Pay for performance and employee outcomes:

The mediating roles of controlling and informational perceptions of pay

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Abstract

Based on self-determination theory, we develop a theoretical model where the effects of pay for performance (PFP) on autonomous motivation, job-related anxiety, and turnover intention are mediated by controlling and informational perceptions of pay. After controlling for several contextual and demographic variables, the empirical results of three field studies provide general support for the model. In a two-wave study of 952 participants, perceived PFP was positively associated with both controlling and informational perceptions of pay. In a second three-wave study of 819 participants, a controlling perception of pay mediated the negative (positive) associations between perceived PFP and autonomous motivation, job-related anxiety, and turnover intention, whereas an informational perception of pay mediated the positive (negative) associations between perceived PFP and autonomous motivation and turnover intention. In a third two-wave study of 256 real estate agents working under a high-powered pay plan, a controlling perception of pay mediated the positive associations between variable PFP intensity and job-related anxiety and turnover intention, but not a negative association with autonomous motivation. Taken together, our research suggests that PFP has both favourable and unfavourable perceptions and that these are, in part, explained by controlling and informational perceptions of pay.

Keywords: controlling and informational perceptions of pay, motivation, pay for performance, self- determination theory compensation

INTRODUCTION

Autonomous work motivation refers to doing work activities out of intrinsic interest and personal identification with the importance or value of such activities (Deci et al., 2017; Trépanier et al., 2023). According to several meta- analyses, autonomous motivation is a potent predictor of performance at work, in education, and in the physical domain (Cerasoli et al., 2014; Howard et al., 2021; Ryan et al., 2022; Van den Broeck et al., 2021). Accordingly, autonomous motivation has instrumental consequences and is increasingly valued by employers (Gagné & Hewett, 2025) and by employees themselves, who experience well- being at work (Van den Broeck et al., 2021).

Autonomous motivation emanates from the work itself, rather than from extrinsic attempts to motivate employees. At the same time, organizations typically rely on extrinsic motivators, in particular, financial rewards, to motivate their employees (Gagné & Hewett, 2025). Indeed, pay for performance (PFP), where pay 'varies with some measure of individual or organizational performance' (Gerhart & Newman, 2020, p. 715), is estimated to be implemented in almost 90% of organizations (Park, 2018) and regarded as a 'best practice' in the human resource management literature (Park & Sturman, 2022). This potential mismatch between PFP practices and autonomous motivation has led to a long- standing and sometimes- heated debate over a key proposition from self- determination theory (SDT), namely, that rewards can undermine autonomous motivation in work settings (Gagné & Deci, 2005). This potentially undermining effect on autonomous motivation, however, is still in need of empirical scrutiny in work settings, that is, outside of laboratory contexts.

According to SDT, PFP can have two contrasting effects on autonomous motivation (or no effect), depending on the functional significance or the meaning it conveys to the pay recipient. Specifically, performance- contingent rewards can be perceived as controlling and thereby

undermine autonomous motivation, or be perceived as informational, thereby enhancing autonomous motivation (Deci et al., 2017; Ryan et al., 2022). Yet, such controlling and informational perceptions of PFP are empirically underexplored explanations of how PFP influences autonomous motivation and other relevant employee outcomes.

Compensation research, on the other hand, has little to offer in explaining exactly how PFP influences motivation, work performance, and other outcomes. Most studies rely on the 'simple' incentive effect (Park & Sturman, 2022, p. 530), typically defined as 'the impact of PFP on performance via its impact on current employees' motivational states' (Gerhart et al., 2009, p. 254). Thus, the rational and instrumental logic adopted from expectancy theory (Vroom, 1964) is that employees will exert more effort when they believe that this effort will lead to higher performance and, thereby, better pay (e.g., Maltarich et al., 2017). However, these 'motivational states' or the motivational mechanisms through which PFP impacts employee outcomes have received surprisingly little research attention in compensation research (Kong et al., 2023; Park & Sturman, 2022).

To address these gaps in motivation and compensation research, we test a theoretical model where controlling and informational perceptions of pay mediate the association between PFP and autonomous motivation, turnover intention, and job- related anxiety (see Figure 1).

To investigate PFP, we focus on two closely related constructs that are paramount to a better understanding of the 'incentive effect' in compensation research (Park & Sturman, 2022) and in predicting controlling and informational perceptions in SDT: Perceived PFP and variable PFP (VPFP) intensity. Perceived PFP refers to the perceived strength of the linkage between individual performance and the pay received (e.g., Kong et al., 2023), whereas VPFP intensity is

the amount of individual variable pay to total pay (He et al., 2021). Perceived PFP is a broad construct that includes all pay components that are based on individual merit or performance, including both base pay and variable pay (Nyberg et al., 2016). Most PFP plans that include variable pay are highly complex, where the allocation of both base and variable pay varies with respect to several different performance criteria and measures (Park & Sturman, 2022). Faced with such complexity, employees typically take a holistic view of PFP plans (Eriksson & Kristensen, 2014), supporting the notion that in PFP in most field contexts, 'perception is reality' (Park & Sturman, 2022). VPFP intensity, on the other hand, presupposes that variable pay is in place and is more relevant in investigating pay under so- called high- powered pay plans designed to have a strong incentive effect. Both perceived PFP and VPFP intensity reflect what is typically referred to as incentive strength in compensation research and performance contingency in SDT. The main differences between the two are that VPFP intensity is a quantitative representation of variable pay, whereas perceived PFP is a perceptual operationalization that includes base or guaranteed pay, as well as variable pay if present.

