), (3) pay structure (i.e., salary, hourly, or other) (4) job industry (e.g., healthcare) and (5) estimated percent of pay involved in PFP.

Voice

Voice was measured in regards to a pay decision with a four-item scale (two items regarding instrumental voice and two items regarding noninstrumental) adapted from Korsgaard and Roberson (1995) and Avery and Quinones (2002) ($\alpha = 0.79-0.86$) using a Likert-type scale ranging from 1 (*Strongly disagree*) to 5 (*Strongly Agree*), with higher scores indicating higher levels of voice. An example item is, “*I felt I could have introduced new topics during the pay discussion*”. We determined coefficient alpha to be 0.81. (An exploratory factor analysis revealed that instrumental and noninstrumental voice did not fall on two separate factors. Specifically, there was only a single eigenvalue greater than one. Therefore, we combined the scales and reworded our hypotheses to reflect this change. Specifically, we created a composite voice scale made up of two instrumental and two noninstrumental voice items (see Appendix) in our mediation analyses. Two hypotheses were tested given that voice was analyzed as a single variable.)

Procedural Justice

Procedural justice in a pay process was measured with a four-item subscale adapted from Sweeney and McFarlin (1993) ($\alpha = 0.73-0.85$) using a Likert-type scale ranging from 1 (*Very unfair*) to 5 (*Very fair*), with higher scores indicating higher fairness perceptions. An example item is, “*How fair or unfair are the procedures used to determine your pay?*” We determined coefficient alpha to be 0.87.

Distributive Justice

Distributive justice in a pay process was measured with a slightly modified version of the six-item *Distributive Justice Index* (Price & Mueller, 1986) ($\alpha = 0.75-0.94$) using a Likert-type scale ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). An example item is, “I am rewarded fairly considering the responsibilities I have”. We determined coefficient alpha to be 0.94.

Pay Satisfaction

Pay level and pay system satisfaction were measured with the 16-item *Pay Satisfaction Questionnaire* (Heneman & Schwab, 1985 ($\alpha = 0.89$)) using a Likert-type scale ranging from 1 (*Very dissatisfied*) to 5 (*Very satisfied*). An example item regarding pay system satisfaction is, “How satisfied are you with how the company administers pay?” An example item of pay level satisfaction is, “How satisfied are you with your overall level of pay?” We determined coefficient alpha to be 0.88.

Pay system and pay level satisfaction were coded in such a way that a negative value indicated a positive relationship. This occurred because the option “Very Satisfied” was coded as 1 and “Very Dissatisfied” was coded as 5. All the other scales (e.g., procedural justice, distributive justice, and voice) were coded oppositely such that “Strongly Disagree” was coded as 1. Therefore, negative values in pay satisfaction actually indicate positive relationships.

Analyses

For the current study, we performed hierarchical linear regression and bootstrapped mediation. Hierarchical regression allowed us to analyze each of the direct effect hypotheses. To test mediated hypotheses, the bootstrapping approach to mediation was used (Preacher & Hayes,

2008). This approach to mediation assesses all potential mediation paths and provides a more reliable estimate of error.

RESULTS

Descriptive statistics and correlations among the study variables (voice, procedural justice, distributive justice, pay system and pay level satisfaction) can be found in Table 3. Voice related significantly and in the predicted direction with distributive justice ($r = .59, p < .01$), procedural justice ($r = .51, p < .01$), pay system satisfaction ($r = -0.41, p < .01$), and pay level satisfaction ($r = -0.34, p < .01$). Note that correlations for pay system satisfaction and pay level satisfaction are negative due to the way they were coded (1 = Very Satisfied; 5 = Very dissatisfied). Procedural justice related significantly and in the predicted directions to pay system satisfaction ($r = -.66, p < .01$) and pay level satisfaction ($r = -0.55, p < .01$). Similarly, distributive justice related significantly and positively to pay level satisfaction ($r = -0.58, p < .01$) and pay system satisfaction ($r = -0.62, p < .01$). The outcome variables, pay system and pay level satisfaction, were significantly related to one another in the expected direction ($r = .79, p < .01$).

