

**PERFORMANCE BENEFITS OF REWARD CHOICE:
A PROCEDURAL JUSTICE PERSPECTIVE**

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ABSTRACT

Reward choice -- employees' ability to exercise control over the formal rewards they receive from work -- is an important part of many human resource management strategies. Reward choice is expected to increase employee performance, but conflicting findings highlight the need to better understand how and when it will do so. Based on fairness heuristic theory, we predicted that procedural justice mediates reward choice's influence on performance, and that choice attractiveness moderates that influence. A field study and an experiment both had similar results, supporting our predictions. Reward choice can increase performance by as much as 40%, but only when the available choices are attractive to employees.

Keywords: Choice; organizational justice; employee performance; rewards

An increasingly popular human resource management strategy is giving employees reward choice, which provides employees the ability to choose the level or type of rewards they receive from work (IOMA, 2011; Miceli & Heneman, 2000; White, 2009). In the United States, for example, fewer than 20 major employers allowed workers any control over how they were rewarded in 1980 (Hewitt Associates, 1993), but almost all major employers were offering some reward choice by 2007 (Employee Benefits, 2007). Adoption of reward choice in other countries shows the same increasing trend (Koo, 2011; Rao, 2008).

Organizations appear to have embraced reward choice for two reasons: to control costs by only providing those reward employees actually value and to benefit from improvements in workers' attitudes and behavior (Kelliher & Anderson, 2008; Lovewell, 2010). The traditional approach of standardized rewards has not succeeded in controlling costs or enhancing performance; generic reward plans tend to produce poor results (Beer & Cannon, 2004; Chiang & Birtch, 2006). Reward choice allows organizations to provide rewards that are customized to the individual and is believed to help when competing to recruit and retain the best employees, as well as contribute to a worker's subsequent performance (Fay & Thompson, 2001; Koo, 2011; Nazir, Shah, & Zaman, 2012). Consistent with the beliefs that reward choice benefits the worker and the organization, scholarship has linked reward choice with both increased task performance and performance-related attitudes, such as organizational commitment (Cole & Flint, 2004; Cooper, Dyck, & Frohlich, 1992; Lawler & Hackman, 1969).

However, despite the widespread adoption of reward choice and research evidence of its effect on performance, two important gaps remain in the literature. The first is a "neglect" gap (Sandberg & Alvesson, 2011): the mechanism linking reward choice to performance is currently unknown despite the scholarship on reward choice spanning several decades. The second is a

“confusion” gap (Sandberg & Alvesson, 2011): anecdotal and empirical evidence suggests that employers do not always get a positive response from introducing reward choice (IOMA, 2011; Shreeram, 2012; Sullivan, 2009). While some studies have found a positive relationship between reward choice and performance (Cooper et al., 1992; Lawler & Hackman, 1969), at least one study (Morgeson, Campion, & Maertz, 2001) found that reward choice was not beneficial. It seems that reward choice can improve employee performance, but does not always do so. As such, the crucial next step for theory and practice lies in “creating consensus” about how reward choice affects performance (Hollenbeck, 2008), including the mediating mechanism and boundary conditions.

In service of this goal, we report two studies that answer the two-part research question: *What is the mediator of the relationship between reward choice and work performance, and what are the boundary conditions of this relationship?* Study 1 used a field survey to extend previous research by showing that reward choice can influence performance-related attitudes through the mediating mechanism of procedural justice. Study 2 utilized an experimental design to replicate the Study 1 findings and to examine boundary conditions for reward choice. Study 2 found that reward attractiveness is an important moderator of the effect of reward choice; (i.e., reward choice only increases justice and performance if the available choices are attractive).

