**ORIGINAL ARTICLE** `OPEN ACCESS`

# Why Bonuses Promote Deviant Behaviors: A Self-Determination Theory Perspective

Marylène Gagné[1] | Florence Jauvin[2] | Jacques Forest[2] | Patrick Coulombe[2] | Anja Olafsen[3]

[1]Curtin University & University of South-Eastern, Hønefoss, Norway | [2]Université du Québec à Montréal, Montreal, Canada | [3]University of South-Eastern, Hønefoss, Norway

**Correspondence:** Marylène Gagné (marylene.gagne@curtin.edu.au)

**ABSTRACT**

Bonuses are notoriously used to motivate workers. How effective are they at doing so, and might there be unintended consequences? We investigated the effectiveness of bonuses based on game profitability on the motivation of video game developers by examining specific bonus characteristics that align with advice derived from expectancy theory. We also investigated if bonuses encouraged or discouraged moral engagement and corner-cutting behavior through their effects on work motivation as conceptualized through self-determination theory. Company data on bonus characteristics coupled with surveys from 1024 game developers in a video game company indicated that the size of the last received bonus did not influence current work motivation. Uncertain probability of getting the next bonus installment was related to a lack of motivation, while more certain probability was related to higher intrinsic motivation. The probable size of the next bonus was related to lower external regulation and to higher intrinsic motivation, contrary to predictions from most motivation theories. Both probability certainty and bonus size probability were indirectly negatively associated with moral disengagement and corner-cutting behaviors via decreasing amotivation and external regulation. Overall, results show that the bonus system in this company had limited effects on motivation and on discouraging deviant behaviors and point to how such systems can be improved using advice from theory.

## 1 | Introduction

Bonuses are widely used to motivate performance in organizations, with some data showing that over 90% of organizations use them and that their use continues to rise (Gerhart 2017; Lawler 2003; Nyberg et al. 2016; World at Work 2024). Meta-analyses show that they generally have positive effects on performance quantity and dubious effects on performance quality (Jenkins et al. 1998; Kim et al. 2022). The rationale for using bonuses to motivate workers is based on expectancy theory (Vroom 1964) which proposes that effort-to-performance contingency perceptions (i.e., expectancy), performance-to-reward contingency perceptions (i.e., instrumentality), and reward valence are important determinants of work motivation (Van Eerde and Thierry 1996). When examining a bonus system, a good bonus would accordingly be one in which rewards have high value (i.e., size of the monetary amount) and in which incentives are highly contingent on work performance that is controllable by workers. However, no research to date has deconstructed a typical bonus system's characteristics to examine if they align with expectancy theory and how these characteristics influence worker motivation. Understanding this alignment is critical, as it can reveal whether widely used incentive practices actually support—or inadvertently undermine—the motivational mechanisms they are intended to activate.

The first goal of the present research is therefore to evaluate whether a typical bonus system aligns with expectancy theory

principles, and whether it is effective in motivating workers. To assess motivation, we used self-determination theory's (SDT; Ryan and Deci 2017) multidimensional conceptualization to verify the quality of motivation that is promoted (or not) through bonuses. The importance of the quality of motivation has been meta-analytically ascertained (Van den Broeck et al. 2021), showing that being motivated through meaning and enjoyment (i.e., autonomous motivation) yields both better performance and better well-being outcomes. In contrast, being motivated by rewards yields weaker performance effects and adverse well-being outcomes, demonstrating that the promotion of autonomous motivation should be sought when designing a bonus program. The question we pose to guide hypothesis development is therefore whether it is better to align bonus system design to expectancy theory or to SDT.

The second goal of the study is to examine why a typical bonus system might promote deviant behaviors. Multiple reports from research and practice indicate that incentive pay can cause deviant behaviors, such as cheating, cutting corners, and fraud (Bohte and Meier 2000; Burns and Kedia 2006; Frey and Osterloh 2005; Glaeser and Van Quaquebeke 2019; Harris and Bromiley 2007; Hayne 2019; Hegarty and Sims 1978; Honeycutt et al. 2001; Litzky et al. 2006; Newman, Le, et al. 2020; Pfeffer and Sutton 2006). SDT is an adequate motivation theory to explain why rewards may promote deviance because it proposes that the functional significance of rewards, in other words, their effects on feelings of competence (similar to the expectancy component of expectancy theory) and autonomy (at odds with the instrumentality component of expectancy theory), can decrease autonomous motivation. Indeed, contrary to expectancy theory, SDT proposes that contingent rewards can decrease feelings of autonomy and consequently decrease autonomous motivation (Deci et al. 1999). Autonomous motivation has been linked to a decreased propensity to engage in deviant behaviors (Bureau et al. 2018; Michel and Hargis 2017; Orosz et al. 2013; Ozdemir Oz et al. 2016). Consequently, the second goal of the present study was to investigate how the effects of bonus characteristics indirectly influence deviant workplace behaviors through the types of motivation they influence.

By pursuing these goals, the present study contributes not only to theoretical knowledge by integrating expectancy and SDT principles to operationalize bonus characteristics and hypotheses relating to them, but it also provides practical advice on how to build more efficient bonus systems that can optimally influence work motivation and curb deviant behaviors. It provides missing information about how and why a typical bonus system influences motivation through the lens of both expectancy theory and SDT. Results provide some support for both theories, but interestingly, the results do not indicate that one theory is better than the other. Both offer necessary insights to design effective bonus systems. Results therefore provide more detailed guidance on how to design effective bonus systems that promote high-quality motivation and avoid deviant behaviors in the workplace. In a post-pandemic world, where remote and hybrid work arrangements have reshaped employee engagement and oversight, understanding how to design effective and ethical incentive structures is more critical than ever. By identifying the mechanisms through which bonus characteristics impact both motivation and deviance, this research helps organizations refine their compensation strategies to foster ethical productivity in evolving workplaces.

## 1.1 | How Rewards Influence Motivation

SDT (Ryan and Deci 2017) proposes a multidimensional conceptualization of motivation ranging from having no motivation at all (amotivation) to being motivated by rewards (extrinsic motivation by material external regulation), by social approval (extrinsic motivation by social external regulation), by feelings of self-worth (extrinsic motivation by introjected regulation), by personally valuing an activity (extrinsic motivation by identified regulation) and by interest and enjoyment (intrinsic motivation). These types of motivation align along a continuum of degrees of self-determination (Howard et al. 2017, 2020). Meta-analytic evidence demonstrates that more autonomously driven motivation (intrinsic and identified) is associated with better work outcomes, whereas more controlled motivation (external and introjected) is less strongly associated with positive work outcomes and positively associated with some negative outcomes. Finally, lack of motivation is associated with very poor work outcomes (Van den Broeck et al. 2021). Of particular interest, the meta-analysis found only five samples that merged a variety of deviant behaviors (e.g., theft, tardiness, loafing, bullying and incivility); amotivation was positively related, and intrinsic motivation was negatively related, to deviant behaviors. Thus, the question arises as to whether bonuses would reduce amotivation or reduce intrinsic motivation, thereby either alleviating or worsening deviant behaviors.

SDT also proposes that autonomous motivation is developed and nurtured through the support of three basic psychological needs for competence (feeling mastery), autonomy (feeling volitional) and relatedness (feeling connected), with meta-analytic evidence supporting their important role in the workplace context (Slemp et al. 2018, 2021; Van den Broeck et al. 2016). A subcomponent of SDT, *cognitive evaluation theory*, deals specifically with the functional significance of incentives that affect the satisfaction of these needs. Contingent incentives can both increase feelings of competence by providing information on one's competence end decrease feelings of autonomy by controlling a person's behavior (Deci and Ryan 1980). Evidence supports this by showing that performance-contingent rewards have an overall negative effect on intrinsic motivation through their informational and controlling components (Deci et al. 1999; Kuvaas et al. 2020; Thibault Landry et al. 2017).

However, past research has not examined specific characteristics of bonus systems on work motivation (Gagné and Forest 2008). Bonus systems vary widely in terms of reward size, frequency of delivery, and instrumentality, which both behaviorist and expectancy theories advocate for (Skinner 1971; Vroom 1964). Indeed, reinforcement theories qualify a reward as reinforcing if it is highly valued, delivered in a timely manner, and highly contingent on clear behavior. Similarly, expectancy theory proposes that motivation is a function of expecting to perform effectively (akin to competence in SDT), perceiving a contingency between performance and a reward (i.e., instrumentality), and valuing the reward. These three factors have been associated with higher performance (Van Eerde and Thierry 1996), yet

instrumentality is at odds with promoting feelings of autonomy, according to SDT.

Moreover, no research has considered all forms of motivation proposed by SDT to understand the impact of bonuses on outcomes (Gerhart 2017), limiting insights into the nuanced motivational processes bonuses may activate or undermine. Most research has examined effects on intrinsic motivation only (Deci et al. 1999), on intrinsic and extrinsic motivation (e.g., Kuvaas et al. 2016, 2020) or on autonomous and controlled motivation aggregates (e.g., Thibault Landry et al. 2017), which might obscure important differential effects. Consequently, our study focused on core bonus characteristics that are advocated for by reinforcement and expectancy theories: incentives should be big enough to be valued (size), given frequently (timeliness), and be highly probable if performance criteria are met (instrumental). We assessed the effects of each of these bonus characteristics on each type of work motivation, from amotivation to intrinsic, providing a more detailed account of how these specific features of bonuses shape motivation. We also extend prior work by investigating how these bonus characteristics relate to deviant behaviors, which has typically been examined only in relation to the mere presence or absence of incentive (e.g., Gläser et al. 2017), and by assessing how distinct forms of motivation influence engagement in deviant behaviors, offering insights into potential unintended consequences of bonus use.