Hypothesis 1 examined the mediating effect of procedural justice and distributive justice on the relationship between voice and pay system satisfaction. To assess these relationships, we used the SPSS macro 'Process' to conduct a bootstrapped mediation analysis using procedural justice and distributive justice as mediators (Preacher & Hayes, 2008). Voice had a direct effect on procedural justice ($a_1 = 0.36, p < .01$). Similarly, procedural justice had a direct effect on pay system satisfaction ($b_1 = -.28, p < .01$). Voice indirectly influenced pay system satisfaction through its effect on procedural justice ($ab_1 \text{ PJ} = -0.10, 95\% \text{ CI} [-0.18, -0.04]$), (DJ = -0.03, 95% CI [-0.09, 0.03]), supporting Hypothesis 1 (see Figure 2). The confidence interval for the relationship that distributive justice has with pay system satisfaction includes zero, indicating a nonsignificant relationship.

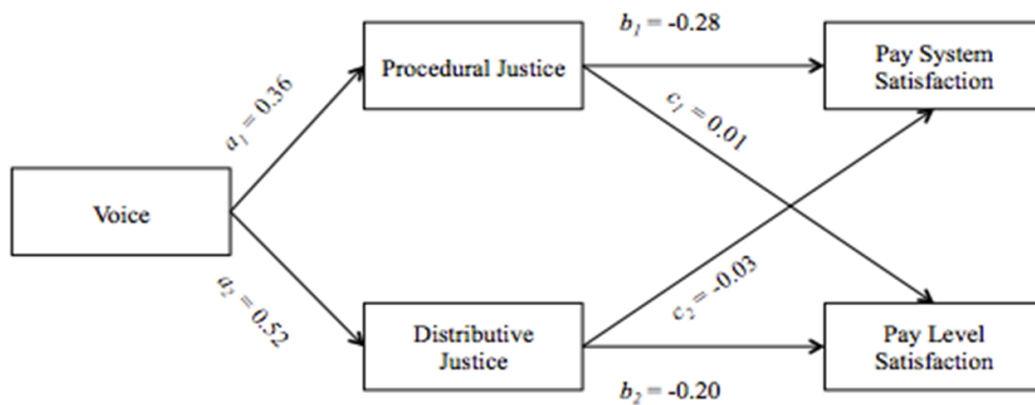
Hypothesis 2 examined the mediating effects of procedural justice and DJ on the relationship between voice and pay level satisfaction. Voice had a direct effect on distributive justice ($a_2 = 0.52, p < .01$). Distributive justice also had a significant effect on pay level satisfaction ($b_2 = -0.20, p < .01$). Supporting the fully mediated model for Hypothesis 2, voice indirectly influenced pay level satisfaction through its effect on distributive justice (ab_2 DJ = -0.09, 95% CI [-0.17, -0.02]), (PJ = 0.008, 95% CI [-0.03, 0.06]) (see Figure 2). Similarly, the confidence interval for the relationship that procedural justice has with pay level satisfaction includes zero, indicating a nonsignificant relationship.

Table 3
Descriptive statistics and correlations

Measure	<i>M</i>	<i>SD</i>	1	2	3	4	5
1.Voice	3.48	0.81	(.81)	-	-	-	-
2.Procedural Justice	3.70	0.80	.51**	(.87)	-	-	-
3.Distributive Justice	3.73	0.93	.59**	.73**	(.94)	-	-
4.Pay Level Sat	2.62	0.93	-.34**	-.55**	-.58**	(.86)	-
5.Pay System Sat	2.62	0.83	-.41**	-.66**	-.62**	.79**	(.90)

n=206; ** p < 0.01

$ab_1 = -0.10$ (Voice to pay system satisfaction through procedural justice)



$ab_2 = -0.09$ (Voice to pay level satisfaction through distributive justice)

Figure 2. Mediation analyses

DISCUSSION

The utility and effectiveness of PFP have been at the crux of pay literature for the past 50 years. Paradoxically, the implementation of PFP systems has become more popular in recent years, despite evidence that in fact PFP can be ineffective in the modern workplace (Petersen, L.A., Woodard, L.D., Urech, B.A., Daw, C., & Sookanan, S., 2006). Given this paradox, we set out to identify additional criteria important for predicting the effectiveness of PFP systems. Specifically, we focused on affective reactions as important criteria for the effectiveness of using PFP systems. By doing so, we were able to identify predictors of pay satisfaction that employers can put into use to add additional criteria for effectiveness of their PFP systems. Based on this, the present study had three main objectives: (1) to attempt to reproduce the voice effect in a PFP dynamic in a non-experimental study, (2) to extend previous findings regarding justice as a mediator of voice and pay satisfaction relationships and (3) to explore PFP in a novel way by assessing affective outcomes of PFP.