THEORETICAL BACKGROUND AND HYPOTHESES

To study the relationship between reward choice and performance, we adopt the total rewards perspective (Lin, Yao & Zhao, 2014; Nazir, Shah & Zaman, 2012). The total rewards perspective is a broad view of rewards that includes all of the valued outcomes that employees derive from their work, including base pay, incentives, non-salary benefits and perquisites (Chiang & Birtch, 2006; Fay & Thompson, 2001; Gross & Friedman, 2004). Focusing on an

employee's total rewards is consistent with larger trends in the study of HRM, which are recognizing the need to move toward more holistic views (Boxall, 2013). The total rewards perspective is based on the fact that different employees value different types of rewards (Kinnie, Hutchison, Purcell, Rayton & Swart, 2005; Krausert, 2014), but their response to having their desires satisfied will be similar. For example, imagine one worker who desires more pay, and another who is most concerned with flexible work arrangements. Giving both workers the same reward (e.g., more pay) would provoke differing responses, but if each worker is given what s/he desires, they should have similarly positive responses (Cable & Edwards, 2004).

Reward Choice and Performance

Organizations are increasingly offering customized total rewards by allowing workers to control some aspects of the level or type of rewards they receive. The specifics of the reward choice vary from simple forms such as choosing among different package options to situations where an employee's entire reward package is idiosyncratic (e.g., Anand, Vidyarth, Liden, & Rousseau, 2010). Providing employees with reward choice is expected to reduce organizational costs, increase worker satisfaction, and improve worker performance (Kelliher & Anderson, 2008; Lovewell, 2010). The first two effects of reward choice – reduced cost and increased reward satisfaction – are straightforward. It has been documented that introducing reward choice decreases the cost of reward provision while simultaneously increasing workers' satisfaction (Dencker, Joshi, & Martocchio, 2007; Karoly & Panis, 2004).

Beyond these two effects, however, there is some evidence that reward choice can also improve work performance. For example, one study found that workers who designed their own reward system performed better than workers who had an identical reward system imposed on them (Cooper et al., 1992). Cooper and colleagues (1992) speculated that reward choice will

increase performance when rewards are perceived as fair, and that having workers involved in designing the reward system leads to perceptions of fairness.

Other findings also fit with the hypothesis that reward choice promotes perceptions of fairness. One study showed that workers perceived a reward system as less fair, less responsive, less motivating, and less satisfying when that system was created exclusively by management, rather than through a joint management-union effort (Schwarz, 1989). Similarly, another study found that allowing workers to design their own reward system made workers more trusting of management (Jenkins & Lawler, 1981).

In contrast, however, one study failed to find any benefit from designing a new reward system (Morgeson et al., 2001): workers were extensively involved in providing information about reward preferences to management, but showed no positive response to the new rewards. Although Morgeson and colleagues (2001) admitted surprise at this outcome, we submit that it reflects the difference between choice and participation (Leana, Locke, & Schweiger, 1990). In most studies of reward choice, the comparison is between one group of workers who designed their own reward system and another group of workers who had a system imposed on them. As such, these studies confounded participation (i.e., having voice or giving input about preferred options) with choice (i.e., making the actual reward selection). The studies that found positive responses compared “participation + choice” to “no-participation + no-choice.” In contrast, Morgeson and colleagues (2001) compared “participation + no-choice” to “no-participation + no-choice”: some workers in their study gave input, but the final system was chosen by management. That Morgeson and colleagues (2001) found no positive outcomes suggests that workers respond to *choosing* their rewards, rather than to *participating* in a process where someone else ultimately chooses. Choice is the key factor.

Additional evidence for the importance of choice was provided by a field experiment where some autonomous work groups were able to design their own reward plan, while control groups had an identical plan imposed on them by management (Lawler & Hackman, 1969). The initial results of Lawler and Hackman's (1969) field experiment were consistent with other work in this domain, showing that workers in the reward choice condition significantly increased their performance-related behaviors while those in the control (no choice) condition did not. While this design initially was like others in confounding participation and choice, a longitudinal component of the study indirectly separated the two elements.

Follow-up data collected by Schefflen, Lawler and Hackman (1971) a year after the reward redesign revealed two important findings. The first finding was that the behavioral change lasted for a year; it was not a short term result. The second finding was that losing the chosen reward system reversed the benefits associated with it. After the first year, management at the organization discontinued the worker-designed reward plan. However, the removal of the plan did not reduce workers' rewards; in fact, management raised overall compensation levels, so that workers were making *more* than they were under the employee-designed plan (Schefflen et al., 1971). Nonetheless, when the reward system changed, performance behaviors reverted to pre-experiment levels. The study did not measure the mechanism, but when considered with the results of Morgeson and colleagues (2001), it seems likely that losing the feeling of choice was crucial. The change was not caused by the level of reward, since the workers' rewards actually increased when their plan was removed. The element that changed was that the workers no longer had a reward plan they had chosen for themselves.