## 1.2 | Bonus Characteristics

Building on this theoretical foundation, we deconstructed the bonus system of an organization into the key components of expectancy theory (Vroom 1964). First, the monetary amount of a bonus (size) should determine its value, an important component of expectancy theory. Highly valued rewards should therefore increase motivation, particularly material external regulation. Bonus size, however, could "crowd-out" autonomous motivation by making the reward highly salient and therefore more controlling, according to SDT (Deci et al. 1999). Operant learning principles (Skinner 1971) propose that past rewards reinforce the probability that behavior will be repeated in the future, while expectancy theory (Vroom 1964) proposes that expectations of future rewards can be created verbally through communication about a bonus system. Accordingly, we operationalized bonus size with variables representing the last obtained bonus and future expected bonus.

**Hypothesis 1.** *Past bonus amount is* (*a*) *negatively related to amotivation*, (*b*) *positively associated with external regulation material, and* (*c*) *negatively associated with autonomous types of motivation.*[1]

**Hypothesis 2.** *Future bonus size is* (*a*) *negatively related to amotivation*, (*b*) *positively associated with external regulation material, and* (*c*) *negatively associated with autonomous types of motivation.*

Second, the strength of the contingency between performance and the bonus (instrumentality) should influence feelings of competence by informing employees of their level of efficiency and impact (Vroom 1964). SDT similarly proposes that bonuses

contingent on performance can signal one's competence because a bonus informs about work effectiveness. In many organizations, effectiveness is determined by profits; sharing profits through a bonus system should signal individual and team contributions to a company's success. What needs to be taken into consideration is whether employees control company success and therefore their bonus, and we argue that in typical bonus systems, control is low. In the current study, we consider expectancy and instrumentality together, taking into account the amount of controllability of performance coupled with the probability of getting a bonus (details provided in the methods). This was instrumental for correctly interpreting results.

SDT also argues that contingent rewards can decrease employees' feelings of volition; the bonus dictates what they need to focus on sometimes at the expense of other work activities or tasks that are also important to them or to others in the company, eroding the meaning and enjoyment they derive from their work (Gagné and Forest 2008).

**Hypothesis 3.** *Future bonus probability is* (*a*) *negatively related to amotivation*, (*b*) *positively associated with external regulation material, and* (*c*) *negatively associated with autonomous types of motivation.*

Finally, operant learning theory (Skinner 1971) proposes that the timeliness of a reward strengthens its contingency to behavior; therefore, frequent payouts of bonuses is advocated to strengthen the instrumentality of a reward, something we also examined. Meanwhile, SDT proposes that frequent rewards could be both more informational (providing more and more frequent feedback) and more controlling (because more frequently salient), thereby possibly creating a trade-off for the promotion of autonomous motivation (Deci et al. 1999).

**Hypothesis 4.** *Future bonus frequency is* (*a*) *negatively related to amotivation*, (*b*) *positively associated with external regulation material, and* (*c*) *negatively associated with autonomous types of motivation.*

## 1.3 | Deviant Behaviors

Past theorizing about why incentives may lead to deviant behaviors includes the *cost–benefit model* whereby actors see the costs of engaging in deviant behaviors to be lower than the benefits they obtain from them, the *goal specificity model* whereby goals narrow actors' attention to things that lead to goal attainment, the *market-pricing model* whereby actors perceive work interactions purely in instrumental or exchange terms which create displacement of responsibility, the *money priming* and *inequality effects* whereby money primes and incentives increase perceived psychological distance (i.e., dehumanization) between actors and others, and the *crowding-out model* whereby incentives reduce intrinsic motivation (Park et al. 2022; Vohs et al. 2006). Besides the fact that there are individual differences in integrity and moral development, incentives can infuse workplace culture, giving moral license to engage in unethical behaviors, and workers' self-regulation of moral behaviors can break down when resources are depleted or perceptions of justice are challenged (Newman, Fast, and Harmon 2020; Perkins et al. 2024).

We focused on two types of deviant behaviors that are likely to be affected by bonuses and work motivation: moral disengagement and corner-cutting behaviors. Moral disengagement is defined as a cognitive restructuring that allows individuals to disassociate with their internal moral standards and behave unethically without feeling distress (Newman, Le, et al. 2020, 535) and is associated with deviance at work (Ogunfowora et al. 2022). Rationalizing can involve perceptions of justice restoration, minimizing the consequences of one's actions, downward social comparisons, displacement of responsibility (e.g., viewing one's behavior as dictated by the instance in control), and victim dehumanization (Bandura 1986; Newman, Fast, and Harmon 2020). We propose that the process of morally disengaging is influenced by the type of work motivation employees develop, which can be influenced by bonus systems.

We found little research examining links between motivation and moral disengagement in the workplace. However, studies of athletes found that controlled motivation was positively related to moral disengagement and attitudes toward doping (Hodge et al. 2013; Hodge and Lonsdale 2011), and a study of primary school children found that moral disengagement was negatively related to their autonomous motivation to defend bullying victims and positively related to extrinsic motivation and amotivation to defend (Thornberg et al. 2023). One study found that entrepreneurs' motivation to make money was positively linked to moral disengagement and the propensity to engage in unethical behaviors (Baron et al. 2015), while another study did not find that money motives were related to moral disengagement and unethical behavior in idea generation competitions (Scheiner et al. 2018). The latter study also found that intrinsic motivation for participating in the competition was negatively related to moral disengagement and unethical behavior.

We also found no research examining links between need satisfaction and moral disengagement in the workplace, but it has been linked to some deviant behaviors. Need frustration causes cheating on academic tasks by decreasing autonomous motivation (Kanat-Maymon et al. 2015). Job autonomy has been shown to curb moral disengagement (Bharadwaj 2021), while priming "deterministic thinking" (versus free will) increased cheating (Vohs and Schooler 2008). Finally, we found some experimental research showing that incentives could increase the likelihood of engaging in deviant behaviors (e.g., Nagel et al. 2021).

Experimental research has shown that incentives decrease people's sense of moral obligation and propensity to engage in deviant behavior (Beaudoin et al. 2015; Kunda and Schwartz 1983). Huang et al. (2017) found that reward uncertainty can cause increases in deviant behaviors. Therefore, we propose that weak bonus probabilities could increase moral disengagement. Autonomy is also important to feelings of responsibility and therefore hampering feelings of autonomy by using highly instrumental bonuses may lead to displacement of responsibility and the "killing of conscience" (Kish-Gephart et al. 2014; Stout et al. 2014).

Corner-cutting behaviors are defined as "skipping one or multiple steps considered important to a task, for the purpose of completing the task sooner by taking shortcuts [...] and bending the rules" (Jonason and O'Connor 2017). Most research on corner-cutting has focused on individual difference predictors such as the dark triad and dispositional greed (Enwereuzor 2024; Jonason and O'Connor 2017). We found no research looking at motivational or need-based predictors, and even incentives have rarely been examined. Healthcare incentive structures have been shown to relate to corner-cutting behavior that leads to greater patient complications (Haile and Stein 2002), while contingent pay has been related to cutting corners in heterogeneous samples of supervisors and employees (Mawritz et al. 2024). Research on cheating behaviors (which could arguably include corner cutting behaviors) outside of the work domain has shown that frustrating autonomy and lowering autonomous motivation is related to cheating (Kanat-Maymon et al. 2015; Lee et al. 2023).

Considering expectancy theory and SDT propositions and past research which provides incomplete insights into how bonuses influence deviant behaviors through motivation, we propose to test the following hypotheses.

**Hypothesis 5.** *Last bonus amount is indirectly positively related to (*a*) moral disengagement and (*b*) corner cutting behaviors via amotivation, external regulation material and autonomous types of motivation.*

**Hypothesis 6.** *Future bonus probability is indirectly positively related to (*a*) moral disengagement and (*b*) corner cutting behaviors via amotivation, external regulation material and autonomous types of motivation.*

**Hypothesis 7.** *Future bonus size is indirectly positively related to (*a*) moral disengagement and (*b*) corner cutting behaviors via amotivation, external regulation material and autonomous types of motivation.*

**Hypothesis 8.** *Future bonus frequency is indirectly positively related to (*a*) moral disengagement and (*b*) corner cutting behaviors via amotivation, external regulation material and autonomous types of motivation.*

## 2 | Materials and Methods

### 2.1 | Participants and Procedure

Game developers from Canada, working for an international video game company, voluntarily participated in a survey following ethical review and approval. 1024 production employees (81.84% male) returned their surveys[2]; they were not compensated for completing the survey. On average, participants were 36.31 years old (SD = 7.65) and had 7.08 years (SD = 5.88) of experience in their role. Their job essentially consists of producing new video games ($n = 736$) or updates and fixes to existing video games ($n = 249$).[3] Employees' bonuses were determined differently based on whether they worked on a new game or a live game (see measures and Table 1 for details). Information pertaining to bonus characteristics was obtained from the human resources department and based on information current at the time of survey

**TABLE 1** | Mean, SD, and range of the bonus variables by type of game (new vs. live).

| | Last bonus amount | Future bonus size | Future bonus probability | Future bonus frequency |
|---|---|---|---|---|
| **New game ($n = 736$)** | | | | |
| Mean | $2,448.75 | 25% | 2.02 | 1.91 |
| SD | $6,343.61 | 6% | 0.86 | 0.28 |
| Range | $0–$50,000 | 10%–40% | 1–3 | 1–2 |
| **Live game ($n = 249$)** | | | | |
| Mean | $14,888.96 | 25% | 3 | 3 |
| SD | $11,781.96 | 5% | 0 | 0 |
| Range | $0–$50,000 | 10%–40% | 3 | 3 |

administration. The survey was in French, and measures were back translated when French versions were not available. The human resources department provided the research team with a list of all the employees' email addresses, which was used to send the survey to participants. The survey was run 2 months after the last bonus payout. Once data collection was over, the process of hashing was used to pair the survey and human resources data for each participant. Specifically, the email address of each participant was turned into a string of characters composed of letters, numbers, and symbols (also called "hash") to protect sensitive data and ensure confidentiality. The hash of each participant was found in both the survey data and the human resources data and was consequently used to pair both datasets together.