In support of the first objective, our results align with previous research of the voice effect (Avery & Quinones, 2002; Leventhal, 1980). We found voice to be an important factor in predicting fairness – both of a system and outcome. In other words, participants were more likely to report higher perceptions of fairness when they were given more opportunity to voice their opinion in a PFP process. Previous research has suggested that pay system satisfaction is more influenced by perceptions of procedural justice than that of distributive justice (Thiabut & Walker, 1975). Procedural justice more strongly mediated the relationship between voice and pay system satisfaction than did distributive justice. Similarly, distributive justice more strongly mediated the relationship between voice and pay level satisfaction than did pay system satisfaction. Taking these findings together, we were able to reproduce past findings regarding

the voice effect in a non-experimental way using affective outcomes. As an implication, we can now be more confident about the existence of the voice effect across industries and demographics. The voice effect appeared in a sample consisting of 27 industries and a range of 20% salary involved in PFP. This bolsters our position that providing voice to employees during pay discussions and PFP meetings has a positive effect. Furthermore, our findings build on previous voice research that was conducted primarily in conflict resolution and performance management arenas by reproducing the voice effect in a PFP environment.

This study's findings achieve our second objective, which was to align with previous research examining justice as a predictor of pay satisfaction. In this study both justice and pay satisfaction were parsed out by looking at distributive justice, procedural justice, pay level satisfaction, and pay system satisfaction respectively. We found 1) distributive justice had a stronger relationship with pay level satisfaction than did procedural justice and 2) procedural justice had a stronger relationship with pay system satisfaction than did distributive justice. Excitingly, this is consistent with our understanding of the justice literature, which purports that voice is strong predictor of justice outcomes and that distributive justice is more related to outcome level satisfaction (i.e., pay level) and procedural justice is more related to system satisfaction (i.e., pay system) (Earley & Lind, 1987; Lind, Kanfer, & Earley, 1990). This also supports other recent literature examining justice perceptions in PFP systems (Kim, 2016). These findings suggest that employee voice – a form of “participation” – is an effective predictor of fairness and pay satisfaction. Adding to previous literature that has loosely defined participation (Miceli, Jung, Near, Greenberger, 1991), our findings specify a particular type of participation – voice – that can influence positive outcomes.

Supporting our third objective, we contribute to the voice and pay literature not only by reproducing previous findings of the voice effect, but also by looking at voice and PFP in a novel way and demonstrating interesting results in this topic area. Until this point, the effectiveness of PFP programs were evaluated primarily using objective measures (e.g., performance data, customer satisfaction ratings, and sales numbers) (Ellwing, 2012). We conducted this study using affective outcomes (e.g., fairness, satisfaction) instead of using what has been traditionally used to measure the effectiveness of PFP. Looking at affective outcomes of PFP, we can draw new conclusions about employees' perceptions of how they are paid. For instance, given we found significant differences in perceptions of voice utility and fairness between people with >5% of pay in PFP and people with <5% of pay in PFP, this may influence how PFP programs are built. Furthermore, our results demonstrate the potential value of offering employees a say in their pay. When employees are given the opportunity to voice, they are more likely to consider the process and the outcome as fair (Leventhal, 1980). Instead of waiting until the exit interview for employers to realize that their employees are dissatisfied with their pay structure, they can be proactive and foster regular check-ins or encourage feedback during the salary review process and expect to see higher perceptions of fairness and satisfaction.

Additionally, the current findings may help guide future efforts to assess PFP programs in a way that previously may have not been leveraged. Specifically, as a practical implication, executives at organizations can look to and draw on additional data to make judgments about their PFP system. For example, take a scenario where a CFO is evaluating the effectiveness of her organization's PFP system – most likely she is looking at whether the system has had an impact on employee performance and motivation. After looking at the data, she discovers that the system has in fact increased employee performance across the board, and so she deems the

system as effective. However, at what cost is the system increasing performance? In other words, performance may be higher, but people may be turning over more frequently due to decreased perceptions of fairness and satisfaction with the system. In this situation, the CFO would benefit greatly from having these data available to provide a more holistic view of the program. In sum, there are more to PFP systems than just the effect they have on performance and motivation – looking at affective outcomes provided us with additional, rich data, which can now be used in an applied setting.