In summary, it is clear that allowing workers to design their own reward system can improve performance. Furthermore, the evidence suggests that the choice exercised in system

design is the key to increasing worker performance (Fang & Gerhart, 2012). Changes in the level of rewards do not account for observed performance gains, nor is it sufficient to participate in the design if someone else chooses what rewards are received.

An important limitation of previous studies is that they examined choice in the context of employees designing their own reward system. Obviously, such complete system design involves a sweeping change, and of necessity cannot occur often. Nonetheless, the underlying mechanism of positive responses to choice suggests that performance should be improved even if reward choice is less sweeping than designing the entire system. We therefore propose the constructive replication hypothesis that reward choice will increase performance, regardless of the scope of change.

H1: Reward choice increases worker performance.

Reward Choice, Procedural Justice and Performance

Stating the hypothesis that reward choice will increase performance begs the question of why. Drawing on fairness heuristic theory, we posit that procedural justice is the mediating mechanism linking reward choice to worker performance (Lind, Kray, & Thompson, 2001; Lind, 2001). We begin by defining procedural justice, and then use fairness heuristic theory to explain why reward choice will increase procedural justice and why procedural justice will increase performance.

Organizational justice is defined as an individual's perception of fairness in an organization (Lind & Tyler, 1988), and while multiple types of justice have been found (Colquitt, LePine, Piccolo, Zapata, & Rich, 2012), the most relevant to reward choice are distributive justice and procedural justice. Distributive justice refers to workers' evaluation of whether the results of a decision are fair (Konovsky, 2000). For example, workers may judge

whether the organization is contributing an appropriate amount toward their retirement savings. In contrast, procedural justice concerns workers' evaluation of the process used to reach an outcome, distinct from the outcome itself (Thibaut & Walker, 1975). In the retirement contribution example, procedural justice would involve workers' views about the fairness of how contribution amounts were calculated; e.g., more for employees with greater seniority, maximum amount limits, etcetera.

Procedural justice is usually more important than distributive justice (Colquitt, 2001). That is, workers will often accept a relatively poor outcome if they believe it was produced by a fair process (van den Bos, Lind, & Wilke, 2001). Moreover, one of the key contributors to perceptions of fair process is the power to choose (Korsgaard & Roberson, 1995; Lind, Kanfer, & Earley, 1990). As a result, procedural justice should be the most important issue in the context of reward choice. Indeed, prior study has shown that reward choice contributes to perceptions of justice in the reward system (Cole & Flint, 2004). In other words, if employees can choose their rewards, they will perceive those rewards as more procedurally just.

Furthermore, fairness heuristic theory suggests that workers' perceptions of the reward system's fairness will generalize to their perception of the organization as a whole (Lind et al., 2001; Lind, 2001; Mignonac & Richebe, 2013). Fairness heuristic theory explains that particular occasions of fair treatment lead individuals to assume that those occasions reflect the overall level of fairness in the organization. If the organization acts justly in important and salient situations, then the individual will tend to assume that the organization is fair in general. Because of how important rewards are to workers, judgments about the fairness of the reward system should be particularly influential in shaping overall perceptions of the organization. As such, reward choice should contribute to generalized perceptions of procedural justice among workers:

having reward choice will lead to perceptions of justice in the reward system, and evaluations of the reward system will be generalized to the organization as a whole (Thibaut & Walker, 1975; Tyler, 1987).

Workers who believe their organization is procedurally just subsequently believe that there is greater interpersonal trust between themselves and the organization, and that trust motivates them to behave in a cooperative and supportive fashion (Cropanzano, Byrne, Bobocel, & Rupp, 2001; Lynch, Eisenberger, & Armeli, 1999). Individuals who feel fairly treated take more action to support the common good (Tyler & Blader, 2003). When workers believe their organization is just, they are more willing to contribute (Grover & Crooker, 1995; Lind, 2001) and their contributions improve performance (Colquitt et al., 2012; Konovsky, 2000). As such, procedural justice should be the mechanism by which reward choice increases performance.