## 2.2 | Measures

### 2.2.1 | Bonus Characteristics

Information about individual bonuses was obtained from the human resources department of the company. The goal of the bonus system was to reward creativity and teamwork, which were thought to lead to game success on the market (i.e., profits). The bonus was distributed yearly to individuals within teams (i.e., working on a particular game) calculated as a function of reaching the annual earnings goal for the game (5% of profits distributed between team members), weighted by individual performance appraisals (between 0% and 120% weight) and job level (percentage of base salary weight varying from 10% for lower levels to 40% for higher levels). Employees either worked on a game in development or a live game; employees working on a game in development obtained a bonus at the end of the year during which the game is launched on the market, while employees working on a live game obtained a bonus each year it is on the market. To summarize, the dependencies involved in getting a bonus and the size of the bonus included factors that were more or less under the control of individual workers: (1) high control over one's individual performance; (2) low to medium control over team performance (i.e., contributing to designing a good game that will sell well, controlling the behavior of team members, controlling company-level design decisions); (3) low control of

when the game goes to market (controlling team-level pace of work, controlling other processes leading to launch such as production, distribution and marketing); (4) low control over profitability (whether it is a good and popular game, competition, economy, quality of marketing). These factors can influence the level of instrumentality of the bonus system, and as is reported in a footnote, perceived instrumentality levels were quite low overall.

The HR department provided information on the following characteristics of the bonus system for each individual employee. *Last bonus amount* was the monetary amount of the bonus obtained in the last installment, which was based on game performance on the market over the past year. It serves as a good proxy for reward value. Bonus amounts were available for 530 employees (52% of respondents) and varied from $20 to $50,000. Because data were not normally distributed, this variable was log-transformed. *Future bonus probability* was determined based on which game an employee worked on and how profitable it was in the past (if live) and is a good proxy for instrumentality of the reward. This was coded by HR as being 1 = unknown (i.e., do not know yet whether the game will be successful and make a profit and when the game will go on the market), 2 = medium (i.e., the game is about to be launched or was launched but it is unknown if it will be profitable) or 3 = high probability (i.e., the game is live or very close to being and there is a high profitability certainty).[4] *Future bonus frequency* was determined based on how often bonuses were distributed to employees and varied based on the type of game worked on. This variable provides another good proxy for instrumentality, tackling the aspect of the timeliness of rewards. This was coded by HR as being 1 = unknown (i.e., do not know when the game will go on the market), 2 = after many years (i.e., know that the game will only go to market after more years of work) or 3 = yearly (i.e., the game is on the market). *Future bonus size* was based on the job level calculated as a percentage of base pay varying between 10% and 40%. It is another good proxy for reward value.

### 2.2.2 | Work Motivation

The validated French version of the Multidimensional work motivation scale (Gagné et al. 2015) was used. Items are answers
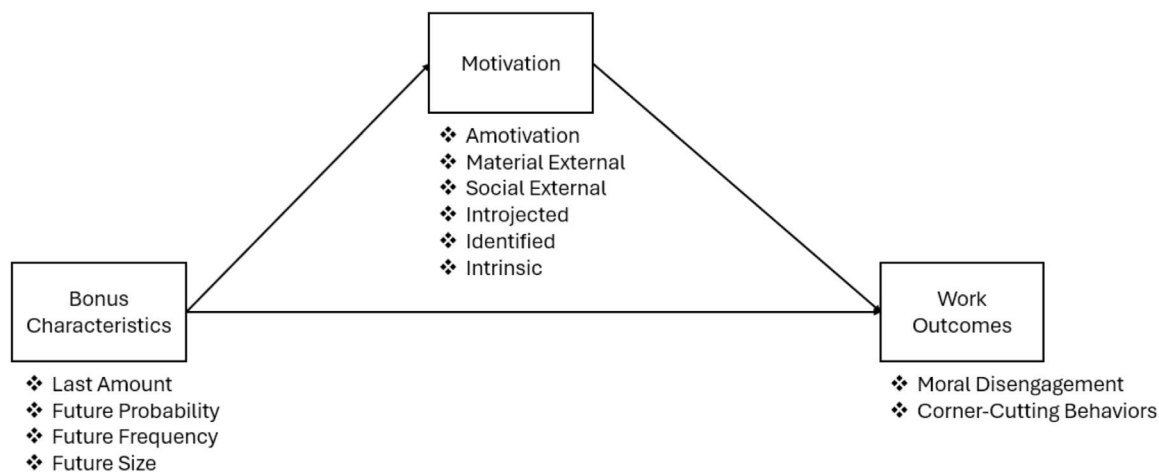
**FIGURE 1** | Conceptual depiction of the parallel mediator model of the effect of bonus characteristics on work outcomes directly and indirectly through motivation. *Note.* All possible direct and indirect paths are estimated simultaneously, yielding a saturated parallel mediator model. Results following estimation are shown in Figure 2.

to the question "why do you put effort into your job?" to assess amotivation (3 items, $\alpha = 0.80$), external regulation material (3 items, $\alpha = 0.52$), external regulation social (3 items, $\alpha = 0.78$), introjected regulation (2 items, $\alpha = 0.73$), identified regulation (3 items, $\alpha = 0.70$), and intrinsic motivation (3 items, $\alpha = 0.89$), using a 1(not at all) to 7(completely) point scale. Two items from the original introjection subscale did not load properly on their factor in a CFA and had high cross-loadings with other subscales; as in the original validation and a more recent re-validation study (Gagné et al. 2015; Trépanier et al. 2023), the approach and avoidance items of the introjection subscale sometimes load on separate subscales. The approach items were consequently omitted in the present model.

### 2.2.3 | Moral Disengagement

Moral disengagement was assessed using 6 items adapted from the Propensity to Morally Disengage scale (Moore et al. 2012). The scale measured specific features of moral disengagement that are common in the workplace, such as moral justification ("It is okay to lie to make sure your work team success"), distort consequences ("Taking personal credit for ideas that were not your own is no big deal"), and advantageous comparisons ("Considering the ways people grossly misrepresent themselves, it's hardly a sin to inflate your own credentials a bit"). Items are measured on a 7-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree ($\alpha = 0.70$).

### 2.2.4 | Corner Cutting Behaviors

Corner-cutting behaviors were assessed using 5 items adapted from Jonason and O'Connor's (2017) questionnaire (e.g., "If skipping a task will save me time at work, I will do it" or "I do not do every little part of my work"). Items are measured on a 5-point Likert scale ranging from 1 = disagree strongly to 5 = agree strongly ($\alpha = 0.74$).

### 2.3 | Analytical Strategy

All analyses were conducted in R v4.4.2 (R Core Team 2024) and JASP v0.19.2 (JASP Team 2024). A path analysis with subscale scores for each variable (generated by computing averages) was estimated. Path coefficients were estimated using the library lavaan v0.6-18 (Rosseel 2012) with full-information maximum likelihood estimation. Using full-information maximum likelihood estimation, we retained every survey respondent for the full analysis, but only employees with a previous bonus amount contribute to the estimate of the effect of bonus amount on motivation variables. In this model (see Figure 1), bonus variables have a direct effect on different types of motivations, which in turn have an effect on work outcomes. Direct effects of bonus variables on work outcomes were estimated, making the model saturated (all possible paths are estimated). Indirect effects from bonus variables to work outcomes through motivation are calculated as the product of two paths (Hayes 2022; MacKinnon et al. 2002): (1) from bonus variables to motivation, and (2) from motivation to work outcomes.