Study Limitations

Although we did yield significant findings that included contributions to not only research but practice as well, there were some limitations to this study. First and foremost, we were unable to get the distinction of voice that we had anticipated. We intended to measure two types of voice – instrumental and noninstrumental – in this study, but our factor analysis did not yield two separate predictors. Perhaps theoretically these two types of voice are distinct, but in practice they become difficult to assess. It is possible that our survey respondents did not differentiate between these two types of voice because in their experience they haven't been different.

Second, this study collected data from respondents via Amazon MTurk, which may limit our ability to generalize our findings to other populations. However, we did find that the present study's sample included a wide range of industries, pay-types, and job schedules.

A third limitation that should be noted is that this study was cross-sectional in design. Due to the cross-sectional research design, we are not able to determine causality between the

variables. However, the directionality between variables in this study is supported by previous findings in this research area and current theory around voice and justice (Lind & Tyler, 1988).

Finally, this study used self-report measures, which can be prone to biased or inaccurate responses from survey respondents (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003). To combat this, we 1) informed all participants that their participations would be kept confidential, decreasing the likelihood for responding in a socially desirable manner, and 2) included attention check items to reduce random responding.

Conclusions

This research supports the notion that there is benefit to exploring PFP effectiveness from a more holistic lens. Specifically, by evaluating PFP programs through affective measures. Understanding the conditions in which employees are more likely to view a pay system as fair allows employers to deliberately tailor their programs to provide these conditions. In this case, providing employees an opportunity to have a say in how their pay is determined. Pay satisfaction and perceptions of justice lead to many positive outcomes that employers can capitalize on by designing a system that allows this opportunity. Further research should seek to understand on a greater level the conditions of a PFP program that lead to both higher performance outcomes as well as higher levels of fairness and satisfaction.