H2: Procedural justice mediates the effect of reward choice on worker performance, such that reward choice increases procedural justice and procedural justice increases worker performance.

Choice Attractiveness: A Boundary Condition

Given the evidence that having choice increases perceptions of justice (Korsgaard & Roberson, 1995; Lind et al., 1990), one might assume that any reward choice would increase justice and subsequent performance. However, research in psychology shows that offering choice does not always produce positive responses (Chua & Iyengar, 2006). For example, Botti and Iyengar (2004) found that if individuals could only choose among meal options that they found unappealing, the freedom to choose actually reduced their satisfaction with the meal. Extending these results to the domain of work rewards suggests that not any choice will do; the available options must be attractive to workers.

For example, imagine an organization that offers only unsatisfactory reward choices to employees. While the workers will be able to exercise reward choice, there is no reason to think that doing so will improve their perception of the reward system in this hypothetical organization. Being compelled to choose among a series of unattractive options will not contribute to perceptions of procedural justice, and is more likely to focus employee attention on the poor level of their benefits (Colquitt, 2001). Since perceptions of an organization's overall justice depend on perceptions in specific circumstances, the organization that only offers choice among unattractive options will not be perceived as more procedurally just in general. Since the performance gains associated with reward choice derive from perceptions of procedural justice, offering reward choice among unattractive options will therefore fail to improve performance. Consistent with this prediction, media reports have noted some overtly negative responses to reward choice (Shreeram, 2012). Offering reward choice does not guarantee positive results; it is necessary to offer attractive choices.

H3: Choice among unattractive rewards will not increase procedural justice.

H4: Choice among unattractive rewards will not increase work performance.

STUDY 1

Method

Sample and procedure. One hundred full-time workers were randomly selected from the alumni database of a large Midwestern American university Master's program and invited to complete an online survey. Forty-six workers provided usable responses, representing a range of industries and job functions. The respondents were primarily young professionals (mean age = 30.47 years, s.d. 6.02). All had graduate-level education, and most had recently been promoted (mean job tenure = 2.30 years, s.d. 1.63; mean organizational tenure = 4.11 years, s.d. 3.79);

57% of the participants were male. More than half (54%) has supervisory duties (mean number of subordinates = 6.47, s.d. 17.07).

Variables. To measure reward choice, respondents were asked to describe the two most important rewards they received from their employer. For each of those rewards, they reported the extent of their reward choice in terms of degree of choice, satisfaction with degree of choice, and quality of available choices on 5-point scales. We combined these six items (three items \times two rewards) into a reward choice measure that had good internal consistency ($\alpha = 0.80$, 95% CI [0.59, 1.00]).

Because objective performance measures would not be comparable across our sample, we used affective organizational commitment (Meyer, Allen, & Smith, 1993) as a proxy measure for performance (six items, e.g., “I really feel as if this organization's problems are my own”). Affective organizational commitment refers to a psychological state of positive attitudes toward continuing one’s relationship with an organization; workers are affectively committed to an organization to the extent that they identify themselves with that organization and feel an emotional attachment to their membership (Meyer & Allen, 1991). Affective organizational commitment is not a measure of performance, but it is the type of commitment most strongly associated with performance (Meyer, Stanley, Herscovitch & Topolnytsky, 2002) and meta-analysis has revealed a consistent positive relationship between affective commitment and performance (Ricketta, 2002). In particular, when individuals are relatively new to their job -- as was the sample used here -- the meta-analytic correlation between affective commitment and performance is 0.44 (Wright & Bonett, 2002). Moreover, organizational commitment has been shown to mediate the relationship between rewards and performance (Park & Kruse, 2014).

Participants also completed Colquitt's (2001) scale measuring procedural justice (seven items, e.g., “To what extent are the procedures use in the organization free of bias?”), as well as items about their demographic characteristics. In addition, to control for different levels of rewards among participants, we had them report their overall satisfaction with the perceived value of the rewards provided by their employer (benefit level, four items, e.g., “How satisfied are you with the value of your benefits?”; Williams, Brower, Ford, Williams, & Carraher, 2008).