## 3 | Results

Descriptive statistics for the whole sample are reported in Table 2. Employees working on new games ($n = 736$) obtained, on average, lower bonuses in the last installment ($M = \$2,449$, range \$0 to \$50,000) and had lower future bonus probability ($M = 2.02$) and frequency ($M = 1.91$) than employees working on live games ($n = 249$, $M = \$14,889$, range \$0–\$50,000, $M = 3.00$, $M = 3.00$) as it was unknown how well the game would do on the market. Future bonus size did not differ between the groups. Zero-order correlations between all study variables are reported in Table 3. Bonus characteristics tended to be positively correlated to identified and intrinsic forms of motivation, though these correlations were small. Only future bonus size was correlated with external regulation material and in the opposite direction (negative) to what would be expected. This

**TABLE 2** | Descriptive statistics for all study variables.

| Variable | Valid | Missing | Median | Mean | SD | Minimum | Maximum |
|---|---|---|---|---|---|---|---|
| Bonus | | | | | | | |
|   Amount | 530 | 494 | 5535.000 | 10521.396 | 11158.347 | 20.00 | 50000.00 |
|   Amount (log) | 530 | 494 | 8.619 | 8.544 | 1.379 | 2.996 | 10.820 |
|   Probability | 1015 | 9 | 3.000 | 2.224 | 0.866 | 1.000 | 3.000 |
|   Frequency | 1024 | 0 | 2.000 | 2.143 | 0.569 | 1.000 | 3.000 |
|   Target | 1024 | 0 | 0.260 | 0.252 | 0.060 | 0.100 | 0.400 |
| Motivation | | | | | | | |
|   Amotivation | 1022 | 2 | 1.333 | 1.658 | 0.912 | 1.000 | 6.333 |
|   Material external | 1022 | 2 | 4.000 | 3.801 | 1.089 | 1.000 | 7.000 |
|   Social external | 1022 | 2 | 3.667 | 3.458 | 1.250 | 1.000 | 7.000 |
|   Introjected | 1022 | 2 | 4.000 | 3.697 | 1.439 | 1.000 | 7.000 |
|   Identified | 1022 | 2 | 4.667 | 4.674 | 1.024 | 1.000 | 7.000 |
|   Intrinsic | 1022 | 2 | 5.333 | 5.128 | 1.040 | 1.000 | 7.000 |
| Work outcomes | | | | | | | |
|   Moral disengagement | 1020 | 4 | 2.167 | 2.185 | 0.807 | 1.000 | 6.000 |
|   Corner-cutting behaviors | 1019 | 5 | 3.000 | 3.042 | 1.045 | 1.000 | 7.000 |

variable was also the only bonus characteristic correlated to the outcomes ($p < 0.001$), negatively with moral disengagement and positively with corner-cutting behaviors. Amotivation was the motivation variable most positively associated with the outcomes, while autonomous forms of motivation were most negatively associated with them.

Results from the path analysis (see Figure 2 and Table 4) reveal that the model accounted for only 8% of the variance in moral disengagement and 12% of corner-cutting behaviors. Bonus characteristics also did not account for much variance in motivation (amotivation 1%, material external regulation 2%, social external regulation 1%, introjected regulation 1%, identified regulation 1%, and intrinsic motivation 3%). Past bonus amounts and future bonus frequency were not related to any type of motivation (H1 and H4 not supported), while future bonus probability was negatively related to amotivation (H3a supported) and positively related to intrinsic motivation, contrary to predictions (H3b,c not supported). Finally, future bonus size was negatively related to external regulation material and positively related to intrinsic motivation, contrary to predictions (H2 not supported). In line with SDT predictions, amotivation and external regulation social were positively related to moral disengagement, while identified regulation was negatively related to it. Amotivation, external regulation material, and introjected regulation were positively related to corner-cutting behaviors, while identified regulation was negatively related to it. However, intrinsic motivation was not related to either deviance variable.

Figure 2 and Table 4 show the direct and indirect effects of bonus variables on work outcomes through work motivation (solid lines). Future bonus probability had a significant indirect effect on both work outcomes through its effect on amotivation: As bonus probability increased, amotivation decreased, and higher levels of amotivation were related to higher levels of moral disengagement ($\beta$indirect$ = -0.02$, $p = 0.023$) and corner-cutting behaviors ($\beta$indirect$ = -0.02$, $p = 0.015$). Bonus probability did not have a significant direct effect on either work outcome (see Table 4), such that the effect that bonus probability has on moral disengagement and corner-cutting behaviors is entirely due to its negative effect on amotivation (full mediation). In summary, the overall effect of probability on deviance was negative, failing to support H6. Moreover, bonus probability was positively related to intrinsic motivation, but this type of motivation was not related to the deviance outcomes, again failing to support H6.

Future bonus size also had a significant indirect effect on corner-cutting behaviors: As bonus size increased, material external regulation decreased, and this type of motivation was positively associated with corner-cutting behaviors ($\beta$indirect$ = -0.01$, $p = 0.018$). However, bonus size had a residual direct positive effect on both work outcomes. In summary, the overall effect of future bonus size on corner-cutting behavior was partially negative through material external regulation and partially positive when not considering motivation, thus partially supporting H7b. Unexpectedly, future bonus size was negatively related to moral disengagement, and this was not mediated by any type of motivation, failing to support H7a. It was also positively related to intrinsic motivation, but this type of motivation was not related to deviance variables. Finally, H5 and H8 were not supported as neither last bonus size nor future bonus frequency were related to the outcomes either directly or indirectly through motivation.

**TABLE 3** | Correlations between bonus, motivation, and work outcome variables.

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Bonus amount | — | | | | | | | | | | | |
| 2. Bonus amount (log) | 0.842*** | — | | | | | | | | | | |
| 3. Bonus probability | 0.409*** | 0.450*** | — | | | | | | | | | |
| 4. Bonus frequency | 0.473*** | 0.510*** | 0.637*** | — | | | | | | | | |
| 5. Bonus target | 0.314*** | 0.234*** | −0.069* | −0.021 | — | | | | | | | |
| 6. Amotivation | 0.008 | −0.025 | −0.065* | 0.009 | −0.007 | — | | | | | | |
| 7. Material external | −0.020 | −0.027 | 0.005 | 0.028 | −0.138*** | 0.068* | — | | | | | |
| 8. Social external | −0.041 | −0.040 | 0.049 | 0.060 | −0.069* | 0.051 | 0.342*** | — | | | | |
| 9. Introjected | 0.048 | 0.036 | 0.068* | 0.091** | −0.018 | 0.045 | 0.224*** | 0.476*** | — | | | |
| 10. Identified | 0.116** | 0.114** | 0.047 | 0.009 | 0.068* | −0.266*** | 0.088** | 0.208*** | 0.214*** | — | | |
| 11. Intrinsic | 0.171*** | 0.168*** | 0.111*** | 0.069* | 0.123*** | −0.270*** | −0.055 | 0.042 | 0.034 | 0.527*** | — | |
| 12. Moral dis. | 0.002 | 0.032 | 0.011 | 0.060 | −0.104*** | 0.181*** | 0.102** | 0.146*** | 0.041 | −0.135*** | −0.107*** | — |
| 13. CC behaviors | 0.021 | −0.014 | 0.031 | 0.074* | 0.143*** | 0.233*** | 0.084** | 0.025 | 0.059 | −0.183*** | −0.091** | 0.251*** |

*Note:* $N = 1024$ production employees.

Abbreviations: CC behaviors, corner cutting behaviors; Moral dis., moral disengagement.

\*\*\**p* < 0.001.
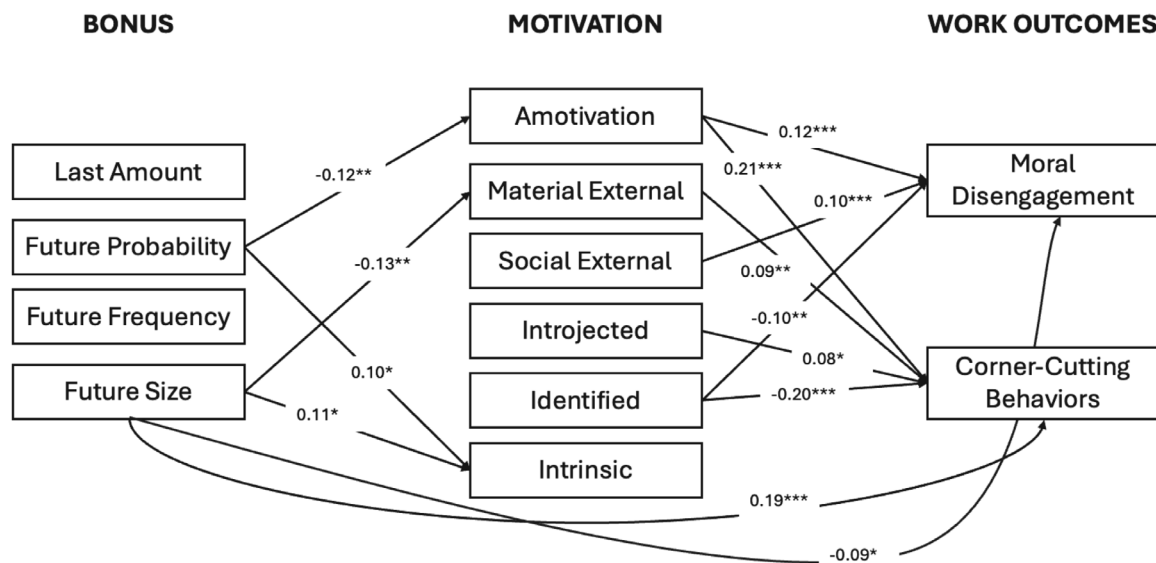
\*\**p* < 0.01.

\**p* < 0.05.

**FIGURE 2** | Results of the parallel mediator model of the effect of bonus characteristics on work outcomes directly and indirectly through motivation. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. No line means there is no significant link.