SDT is a theory of both motivation *and* well- being, and controlling and informational perceptions of pay are theorized to influence psychological well- and ill- being in opposing ways (Deci et al., 2017). Furthermore, our understanding of how and why pay affects employee health is limited, according to a recent cross- disciplinary review (Sayre & Conroy, 2024). Therefore, we also included job- related anxiety in our model, which is defined as 'feelings of apprehension and nervousness about the accomplishment of job tasks' (Mao et al., 2021, p. 34). In addition to the incentive effect, compensation research suggests that PFP can have a positive sorting effect by means of attracting and retaining high- performing employees (e.g., Gerhart, 2017). Yet, while a sorting effect may be consistent with an informational perception of pay, a controlling perception,

according to SDT, should increase employee turnover. Consequently, controlling and informational perceptions may, in part, explain the extent to which PFP contributes to a positive sorting effect. Therefore, we included turnover intention, which is a major predictor of actual voluntary turnover (Rubenstein et al., 2018), in our model.

We aim to make three distinct contributions to motivation and compensation research and practice. First, the explanation and predictable functioning of controlling and informational perceptions of pay in organizations is fundamental to the external validity and practical value of SDT as a theory of motivation and well- being in work settings. Yet, these perceptions are empirically underexplored explanations of the effects PFP can have on autonomous motivation and well- being, with important practical implications. If pay practices that are adopted by 90% of organizations (Park, 2018) risk having adverse consequences via a controlling perception of pay, it has highly important practical implications for decision- makers involved in the design of pay plans (Gagné & Hewett, 2025). If such practices simultaneously result in favourable outcomes through an informational perception of pay, practitioners should expand efforts in balancing such a dual role played by PFP. Second, SDT- based and compensation research have, to a large extent, operated independently of each other. Thus, by relying on mechanisms, constructs, and measures from both SDT and compensation research, we can provide findings that may reconcile the sometimes- heated debate over whether and how PFP can both undermine and enhance autonomous motivation (e.g., Kim et al., 2022; Ryan et al., 2022; Shaw, 2024). Third, contemporary knowledge of the motivational and performance perceptions of PFP relies too heavily on experimental findings, and 'more work in workplace settings on more typical pay for performance plans is needed' (Kim et al., 2022, p. 163). Thus, by investigating the associations between perceived PFP and VPFP intensity and controlling and informational perceptions of pay

across different types of plans in organizations in multiple countries, we add to recent research that has started to unpack how PFP affects employees in their natural work context (e.g., Kong et al., 2023; Kuvaas et al., 2020).

THEOR ETICA L BACKGROUND A ND REVIEW

According to SDT, autonomous motivation1 emerges when individuals satisfy their innate psychological needs for autonomy, competence, and relatedness (e.g., Gagné & Deci, 2005). Satisfaction of these needs predicts autonomous motivation and is also essential for psychological well- being (Deci & Ryan, 2000), and therefore, is also important in predicting job- related anxiety and turnover intention.

In the early 70s, satisfaction of the needs for autonomy and competence played pivotal roles in explaining how rewards influence intrinsic motivation. Deci (1971) observed that positive feedback or verbal rewards for doing a task increased intrinsic task motivation, whereas the provision of rewards that were task- or performance- contingent undermined intrinsic motivation (Deci, 1972). These findings were later formulated as the perhaps most central proposition of SDT: that the effects of rewards were dependent on whether they were informational about employee competence or controlling and frustrating the need for autonomy (e.g., Deci & Ryan, 1980). A controlling effect of rewards has later been used to explain the meta- analytical finding that the presence of performance- contingent rewards2 under-
mines intrinsic motivation in experimental research (Cerasoli et al., 2014; Deci et al., 1999). However, this finding cannot easily be extrapolated to research in the field for several reasons (Gerhart & Fang, 2014; Kuvaas et al., 2020), but particularly because performance contingency is typically a matter of degree, not either/or.

There are, however, some studies that have directly explored the functional meaning of pay in field settings. Thibault Landry et al. have conducted a series of SDT- based studies in early and important attempts to investigate informational and controlling meanings of pay (Thibault Landry et al., 2017, 2019, 2022). Yet, their measures confound leadership with how or why 'cash rewards' are administered as reflected in items such as 'My boss tries to motivate me by promising to financially reward me if I do well' and 'My boss provides me with positive feedback when s/he gives me a cash reward.'