Results and Discussion

Based on responses to demographic questions, respondents did not appear to differ from non-respondents. Demographic characteristics largely proved to be non-significant control variables, and even when they were significant, their inclusion did not change any of the substantive conclusions. As such, demographic variables were excluded for clarity and parsimony (Aguinis & Vandenberg, 2014). Descriptive statistics and the reliability of our scales are provided in Table 1.

Insert Table 1 here

We used ordinary least squares regression for our primary analyses. Consistent with H1, reward choice was related to affective organizational commitment (Model 1 in Table 2). Furthermore, consistent with H2, procedural justice mediated the relationship between reward choice and affective organizational commitment. Reward choice predicted procedural justice (Model 2), and when controlling for the relationship between procedural justice and affective organizational commitment, there was no consistent relationship between reward choice and affective commitment (Model 3). To further assess mediation, we conducted two additional tests: a bootstrap estimation (Preacher & Hayes, 2008) revealed a standardized indirect effect of 0.23 (95% CI [.03, .46]); and a Sobel (1982) test found a significant effect ($z = 2.24$, $p = 0.02$, 95% CI

[0.04, 0.40]). All of these results are consistent with H2, the prediction that procedural justice mediates the relationship between reward choice and affective organizational commitment.

Insert Table 2 here

To provide a conservative test of our predictions, we also conducted several additional analyses. First, we estimated a model that included the control variable for how satisfied individuals were with their level of rewards (Model 4). This analysis revealed that the relationship between procedural justice and performance remained after controlling for the level of rewards. Second, we estimated alternative models using Huber, bi-square and sandwich corrections, which can improve model estimates in the presence of outliers or heteroskedasticity (Huber, 1981). In all cases, the results were substantively unchanged. Moreover, post hoc diagnostics revealed that collinearity was not a concern; the largest variance inflation factor was only 2.0 (O'Brien, 2007). Additionally, power analysis revealed an observed statistical power greater than 0.9, which exceeds the traditional 0.8 guideline required for appropriate hypothesis testing (Cohen, 1988). Taken together, all of these results suggest the robustness of the findings.

In sum, using a diverse sample of full-time workers, we found results consistent with prior research: reward choice was associated with higher levels of the performance-related attitude of affective organizational commitment. Also consistent with previous studies (e.g. Tremblay, Sire & Pelchat, 1998), the effect of reward choice was independent of the level of the reward. In addition to replicating previous results, these findings extended previous work in two important ways. First, where previous studies were conducted primarily with first-level workers, the majority of our respondents were managers or supervisors. The results therefore suggest that reward choice has similar effects across hierarchical levels. Second, our results showed that the effect of reward choice was mediated by procedural justice. This finding is consistent with the

longstanding, but previously untested, prediction that reward choice improves performance by fostering perceptions of fairness.

Nonetheless, Study 1 had three limitations. First, it used affective organizational commitment as a proxy, rather than measuring performance directly. Second, it used cross-sectional data, which prevents us from ruling alternative explanations (e.g., committed employees may be more likely to perceive the organization as fair). And finally, the data did not allow a test of the moderating effect of choice attractiveness. Moreover, the reward choices that the respondents' reported on were primarily non-salary benefits, rather than choice about pay. To address these issues, we conducted a second study in a controlled experimental context.

STUDY 2

Method

Sample and procedure. Eighty-two undergraduate business majors at a large Midwestern American university participated. Their mean age was 20.5 years (s.d. 1.61) and 47.5% were male.

After providing consent, participants were told about the task and how they would be rewarded (i.e., the experimental manipulation); they then completed the procedural justice measure from Study 1, and finally completed the compound remote associates task (CRA). In the CRA, participants try to find one word that can be combined with each of three different prompt words to create meaningful compound terms. For example, the prompt “night/wrist/stop” is solved by the word “watch,” which can combine with each of the three prompts. Participants were presented with 140 sets of prompts (Bowden & Jung-Beeman, 2003) and directed to complete as many as they could. The CRA was originally developed as a measure of creativity (Mednick, 1962), but recent research treats the task as an assessment of problem-solving ability

without requiring domain-specific knowledge (Bowden & Jung-Beeman, 2003). As such, the CRA is considered a good measure of abstract knowledge-based work performance (Ackerman & Zalmanov, 2012).