## 4 | Discussion

A field study examined how a bonus system rewarding creative teamwork to create or update video games relates to morally disengaging and cutting corners, and how this can be explained by the type of motivation bonuses trigger. Bonus characteristics were the focus of inquiry to innovate beyond examining the simple presence versus absence of rewards on motivation and deviance, which has been the norm in this field of research to date. Based on expectancy theory principles, the study took into consideration bonus characteristics because bonus systems can vary significantly in the size of rewards, the criteria used to deliver them, the probability of getting them, and their frequency of administration. In this sample of game developers, there was a wide range in the size of past bonuses, in the probability of getting a future bonus, and their frequency depending on whether employees worked on a new or a live game. Working on a new game made bonuses much less likely and frequent and consequently lowered the average bonus size in this group of employees, though their size range was the same as the range for employees working on established games.

Surprisingly, we found that most bonus characteristics were not significantly related to work motivation of game developers and bonus characteristics only accounted for 1%–3% of the variance in motivation. We cannot attribute this to the bonus system being inconsequential as the size of the bonuses could be quite substantial. Nonetheless, the size of past bonuses did not affect current motivation, but future bonus size did: it was related to lower levels of material external regulation and positively related to intrinsic motivation. At first glance, this appears to support expectancy theory more than SDT which would predict the opposite pattern. One explanation could be that expected future bonus sizes reflected team success: providing information about the competence of the team in creating a successful game. An alternate explanation for this finding, however, is that bonus size was dependent on job level, and those in higher-level jobs could possibly have better work design (e.g., more job autonomy, more stimulating work) that has been

associated with higher intrinsic motivation (Gagné et al. 1997; MacLeod and Parent 1999; Schumann et al. 1994). Bonus size is often associated with job levels in organizations, with people in higher hierarchical levels typically having a greater proportion of their income contingent on their performance, the performance of their unit, or organizational performance (Sockin and Sockin 2019). Perhaps future research examining the effects of bonuses on motivation and outcomes should control for work design. Looking back at studies included in meta-analyses on the effects of bonuses on performance, work design is not taken into consideration (Jenkins et al. 1998; Kim et al. 2022).

Unknown or low probability of getting a future bonus demotivated people who worked on new games, which led these developers to morally disengage and engage in corner-cutting behaviors, perhaps in the hope of accelerating game launch. A higher probability decreased the developers′ propensity to engage in deviant behaviors, and it was also associated with greater intrinsic motivation. This finding supports expectancy theory more than SDT. Three potential explanations could be explored in future research. First, the functional significance of the probability of getting a bonus should be assessed; is a higher probability more informational than controlling? Second, a clear and strong probability may indicate a clearer psychological contract that is less likely to be perceived as breached (Rousseau 1995). Third, is the perceived injustice of being less likely to get a bonus simply a function of being assigned to work on a new game rather than on a live game? Finally, future bonus frequency was not related to motivation or outcomes, contrary to the principle of timeliness dictated by reinforcement theories (Skinner 1971).

Overall, we did not find very strong support for either the expectancy theory or SDT predictions regarding the effects of performance-based pay on work motivation. Despite the developers receiving substantial and impactful bonuses based on the performance of the game they worked on, which the company used to motivate future performance and increase its profits, the work motivation of the developers was not influenced very much

**TABLE 4** | Standardized coefficients from the path analysis.

| IV | MV | DV | a-path (IV-MV) | b-path (MV-DV) | c-path (total effect) | c'-path (direct effect) | ab-path (indirect effect) |
|---|---|---|---|---|---|---|---|
| Last bonus amount | Amotivation | Moral dis. | −0.01 | 0.12*** | 0.04 | 0.04 | −0.01 |
| Future bonus probability | Amotivation | Moral dis. | −0.12** | 0.12*** | −0.06 | −0.04 | −0.02* |
| Future bonus frequency | Amotivation | Moral dis. | 0.09 | 0.12*** | 0.06 | 0.05 | 0.01 |
| Future bonus size | Amotivation | Moral dis. | −0.01 | 0.12*** | −0.09** | −0.09* | 0.00 |
| Last bonus amount | Material ext. | Moral dis. | −0.02 | 0.03 | 0.04 | 0.04 | −0.01 |
| Future bonus probability | Material ext. | Moral dis. | −0.03 | 0.03 | −0.04 | −0.04 | 0.00 |
| Future bonus frequency | Material ext. | Moral dis. | 0.05 | 0.03 | 0.05 | 0.05 | 0.00 |
| Future bonus size | Material ext. | Moral dis. | −0.13*** | 0.03 | −0.10** | −0.09* | −0.01 |
| Last bonus amount | Social ext. | Moral dis. | −0.08 | 0.10*** | 0.03 | 0.04 | −0.01 |
| Future bonus probability | Social ext. | Moral dis. | 0.03 | 0.10*** | −0.03 | −0.04 | 0.01 |
| Future bonus frequency | Social ext. | Moral dis. | 0.08 | 0.10*** | 0.06 | 0.05 | 0.01 |
| Future bonus size | Social ext. | Moral dis. | −0.04 | 0.10*** | −0.10** | −0.09* | −0.01 |
| Last bonus amount | Introjected | Moral dis. | 0.00 | −0.02 | 0.04 | 0.04 | 0.00 |
| Future bonus probability | Introjected | Moral dis. | 0.05 | −0.02 | −0.04 | −0.04 | 0.00 |
| Future bonus frequency | Introjected | Moral dis. | 0.08 | −0.02 | 0.05 | 0.05 | 0.00 |
| Future bonus size | Introjected | Moral dis. | 0.03 | −0.02 | −0.09** | −0.09* | 0.00 |
| Last bonus amount | Identified | Moral dis. | 0.07 | −0.10** | 0.03 | 0.04 | −0.01 |
| Future bonus probability | Identified | Moral dis. | 0.06 | −0.10** | −0.05 | −0.04 | −0.01 |
| Future bonus frequency | Identified | Moral dis. | −0.06 | −0.10** | 0.06 | 0.05 | 0.01 |
| Future bonus size | Identified | Moral dis. | 0.05 | −0.10** | −0.10** | −0.09* | −0.01 |
| Last bonus amount | Intrinsic | Moral dis. | 0.08 | 0.00 | 0.04 | 0.04 | 0.00 |

(Continues)

**TABLE 4** | (Continued)

| IV | MV | DV | a-path (IV-MV) | b-path (MV-DV) | c-path (total effect) | c'-path (direct effect) | ab-path (indirect effect) |
|---|---|---|---|---|---|---|---|
| Future bonus probability | Intrinsic | Moral dis. | 0.10* | 0.00 | −0.04 | −0.04 | 0.00 |
| Future bonus frequency | Intrinsic | Moral dis. | −0.04 | 0.00 | 0.05 | 0.05 | 0.00 |
| Future bonus size | Intrinsic | Moral dis. | 0.11** | 0.00 | −0.09** | −0.09* | 0.00 |
| Last bonus amount | Amotivation | Corner Cutting | −0.01 | 0.21*** | −0.06 | −0.06 | 0.00 |
| Future bonus probability | Amotivation | Corner Cutting | −0.12** | 0.21*** | 0.02 | 0.04 | −0.02* |
| Future bonus frequency | Amotivation | Corner Cutting | 0.09 | 0.21*** | 0.09* | 0.07 | 0.02 |
| Future bonus size | Amotivation | Corner Cutting | −0.01 | 0.21*** | 0.19*** | 0.19*** | 0.00 |
| Last bonus amount | Material ext. | Corner Cutting | −0.02 | 0.09** | −0.07 | −0.06 | 0.00 |
| Future bonus probability | Material ext. | Corner Cutting | −0.03 | 0.09** | 0.04 | 0.04 | 0.00 |
| Future bonus frequency | Material ext. | Corner Cutting | 0.05 | 0.09** | 0.08 | 0.07 | 0.01 |
| Future bonus size | Material ext. | Corner Cutting | −0.13*** | 0.09** | 0.18*** | 0.19*** | −0.01* |
| Last bonus amount | Social ext. | Corner Cutting | −0.08 | −0.01 | −0.06 | −0.06 | 0.00 |
| Future bonus probability | Social ext. | Corner Cutting | 0.03 | −0.01 | 0.04 | 0.04 | 0.00 |
| Future bonus frequency | Social ext. | Corner Cutting | 0.08 | −0.01 | 0.08 | 0.07 | 0.00 |
| Future bonus size | Social ext. | Corner Cutting | −0.04 | −0.01 | 0.19*** | 0.19*** | 0.00 |
| Last bonus amount | Introjected | Corner Cutting | 0.00 | 0.08* | −0.06 | −0.06 | 0.00 |
| Future bonus probability | Introjected | Corner Cutting | 0.05 | 0.08* | 0.04 | 0.04 | 0.00 |
| Future bonus frequency | Introjected | Corner Cutting | 0.08 | 0.08* | 0.08 | 0.07 | 0.01 |
| Future bonus size | Introjected | Corner Cutting | 0.03 | 0.08* | 0.19*** | 0.19*** | 0.00 |
| Last bonus amount | Identified | Corner Cutting | 0.07 | −0.20*** | −0.08 | −0.06 | −0.01 |
| Future bonus probability | Identified | Corner Cutting | 0.06 | −0.20*** | 0.03 | 0.04 | −0.01 |

(Continues)