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APPENDIX A. MEDIATION ANALYSES AND DESCRIPTIVES

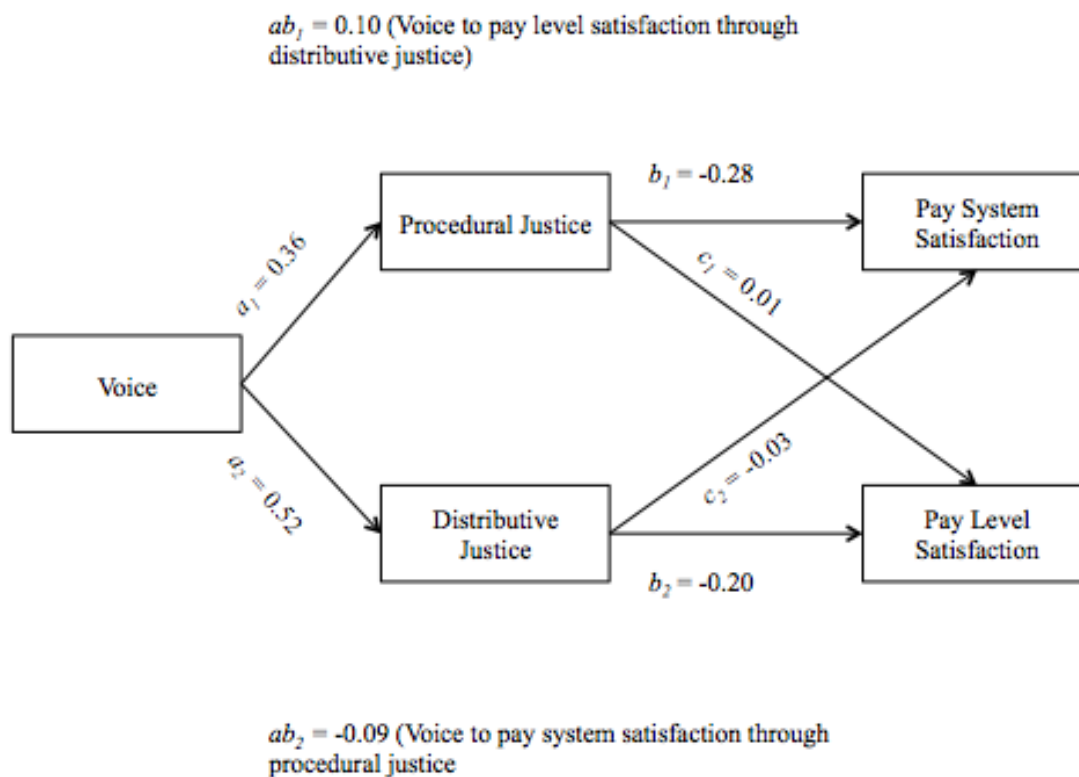


Figure 2
Mediation Analyses

Table 2
Descriptive statistics

Measure	<i>M</i>	<i>SD</i>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
1.Voice	2.97	1.02	(.90)	-	-	-	-
2.Procedural Justice	3.49	0.84	.53**	(.88)	-	-	-
3.Distributive Justice	3.28	1.09	.70**	.67**	(.95)	-	-
4.Pay Level Sat	2.65	0.95	-.24**	-.50**	-.40**	(.87)	-
5.Pay System Sat	2.70	0.81	-.36**	-.62**	-.50**	.77**	0.89

n=399; ** p < 0.01

APPENDIX B. DEMOGRAPHICS

Table 3

Industry demographics

Industries Included in Sample	<i>Frequency</i>	<i>%</i>
Computer and Mathematical Occupations	46	21.5
Sales and Related Occupations	24	11.2
Healthcare Support Occupations	19	8.9
Arts, Design, Entertainment, Sports, and Media Occupations	17	7.9
Business and Financial Operations Occupations	16	7.5
Production Occupations	15	7.0
Education, Training, and Library Occupations	15	7.0
Construction and Extraction Occupations	13	6.1
Office and Administrative Support Occupations	11	5.1
Personal Care and Service Occupations	5	2.3
Food Preparation and Serving Related Occupations	5	2.3
Farming, Fishing, and Forestry Occupations	3	1.4
Architecture and Engineering Occupations	3	1.4
Government	3	1.4
Management Occupations	3	1.4
Protective Service Occupations	2	0.9
Legal Occupations	2	0.9
Life, Physical, and Social Science Occupations	1	0.5
Community and Social Service Occupations	1	0.5
Transportation and Materials Moving Occupations	1	0.5

APPENDIX C. MEASURES

Voice (5pt agreement scale)

1. I have the opportunity to provide relevant data to the person(s) who determine how much pay I receive from the pay-for-performance portion of my salary.
2. The person(s) who decide my pay asks me to provide input when calculating the pay I receive from the pay-for-performance portion of my salary.
3. I am able to provide input regarding the criteria used to determine my pay in the pay-for-performance system.
4. I appreciate the opportunity to have a discussion with the person(s) who decide how much pay I receive in my PFP program.

Distributive Justice (5pt agreement scale)

1. The amount of pay I receive in the pay-for-performance portion of my compensation accurately reflects the effort I have put into my work.
2. The amount of pay I receive in the pay-for-performance portion of my compensation accurately reflects the effort I have put into my work
3. The amount of pay I receive in the pay-for-performance portion of my compensation reflects what I have contributed to my organization.
4. The amount of pay I receive in the pay-for-performance portion of my compensation is justified, given my performance.
5. In general, the amount of pay I receive in the pay-for-performance portion of my compensation is fair.
6. In general, the pay I receive from my organization is fair.

Procedural Justice (5pt fairness scale)

1. How fair or unfair are the procedures used to determine the portion of pay you receive in the pay-for-performance component?
2. How fair or unfair are the procedures used to communicate your pay increases you receive in the pay-for-performance component?
3. How fair or unfair are the procedures used to evaluate your performance?
4. How fair or unfair are the criteria used to determine pay?

Pay Satisfaction (5pt satisfaction scale)

Please indicate your satisfaction level with each of the items below:

1. My take-home pay
2. My benefits package
3. My most recent raise
4. Influence my supervisor has on my pay

5. My current salary
6. Amount the company pays towards my benefits
7. Please answer "satisfied" to this item
8. The raises I have typically received in the past
9. The company's pay structure
10. Information the company gives about pay issues of concern to me
11. My overall level of pay
12. The value of my benefits
13. Pays of other jobs in the company
14. Consistency of the company's pay policies
15. Size of my current salary
16. The number of benefits I receive
17. How my raises are determined
18. Differences in pay among jobs in the company
19. How the company administers pay