Reward choice was manipulated as a three-level between-subjects factor (attractive-choices, less-attractive-choices, no-choice), derived from a two-phase pretest. In the first phase of pretesting, a sample of 43 participants was shown a list of 14 possible rewards for completing an experiment, and asked to rate each reward's attractiveness. In the second phase of pretesting, a different sample of 31 participants rated the overall attractiveness of the three highest rated rewards from phase 1 (Set A) and the three lowest rated rewards from phase 1 (Set B). Set A was rated as significantly more attractive than Set B, regardless of presentation order (mean = 4.68 vs. 2.32 on a 7-point scale, paired $t[31] = 8.56, p < .01$).

The options in the attractive-choices condition were: (1) two points of extra credit + \$0.10 cash per correct answer; (2) two points of extra credit + \$0.10 per correct answer donated to a charity of their choice; (3) \$0.30 cash per correct answer (no extra credit); or (4) two points of extra credit (the university's standard experimental reward). The options in the less-attractive-choices condition were: (1) \$0.20 cash per correct answer (no extra credit); (2) two points of extra credit + \$0.13 in fast food coupons per correct answer; (3) two points of extra credit + \$0.13 donated to the Humane Society per correct answer; or (4) two points of extra credit + \$0.10 cash per correct answer. The first three of the less attractive options were the set rated least attractive in pretesting (i.e., Set B); the fourth was the same as the first attractive-choices option and was the single option judged most attractive in pretesting. We offered this single highly attractive option with the three less attractive rewards to control for the effects of reward content, as described below.

After learning about the task, participants in the attractive-choices and less-attractive-choices conditions chose their reward from the appropriate list. All but three of the attractive-choices participants chose the same reward, and all of the less-attractive-choices participants chose that same reward. Therefore, participants in the no-choice condition were told that they would receive that reward: two points of extra credit + \$0.10 cash per correct answer. To prevent any effect from reward content, the three participants who chose a different reward were not included in the dataset (final N: attractive=27, less-attractive=25, no choice=30). As such, all participants operated under an identical reward structure; the only difference among groups was whether they had it imposed on them or chose it from a list of otherwise attractive or less attractive options.

Results and Discussion

As in Study 1, demographic variables were non-significant covariates. The mean CRA performance was 30.8 correct responses (s.d. 17.88), the mean level of procedural justice was 3.92 on a 5-point scale (s.d. 0.74), and these two variables were significantly correlated ($r = 0.25$, $p = .02$). Consistent with Study 1, reward choice increased performance ($F[2, 79] = 5.22$, $p < .01$, $\eta^2 = .12$) and procedural justice ($F[2, 79] = 4.54$, $p = .01$, $\eta^2 = .10$).

Planned contrasts supported both H3 and H4 (see Table 3). Participants in the attractive-choices condition reported greater procedural justice (mean = 4.26) than those in the no-choice condition (mean = 3.74; $t = 2.74$, $p < .01$), and greater procedural justice than those in the less-attractive-choices condition (mean = 3.77; $t = 2.47$, $p = .02$). There was no significant difference in reported procedural justice between the no-choice and less-attractive-choices conditions ($t = 0.15$, $p = .88$). As one would expect, given the mediating role of procedural justice, the results were similar for performance. Participants in the attractive-choices condition (mean = 39.26)

performed 39.6% better than participants in the no-choice condition (mean = 28.13; $t = 2.46$, $p = .02$) and 57.8% better than participants in the less-attractive-choices condition (mean = 24.88; $t = 3.04$, $p < .01$). There was no statistically significant difference in performance between the no-choice and less-attractive-choices conditions ($t = 0.71$, $p = .48$).