**TABLE 4** | (Continued)

| IV | MV | DV | a-path (IV-MV) | b-path (MV-DV) | c-path (total effect) | c'-path (direct effect) | ab-path (indirect effect) |
|---|---|---|---|---|---|---|---|
| Future bonus frequency | Identified | Corner Cutting | −0.06 | −0.20*** | 0.09* | 0.07 | 0.01 |
| Future bonus size | Identified | Corner Cutting | 0.05 | −0.20*** | 0.18*** | 0.19*** | −0.01 |
| Last bonus amount | Intrinsic | Corner Cutting | 0.08 | 0.02 | −0.06 | −0.06 | 0.00 |
| Future bonus probability | Intrinsic | Corner Cutting | 0.10* | 0.02 | 0.04 | 0.04 | 0.00 |
| Future bonus frequency | Intrinsic | Corner Cutting | −0.04 | 0.02 | 0.07 | 0.07 | 0.00 |
| Future bonus size | Intrinsic | Corner Cutting | 0.11** | 0.02 | 0.19*** | 0.19*** | 0.00 |

*$p < 0.05$.
**$p < 0.01$.
***$p < 0.001$.

by the bonus system. It only weakly decreased their amotivation and, surprisingly, their material external regulation, and it also increased their intrinsic motivation. These small effects would be unlikely to significantly impact performance (Van den Broeck et al. 2021). Bonus characteristics did not have a large impact on levels of deviant behaviors. Some small direct and indirect effects were found, with mixed support for SDT's "corruptive" predictions. The propensity to morally disengage was reduced with higher future probabilities of obtaining a bonus and with future bonus size, contrary to SDT predictions. Corner-cutting behaviors were decreased by higher probabilities but increased by future bonus size; thus, the expected size of future bonuses seems to increase the risk that people will take short cuts to get them, especially if they are uncertain. The message here is clear: Bonuses may not have strong effects on deviant behavior but when they do, the instrumentality of the bonus, in other words its certainty, must be clear.

## 4.1 | Theoretical and Practical Implications

The study provides much needed information about the field of compensation's reliance on motivation theories to justify the use of contingent rewards to motivate workers. The literature frequently uses expectancy theory to provide logical arguments as to why contingent rewards should be used as part of remuneration systems (Gerhart and Fang 2015). Results from the present study, which specifically look at bonus characteristics aligned to expectancy theory, indicate that typical bonus systems may not be as powerful as portrayed. On the other hand, results also did not support SDT's assertion that rewards decrease intrinsic motivation in real work settings. It could be because of the functional significance of the bonuses whereby more instrumental bonuses provide more information about one's effectiveness at work, something that could be ascertained in future research. The assertion that instrumentality, as assessed through probability, is more controlling does not seem to be supported in the current

study. This could be because developers did not have control over some of the performance criteria, which may have washed out any aspect deemed to "control" their work behaviors, something that has been observed in typical bonus systems (Beck et al. 2014; Gerhart and Fang 2015; Gerhart et al. 2009), and reflected in the low instrumentality perceptions found in the current study. It has indeed been argued that behavior-based rewards have more detrimental effects on feelings of autonomy than results-based rewards (Anderson and Oliver 1987). Like typical bonus systems (Beck et al. 2014), the bonus system in the current study was closer to a results-based system. Future research should explore how behavior-based bonus systems may influence functional significance in terms of information and control.

It is worth noting that the bonus system in the participating company is highly typical of bonus systems: it uses a profit-sharing approach based on game performance weighted by individual contributions based on performance and job level. The size of the bonuses in this company is quite large, possibly at the upper end of the range of bonuses found in organizations. We therefore cannot attribute the weak findings to a weak bonus system. The performance criteria determining bonus attribution were also typical of what we find across organizations: they include individual, team, and organizational performance components weighted by job level. Organizations should pay attention to how much employees can control their performance, team performance, and company performance. For example, profits from a game may depend on the market landscape, the economy, and the power an individual employee may have over team members. Lack of control over outcomes affects the expectancy component proposed by expectancy theory (akin to competence in SDT). Moreover, what stood out in this company was the range of probabilities tied to game assignments, which might have contributed to perceptions of unfairness that could feed into the motivation to engage in deviant behaviors (Greenberg 1990). If being assigned to a new versus live game influences chances of getting a bonus, this appears to be a flaw of this bonus system.

The company might want to consider this issue in revisions of the bonus program to avoid motivational and behavioral problems. But the overall conclusion we draw from this research is that despite putting together a rather complicated and expensive bonus system, the company did not seem to reap motivational benefits out of it, and for some employees it was associated with corner-cutting behaviors. The question is whether such a system is worth the expense.

## 4.2 | Strengths, Limitations, and Future Research Directions

Since the conclusions of this study are based on a single bonus system within one company in the gaming industry, replication studies are essential, especially those that explore different bonus structures and job types. The bonus system under investigation is similar to many bonus systems encountered by the authors across different countries and industries and those described in reviews (e.g., Beck et al. 2014; Gerhart and Fang 2015; Gerhart et al. 2009), which is why it was qualified as being typical of bonus systems used in real work organizations. A factor that is difficult to consider in field studies is the possibility of attraction to organizations that use bonus systems as part of their remuneration. Vignette, simulation, and experimental work could provide insights into who is attracted by them and how this influences the effect of bonuses on work motivation (i.e., individual difference moderators). Past research has found that reminding people of the impact of their behavior on others and trait conscientiousness can mitigate the effects of incentives on deviant behavior (Kish-Gephart et al. 2014), while other research has found that a proactive personality can exacerbate these effects (Wang et al. 2022).

This study also had some strengths in the use of multiple sources of data, some of which were cross-validated (e.g., bonus probability with self-reported instrumentality perceptions). Considering bonus characteristics that are based on theory (i.e., expectancy theory) and considering multiple types of motivation constitute important new contributions to existing knowledge on the effects of performance pay on work motivation, answering calls for such research (Gagné and Forest 2008; Gerhart 2017). Yet the study cannot address causality fully as employees were not randomly assigned to bonus characteristics' levels. Thus, future research using quasi-experimental designs would strengthen our conclusions.

## 5 | Conclusions

A field study highlighted the complexity of bonus systems in a real-life work environment. While bonus characteristics such as future bonus size and probability did impact motivation, their effects were generally weak. The study suggests that while performance-based pay systems can influence motivation and deviant behavior, their overall impact may be quite limited.

**Conflicts of Interest**

The authors declare no conflicts of interest.

**Data Availability Statement**

Research data are not shared.

**Endnotes**

[1] We intentionally left out hypotheses for social external regulation and introjected regulation as bonuses are assumed to be more indirectly associated with them; an individual who receives (or not) a bonus might interpret it as a signal of approval (criticism) and it could affect their self-esteem if it is contingent on their performance. We included measures of both but left them out of hypotheses, instead opting to simply explore what associations were to be found.

[2] The survey was sent to 6079 employees throughout the entire organization. The response rate of 36.48% is calculated based on all respondents to the survey, yet only production workers were included in this study.

[3] Employees do not choose whether they work on a new or established game. Though employees were not randomly assigned to games, lack of choice still minimizes self-selection bias.

[4] We conducted supplemental analyses in which we examined the relation between future bonus probability and self-reports of pay instrumentality (Houlfort 2004), assessing the extent to which workers perceive their bonuses to be directly tied to their performance, their effort put on the job, and the skills and knowledge they developed over time. These analyses revealed that individuals with high probability of getting a bonus reported greater pay instrumentality ($M = 2.04$, $SD = 0.63$) compared to individuals with an unknown ($M = 1.82$, $SD = 0.64$) or a medium ($M = 1.86$, $SD = 0.68$) probability of getting a bonus. Note that instrumentality levels are rather low for all workers.

**References**

Anderson, E., and R. L. Oliver. 1987. "Perspectives on Behavior-Based Versus Outcome-Based Salesforce Control Systems." *Journal of Marketing* 51, no. 4: 76–88. https://doi.org/10.1177/002224298705100407.

Bandura, A. 1986. *Social Foundations of Thought and Action: A Social Cognitive Theory.* Prentice-Hall.

Baron, R. A., H. Zhao, and Q. Miao. 2015. "Personal Motives, Moral Disengagement, and Unethical Decisions by Entrepreneurs: Cognitive Mechanisms on the Slippery Slope." *Journal of Business Ethics* 128, no. 1: 107–118. https://doi.org/10.1007/s10551-014-2078-8.

Beaudoin, C. A., A. M. Cianci, and G. T. Tsakumis. 2015. "The Impact of Cfos' Incentives and Earnings Management Ethics on Their Financial Reporting Decisions: The Mediating Role of Moral Disengagement." *Journal of Business Ethics* 128, no. 3: 505–518. https://doi.org/10.1007/s10551-014-2107-x.

Beck, J. W., A. S. Beaty, and P. R. Sackett. 2014. "On the Distribution of Job Performance: The Role of Measurement Characteristics in Observed Departures From Normality." *Personnel Psychology* 67, no. 3: 531–566. https://doi.org/10.1111/peps.12060.

Bharadwaj, A. 2021. Investigating Job Autonomy as an Antecedent of Unethical Pro-Organisational Behaviour and Displacement of Responsibility.

Bohte, J., and K. J. Meier. 2000. "Goal Displacement: Assessing the Motivation for Organizational Cheating." *Public Administration Review* 60, no. 2: 173–182. https://doi.org/10.1111/0033-3352.00077.

Bureau, J., G. Mageau, A. Morin, et al. 2018. "Promoting Autonomy to Reduce Employee Deviance: The Mediating Role of Identified

Motivation." *International Journal of Business and Management* 13, no. 5: 61–71.

Burns, N., and S. Kedia. 2006. "The Impact of Performance-Based Compensation on Misreporting." *Journal of Financial Economics* 79, no. 1: 35–67. https://doi.org/10.1016/j.jfineco.2004.12.003.

Deci, E. L., R. Koestner, and R. M. Ryan. 1999. "A Meta-Analytic Review of Experiments Examining the Effects of Extrinsic Rewards on Intrinsic Motivation." *Psychological Bulletin* 125, no. 6: 627–668. https://doi.org/10.1037/0033-2909.125.6.627.

Deci, E. L., and R. M. Ryan. 1980. "The Empirical Exploration of Intrinsic Motivational Processes." In *Advances in Experimental Social Psychology*, edited by L. Berkowitz, vol. 13, 39–80. Academic Press.

Enwereuzor, I. K. 2024. "Dispositional Greed and Knowledge Sabotage: The Roles of Cutting Corners at Work and Ethical Leadership." *Current Psychology* 43: 1325–1339. https://doi.org/10.1007/s12144-023-04361-2.

Frey, B. S., and M. Osterloh. 2005. "Yes, Managers Should Be Paid Like Bureaucrats." *Journal of Management Inquiry* 14, no. 1: 96–111. https://doi.org/10.1177/1056492604273757.

Gagné, M., and J. Forest. 2008. "The Study of Compensation Systems Through the Lens of Self-Determination Theory: Reconciling 35 Years of Debate." *Canadian Psychology* 49, no. 3: 225–232. https://doi.org/10.1037/a0012757.

Gagné, M., J. Forest, M. Vansteenkiste, et al. 2015. "The Multidimensional Work Motivation Scale: Validation Evidence in Seven Languages and Nine Countries." *European Journal of Work and Organizational Psychology* 24, no. 2: 178–196. https://doi.org/10.1080/1359432X.2013.877892.

Gagné, M., C. B. Senécal, and R. Koestner. 1997. "Proximal Job Characteristics, Feelings of Empowerment, and Intrinsic Motivation: A Multidimensional Model." *Journal of Applied Social Psychology* 27, no. 14: 1222–1240. https://doi.org/10.1111/j.1559-1816.1997.tb01803.x.

Gerhart, B. 2017. "Incentives and Pay for Performance in the Workplace." In *Advances in Motivation Science*, edited by A. J. Elliot, vol. 4, 91–140. Elsevier.

Gerhart, B., and M. Fang. 2015. "Pay, Intrinsic Motivation, Extrinsic Motivation, Performance, and Creativity in the Workplace: Revisiting Long-Held Beliefs." *Annual Review of Organizational Psychology and Organizational Behavior* 2, no. 1: 489–521. https://doi.org/10.1146/annurev-orgpsych-032414-111418.

Gerhart, B., S. L. Rynes, and I. S. Fulmer. 2009. "Pay and Performance: Individuals, Groups, and Executives." *Academy of Management Annals* 3, no. 1: 251–315. https://doi.org/10.1080/19416520903047269.

Glaeser, D., and N. Van Quaquebeke. 2019. "The Double-Edged Sword of Financial Incentive Schemes." In *Corporate Social Responsibility and Corporate Change: Institutional and Organizational Perspectives*, edited by J. Brown, M. Löhr, and A. T. Williams, 205–219. Springer.

Gläser, D., S. van Gils, and N. Van Quaquebeke. 2017. "Pay-For-Performance and Interpersonal Deviance." *Journal of Personnel Psychology* 16, no. 2: 77–90. https://doi.org/10.1027/1866-5888/a000176.

Greenberg, J. 1990. "Organizational Justice: Yesterday, Today, and Tomorrow." *Journal of Management* 16, no. 2: 399–432. https://doi.org/10.1177/014920639001600208.

Haile, P. A., and R. M. Stein. 2002. "Managed Care Incentives and Inpatient Complications." *Journal of Economics and Management Strategy* 11, no. 1: 37–79. https://doi.org/10.1162/105864002753451263.

Harris, J., and P. Bromiley. 2007. "Incentives to Cheat: The Influence of Executive Compensation and Firm Performance on Financial Misrepresentation." *Organization Science* 18, no. 3: 350–367. https://doi.org/10.1287/orsc.1060.0224.

Hayes, A. F. 2022. *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. 3rd ed. Guilford Press.

Hayne, K. M. 2019. *Final Report: Royal Commission Into Misconduct in the Banking, Superannuation and Financial Services Industry.* Commonwealth of Australia.

Hegarty, W. H., and H. P. Sims. 1978. "Some Determinants of Unethical Decision Behavior: An Experiment." *Journal of Applied Psychology* 63, no. 4: 451–457. https://doi.org/10.1037/0021-9010.63.4.451.

Hodge, K., E. A. Hargreaves, D. Gerrard, and C. Lonsdale. 2013. "Psychological Mechanisms Underlying Doping Attitudes in Sport: Motivation and Moral Disengagement." *Journal of Sport and Exercise Psychology* 35, no. 4: 419–432. https://doi.org/10.1123/jsep.35.4.419.

Hodge, K., and C. Lonsdale. 2011. "Prosocial and Antisocial Behavior in Sport: The Role of Coaching Style, Autonomous vs. Controlled Motivation, and Moral Disengagement." *Journal of Sport and Exercise Psychology* 33, no. 4: 527–547.

Honeycutt, E. D., M. Glassman, M. T. Zugelder, and K. Karande. 2001. "Determinants of Ethical Behavior: A Study of Autosalespeople." *Journal of Business Ethics* 32: 69–79. https://doi.org/10.1023/A:1010788727555.

Houlfort, N. 2004. "The Impact of Performance-Contingent Rewards on Perceived Autonomy and Intrinsic Motivation (Reference: 0-494-12860-7)." Doctoral thesis, McGill University.

Howard, J. L., M. Gagné, and J. S. Bureau. 2017. "Testing a Continuum Structure of Self-Determined Motivation: A Meta-Analysis." *Psychological Bulletin* 143, no. 12: 1346–1377. https://doi.org/10.1037/bul0000125.

Howard, J. L., M. Gagné, and A. J. S. Morin. 2020. "Putting the Pieces Together: Reviewing the Structural Conceptualization of Motivation Within SDT." *Motivation and Emotion* 44, no. 6: 846–861. https://doi.org/10.1007/s11031-020-09838-2.

Huang, G. H., N. Wellman, S. J. Ashford, C. Lee, and L. Wang. 2017. "Deviance and Exit: The Organizational Costs of Job Insecurity and Moral Disengagement." *Journal of Applied Psychology* 102, no. 1: 26–41. https://doi.org/10.1037/apl0000157.

JASP Team. 2024. "JASP (Version 0.19.2)." https://jasp-stats.org/.

Jenkins Jr, G. D., A. Mitra, N. Gupta, and J. D. Shaw. 1998. "Are Financial Incentives Related to Performance? A Meta-Analytic Review of Empirical Research." *Journal of Applied Psychology* 83, no. 5: 777.

Jonason, P. K., and P. J. O'Connor. 2017. "Cutting Corners at Work: An Individual Differences Perspective." *Personality and Individual Differences* 107: 146–153. https://doi.org/10.1016/j.paid.2016.11.045.

Kanat-Maymon, Y., M. Benjamin, A. Stavsky, A. Shoshani, and G. Roth. 2015. "The Role of Basic Need Fulfillment in Academic Dishonesty: A Self-Determination Theory Perspective." *Contemporary Educational Psychology* 43: 1–9.

Kim, J. H., B. Gerhart, and M. Fang. 2022. "Do Financial Incentives Help or Harm Performance in Interesting Tasks?" *Journal of Applied Psychology* 107, no. 1: 153.

Kish-Gephart, J., J. Detert, L. K. Treviño, V. Baker, and S. Martin. 2014. "Situational Moral Disengagement: Can the Effects of Self-Interest Be Mitigated?" *Journal of Business Ethics* 125: 267–285. https://doi.org/10.1007/s10551-013-1929-9.

Kunda, Z., and S. H. Schwartz. 1983. "Undermining Intrinsic Moral Motivation: External Reward and Self-Presentation." *Journal of Personality and Social Psychology* 45, no. 4: 763–771. https://doi.org/10.1037/0022-3514.45.4.763.

Kuvaas, B., R. Buch, and A. Dysvik. 2020. "Individual Variable Pay for Performance, Controlling Effects, and Intrinsic Motivation." *Motivation*

*and Emotion* 44, no. 4: 525–533. https://doi.org/10.1007/s11031-020-09894-7.

Kuvaas, B., R. Buch, M. Gagne, A. Dysvik, and J. Forest. 2016. "Do You Get What You Pay for? Sales Incentives and Implications for Motivation and Changes in Turnover Intention and Work Effort." *Motivation and Emotion* 40: 667–680. https://doi.org/10.1007/s11031-016-9560-1.

Lawler, E. J. 2003. "Reward Practices and Performance Management System Effectiveness." *Organizational Dynamics* 32, no. 4: 396–404. https://doi.org/10.1016/j.orgdyn.2003.08.007.

Lee, S. J., E. J. Jeong, D. J. Kim, and J. Kong. 2023. "The Influence of Psychological Needs and Motivation on Game Cheating: Insights From Self-Determination Theory." *Frontiers in Psychology* 14: 1278738.

Litzky, B. E., K. A. Eddleston, and D. L. Kidder. 2006. "The Good, the Bad, and the Misguided: How Managers Inadvertently Encourage Deviant Behaviors." *Academy of Management Perspectives* 20, no. 1: 91–103. https://doi.org/10.5465/amp.2006.19873401.