Insert Table 3

In sum, reward choice increased performance and perceptions of procedural justice, but only when the choice was made from attractive options. These results extend our previous studies' findings in three important ways. They replicated them in a different context, they generalized them to a different criterion variable, which was an objective measure of task performance, and they provided a clear demonstration of the causal effect of reward choice.

Providing one attractive option in the less-attractive-choices condition was necessary to control for the effects of reward content, but it may have led participants to perceive this condition as effectively offering no choice, since only one option was attractive. This could explain the comparable results between the less-attractive-choices and no-choice groups. It may be that if the less-attractive-choices condition had offered *only* unattractive options, performance may actually have been reduced.

GENERAL DISCUSSION

In two studies, we examined the relationship between reward choice and performance. Consistent with predictions, reward choice increased performance through the mediating effect of procedural justice. Workers provided with reward choice perceive their organization as more fair, and that perception of fairness leads to improved performance. Our results showed that the effect of reward choice on performance is independent of the actual level of reward, but does depend on choice attractiveness. Workers offered a choice among unattractive options did not

perceive greater procedural justice nor did their performance improve; only those choosing from multiple attractive options had perceptions of greater procedural justice and subsequent performance gains. Our data combined experimental and field observations, showing consistency across diverse contexts, tasks, and measures. As a result, our research design provides strong evidence for the causal effect of reward choice. These findings have important theoretical and practical implications.

Theoretical Implications

The results make three theoretical contributions. The first is to demonstrate the previously uncertain mediator of the effect of reward choice on performance. Human resource management suffers from a lack of theoretical explanations for observed results (Monks, Kelly, Conway, Flood, Truss & Hannon, 2013) and poor evidence of the causal nature of observed associations (Guest, 2011). Our data address both of these issues. Prior to our research, there were no data on the mediated process by which reward choice influences performance. Allowing workers to create their own reward system had been shown to enhance performance (Cooper et al., 1992; Lawler & Hackman, 1969), but the explanation for this result remained unclear. We advanced this work by testing the effects of reward choice in different contexts, with different outcomes and different types of choice, while measuring the mediating mechanism. As a result, we extended and clarified those previous studies, confirming that perceptions of fairness – specifically of procedural justice – are the mechanism by which reward choice improves performance. Moreover, our use of both field and experimental data supports inferences of cause: choice is the causal agent.

The second contribution arises from clearly distinguishing between choice and participation (Barber, Dunham, & Formisano, 1992). Previous studies confounded these two factors, which led to some apparently anomalous findings (Morgeson et al., 2001). Our results

appear to resolve the anomaly, creating consensus in the literature. In our studies, workers had choice (i.e., they could decide what type or level of reward they received), but they did not participate in creating those choices. We found that choice improved performance, while previous studies found that the combination of choice and participation improved performance (Cooper et al., 1992; Lawler & Hackman, 1969). Combining these results with the observed lack of benefit among employees who had participation without choice (Morgeson et al., 2001) suggests that choice, not participation, is essential. As such, Morgeson and colleagues' (2001) results are consistent with previous work, so long as one distinguishes between choice and participation. Nonetheless, opportunities remain for further investigation. While choosing among options is sufficient to improve performance, future scholarship can whether the benefits are greater when choice is combined with participation (Deci & Ryan, 2000).

The third contribution of our work is to highlight the complexities of choice, and thereby identify a significant boundary condition to the benefits of reward choice. Research in other contexts has shown that choice is not unequivocally good (Iyengar, Huberman, & Jiang, 2004), and we likewise found that in the case of work rewards not any choice will do. Reward choice only improved performance when individuals perceived their choice options as attractive ones. As such, the preferences of workers will be an important consideration in future investigations of reward systems and reward choice. All choice options will not have equivalent effects, suggesting (as noted below) an important role for pre-choice participation to insure that choice options are attractive.

Practical Implications

Our findings suggest several related considerations for implementation. In discussing these, it should be recalled that others found that the effects of reward choice persisted among

employees for more than a year (e.g. Schefflen et al., 1971). In the long run, the performance-enhancing consequences of reward choice may be substantial, which makes this issue an important one.