MacKinnon, D. P., C. M. Lockwood, J. M. Hoffman, S. G. West, and V. Sheets. 2002. "A Comparison of Methods to Test Mediation and Other Intervening Variable Effects." *Psychological Methods* 7: 83–104. https://doi.org/10.1037/1082-989X.7.1.83.

MacLeod, W. B., and D. Parent. 1999. "Job Characteristics and the Form of Compensation." USC Law School, Olin Working Paper 99-10.

Mawritz, M. B., A. C. Farro, J. Kim, R. L. Greenbaum, C. S. Wang, and J. M. Bonner. 2024. "Bottom-Line Mentality From a Goal-Shielding Perspective: Does Bottom-Line Mentality Explain the Link Between Rewards and Pro-Self Unethical Behavior?" *Human Relations* 77, no. 4: 505–532. https://doi.org/10.1177/00187267221111438.

Michel, J. S., and M. B. Hargis. 2017. "What Motivates Deviant Behavior in the Workplace? An Examination of the Mechanisms by Which Procedural Injustice Affects Deviance." *Motivation and Emotion* 41: 51–68.

Moore, C., J. R. Detert, L. Klebe Treviño, V. L. Baker, and D. M. Mayer. 2012. "Why Employees Do Bad Things: Moral Disengagement and Unethical Organizational Behavior." *Personnel Psychology* 65, no. 1: 1–48. https://doi.org/10.1111/j.1744-6570.2011.01237.x.

Nagel, J. A., K. R. Patel, E. G. Rothstein, and L. L. Watts. 2021. "Unintended Consequences of Performance Incentives: Impacts of Framing and Structure on Performance and Cheating." *Ethics & Behavior* 31, no. 7: 498–515. https://doi.org/10.1080/10508422.2021.1910790.

Newman, A., H. Le, A. North-Samardzic, and M. Cohen. 2020. "Moral Disengagement at Work: A Review and Research Agenda." *Journal of Business Ethics* 167: 535–570. https://doi.org/10.1007/s10551-019-04194-7.

Newman, D. T., N. J. Fast, and D. J. Harmon. 2020. "When Eliminating Bias Isn't Fair: Algorithmic Reductionism and Procedural Justice in Human Resource Decisions." *Organizational Behavior and Human Decision Processes* 160: 149–167. https://doi.org/10.1016/j.obhdp.2020.02.001.

Nyberg, A. J., J. R. Pieper, and C. O. Trevor. 2016. "Pay-For-Performance's Effect on Future Employee Performance: Integrating Psychological and Economic Principles Toward a Contingency Perspective." *Journal of Management* 42, no. 7: 1753–1783. https://doi.org/10.1177/0149206313515520.

Ogunfowora, B. T., V. Q. Nguyen, P. Steel, and C. C. Hwang. 2022. "A Meta-Analytic Investigation of the Antecedents, Theoretical Correlates, and Consequences of Moral Disengagement at Work." *Journal of Applied Psychology* 107, no. 5: 746–765. https://doi.org/10.1037/apl0000983.

Orosz, G., D. Farkas, and C. Roland-Lévy. 2013. "Are Competition and Extrinsic Motivation Reliable Predictors of Academic Cheating?" *Frontiers in Psychology* 4: 87.

Ozdemir Oz, A., J. F. Lane, and A. Michou. 2016. "Autonomous and Controlling Reasons Underlying Achievement Goals During Task Engagement: Their Relation to Intrinsic Motivation and Cheating." *Educational Psychology* 36, no. 7: 1160–1172.

Park, T. Y., S. Park, and B. Barry. 2022. "Incentive Effects on Ethics." *Academy of Management Annals* 16, no. 1: 297–333. https://doi.org/10.5465/annals.2020.0029.

Perkins, B. G., N. P. Podsakoff, and D. T. Welsh. 2024. "Variance in Virtue: An Integrative Review of Intraindividual (un) Ethical Behavior Research." *Academy of Management Annals* 18, no. 1: 210–250.

Pfeffer, J., and R. I. Sutton. 2006. "What's Wrong With Pay-For-Performance." *Industrial Management* 48, no. 2: 12–18. https://doi.org/10.1108/00342530610666045.

R Core Team. 2024. *R: A Language and Environment for Statistical Computing (Version 4.4.2)*. R Foundation for Statistical Computing.

Rosseel, Y. 2012. "Lavaan: An R Package for Structural Equation Modeling." *Journal of Statistical Software* 48: 1–36. https://doi.org/10.18637/jss.v048.i02.

Rousseau, D. M. 1995. *Psychological Contracts in Organizations: Understanding Written and Unwritten Agreements*. Sage Publications.

Ryan, R. M., and E. L. Deci. 2017. *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. Guilford Press.

Scheiner, C. W., C. V. Baccarella, J. Bessant, and K. I. Voigt. 2018. "Participation Motives, Moral Disengagement, and Unethical Behaviour in Idea Competitions." *International Journal of Innovation Management* 22, no. 6: 1850043. https://doi.org/10.1142/S1363919618500434.

Schumann, P. L., D. A. Ahlburg, and C. B. Mahoney. 1994. "The Effects of Human Capital and Job Characteristics on Pay." *Journal of Human Resources* 9, no. 2: 481–503. https://doi.org/10.2307/145828.

Skinner, B. F. 1971. "Operant Conditioning." In *The Encyclopedia of Education*, vol. 7, 29–33. Macmillan.

Slemp, G. R., M. L. Kern, K. J. Patrick, and R. M. Ryan. 2018. "Leader Autonomy Support in the Workplace: A Meta-Analytic Review." *Motivation and Emotion* 42, no. 5: 706–724. https://doi.org/10.1007/s11031-018-9750-1.

Slemp, G. R., M. A. Lee, and L. H. Mossman. 2021. "Interventions to Support Autonomy, Competence, and Relatedness Needs in Organizations: A Systematic Review With Recommendations for Research and Practice." *Journal of Occupational and Organizational Psychology* 94, no. 2: 427–457. https://doi.org/10.1111/joop.12323.

Sockin, J., and M. Sockin. 2019. "The Role of Non-Base Compensation in the United States." In *IZA-Institut of Labor Economics Conference*.

Stout, N., A. R. Dennis, and T. M. Wells. 2014. "The Buck Stops There: The Impact of Perceived Accountability and Control on the Intention to Delegate to Software Agents." *AIS Transactions on Human-Computer Interaction* 6, no. 1: 1–15. https://doi.org/10.17705/1thci.00039.

Thibault Landry, A., M. Gagné, J. Forest, S. Guerrero, M. Séguin, and K. Papachristopoulos. 2017. "The Relation Between Financial Incentives, Motivation, and Performance: An Integrative SDT-Based Investigation." *Journal of Personnel Psychology* 16, no. 2: 61–74. https://doi.org/10.1027/1866-5888/a000181.

Thornberg, R., T. Jungert, and J. S. Hong. 2023. "The Indirect Association Between Moral Disengagement and Bystander Behaviors in School Bullying Through Motivation: Structural Equation Modelling and Mediation Analysis." *Social Psychology of Education* 26, no. 2: 533–556. https://doi.org/10.1007/s11218-023-09714-5.

Trépanier, S. G., C. Peterson, M. Gagné, C. Fernet, J. Levesque-Côté, and J. L. Howard. 2023. "Revisiting the Multidimensional Work Motivation Scale (MWMS)." *European Journal of Work and Organizational*

*Psychology* 32, no. 2: 157–172. https://doi.org/10.1080/1359432X.2023.2009649.

Van den Broeck, A., D. L. Ferris, C. H. Chang, and C. C. Rosen. 2016. "A Review of Self-Determination Theory's Basic Psychological Needs at Work." *Journal of Management* 42, no. 5: 1195–1229. https://doi.org/10.1177/0149206316632058.

Van den Broeck, A., J. L. Howard, Y. Van Vaerenbergh, H. Leroy, and M. Gagné. 2021. "Beyond Intrinsic and Extrinsic Motivation: A Meta-Analysis on Self-Determination Theory's Multidimensional Conceptualization of Work Motivation." *Organizational Psychology Review* 11, no. 3: 240–273. https://doi.org/10.1177/2041386620978026.

Van Eerde, W., and H. Thierry. 1996. "Vroom's Expectancy Models and Work-Related Criteria: A Meta-Analysis." *Journal of Applied Psychology* 81, no. 5: 575–586. https://doi.org/10.1037/0021-9010.81.5.575.

Vohs, K. D., N. L. Mead, and M. R. Goode. 2006. "The Psychological Consequences of Money." *Science* 314, no. 5802: 1154–1156. https://doi.org/10.1126/science.1132491.

Vohs, K. D., and J. W. Schooler. 2008. "The Value of Believing in Free Will: Encouraging a Belief in Determinism Increases Cheating." *Psychological Science* 19, no. 1: 49–54. https://doi.org/10.1111/j.1467-9280.2008.02045.x.

Vroom, V. H. 1964. *Work and Motivation*. John Wiley & Sons.

Wang, D., Q. Weng, A. Kiani, and A. Ali. 2022. "Job Insecurity and Unethical Pro-Organizational Behavior: The Joint Moderating Effects of Moral Identity and Proactive Personality." *Personality and Individual Differences* 195: 111685. https://doi.org/10.1016/j.paid.2022.111685.

World at Work. 2024. "Bonus Programs and Practices Report." Total Rewards Association.