The most salient element of our findings is that choice is sufficient to improve performance. Before our research, one might have inferred from the literature that performance gains require allowing employees to design their own reward system, which will be impractical in many contexts. Our results show that reward design is not necessary. It is enough for management to have workers choose among attractive options. Doing so improved performance in our study by almost 40%, compared to workers who had no choice. However, reward attractiveness is an important contingency; there were no benefits from choice among unattractive options. Organizations must assure that the rewards offered meet not only their own needs, but also those of the employees. It may be best to have workers participate in identifying reward options to ensure that the results are sufficiently attractive. In addition, whatever system is adopted, it will be crucial to evaluate it in terms of employee perception and response (Corby, White & Stanworth, 2005).

In addition, organizational assistance may be required for the successful implementation of reward choice. In practice, it will likely not be enough to simply provide choice. For example, many organizations have moved from defined benefit pensions to defined contribution plans, and while this move clearly gives workers more reward choice, it may not contribute to their perceptions of organizational justice, particularly since prior work has shown that many individuals make poor choices for their retirement (Benartzi & Thaler, 2007). Workers may require help using their freedom to choose.

Conclusion

It seems obvious that the type of rewards provided would influence employees' attitudes and behavior. Our findings support this intuition, but further demonstrate that rewards have an effect beyond just their level. We integrated and extended previous studies by showing that being able to choose how one is rewarded has potentially powerful implications for organizational outcomes. Providing workers with choice over their rewards can lead them to feel more fairly treated, and thus to provide better performance. This observation clarifies decades of prior research, and, we hope, provides a foundation and stimulus for future investigation of the interrelations among rewards, choice, and worker performance.

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TABLE 1. DESCRIPTIVE STATISTICS AND PAIRWISE CORRELATIONS FOR STUDY 1^A

Variable	Mean	s.d.	α	1	2	3	4	5	6	7	8	9
1 Reward Choice	3.88	0.92	.80									
2 Affective Organizational Commitment	3.20	0.93	.81	.33								
3 Procedural Justice	3.43	0.95	.85	.40	.58							
4 Reward Level Satisfaction	3.72	0.91	.95	.69	.16	.34						
5 Organizational size (thousands of employees)	24.40	53.78		.11	.22	.19	.23					
6 Number of hierarchical levels from respondent to the top	4.61	2.29		.14	-.17	-.14	.08	.34				
7 Gender (1 = male; 0 = female)	0.59	0.50		-.26	-.26	-.32	-.26	.19	.32			
8 Age (years)	30.48	6.08		.18	.09	.17	.21	.02	-.10	.13		
9 Organizational tenure (years)	4.15	3.82		.19	.37	.36	.17	.54	-.03	.17	.40	
10 Tenure in current position (years)	2.31	1.64		.02	.01	.00	.12	-.08	-.35	.19	.22	.32

A. $n=46$ * Correlations with an absolute value greater than 0.30 were significant ($p < .05$).

TABLE 2. REGRESSION MODELS FOR STUDY 1^A

Independent Variables	Model 1 Affective Organizational Commitment	Model 2 Procedural Justice	Model 3 Affective Organizational Commitment	Model 4 Affective Organizational Commitment
Reward Choice	0.33* [0.04, 0.62]	0.41* [0.12, 0.70]	0.11 [-0.16, 0.39]	0.25 [-0.11, 0.60]
Procedural Justice			0.53* [0.26, 0.79]	0.54* [0.28, 0.81]
Reward Level Satisfaction				-0.20 [-0.55, 0.15]
Constant	1.92*	1.83*	0.96	1.15
R^2	.11	0.16	0.35	0.37
F	5.28* (<i>df</i> 1, 44)	8.30* (<i>df</i> 1, 44)	11.62* (<i>df</i> 2, 43)	8.28* (<i>df</i> 3, 42)

A. 95% CI in brackets; $n=46$

* $p < .05$

TABLE 3. GROUP MEANS FOR STUDY 2^A

	No Choice	Less-Attractive Choices	Attractive Choices
Performance (correct CRA answers)	28.13	24.88	39.26
Procedural Justice	3.74	3.77	4.26

A. No choice N = 30, less-attractive choices N = 25, attractive choices N = 27.