In addition, two studies are more directly relevant to a controlling perception of PFP, but not an informational perception. First, Kuvaas et al. (2020) investigated a controlling perception of variable pay only, and that represented a relatively small proportion of total pay. Variable pay is typically more performance- contingent than base pay and, therefore, more likely to be perceived as controlling. Second, Saini et al. (2025) investigated perceived financial incentive salience, autonomy frustration, and intrinsic motivation. Although perceived salience of incentives, defined as the potential of incentives to draw employees' attention, has some conceptual overlap with perceived PFP, autonomy frustration is both conceptually and empirically different from a controlling perception on two important accounts. First, in organizational contexts, autonomy frustration is generic and not pay- specific, and thus more
influenced by job design and employees' experience of their immediate manager than by actual or perceived PFP (e.g., Deci et al., 2017). Second, many of the items used to measure autonomy frustration contain negatively loaded words such as 'forced' and 'pressured,' which should have inflated their findings concerning intrinsic motivation.

With respect to job- related anxiety, a recent review suggests that the performance contingency of pay is associated with poor mental health, where a controlling perception is

mentioned as one of several explanations (Sayre & Conroy, 2024). Likewise, controlling and informational perceptions of pay have not been investigated to explain the association between PFP and turnover intention (or actual turnover).

HYPOTHESES DEVELOPMENT

In explaining an undermining effect of performance- contingent rewards on autonomous motivation, frustration of basic needs, in particular, the need for autonomy is key (Deci et al., 2017). Autonomy, which refers to feeling like the origin or source of one's own behaviours, is the need most strongly positively related to autonomous motivation and most negatively associated with ill- being at work and turnover intention (Van den Broeck et al., 2016). Accordingly, frustration of the need for autonomy is central to our arguments that a controlling perception will mediate the associations between PFP and autonomous motivation, job- related anxiety, and turnover intention.

Rewards that are highly contingent on performance reflect PFP that is intended to have a strong influence on employee behaviours. Such an influence is the incentive effect in compensation research and the key to motivating or reinforcing employee behaviours (Park et al., 2022). In SDT, however, such PFP can undermine autonomous motivation if the reinforced behaviours are not perceived as volitional or autonomous, that is, perceived as controlling (Ryan et al., 2022). Although there are limits to generalizing from experimental research, the meta-analytical finding that the presence of performance-contingent rewards undermines intrinsic (Cerasoli et al., 2014; Deci et al., 1999) provides initial support for a hypothesis that a controlling perception will mediate the association between perceived PFP and VPFP intensity and autonomous motivation. Support from field research on an undermining effect is

provided by observations that the amount of variable pay received is negatively associated with autonomous motivation (Kuvaas et al., 2016) and that such an association is mediated by a controlling perception (Kuvaas et al., 2020). Accordingly, we hypothesize:

Hypothesis 1a. The negative association between perceived PFP/VPFP intensity and autonomous motivation is mediated by a controlling perception of pay.

Macro, micro, and review studies suggest that PFP can foster stress, anxiety, and other forms of ill-being, and even poor mental health (e.g., Dahl & Pierce, 2020; DeVaro & Heywood, 2017; Kong et al., 2023; Ogbonnaya et al., 2017; Sayre & Conroy, 2024). According to SDT, such findings might be explained by frustration of the need for autonomy and the perception of being controlled by pay. Such theorizing aligns well with meta- analytical findings suggesting that autonomy is crucial for both job- related anxiety and turn-over intention (Humphrey et al., 2007; Van den Broeck et al., 2016). Therefore, we hypothesize:

Hypothesis 1b. The positive association between perceived PFP/VPFP intensity and job- related anxiety is mediated by a controlling perception of pay.

Although a sorting effect suggests that perceived PFP should decrease turnover intention among high-performing employees (e.g., Gerhart & Fang, 2014; Shaw & Gupta, 2007), the potential ill- being consequences caused by a lack of autonomy may have the opposite effect. Compared with lower performers, higher performers are more attractive and typically have more job alternatives, suggesting that they should be at least as likely to respond to a controlling perception of pay with turnover cognitions. In support of this argument, Kuvaas et al. (2016) found an association between the amount of variable PFP received over a

year period and an increase in turnover intention. In a variable PFP context, in this case, sales incentives, larger payouts should reflect higher performance levels. Accordingly, we hypothesize:

Hypothesis 1c. The positive association between perceived PFP/VPFP intensity and turnover intention is mediated by a controlling perception of pay.

PFP can also convey information about competence and worth to an organization and thereby increase autonomous motivation and reduce job- related anxiety and turnover intention. The need for competence, which refers to feeling a sense of mastery over the environment and developing new skills, is especially central to an informational effect of rewards (Ryan et al., 2022). Accordingly, the finding that rewards that are non-contingent (Deci et al., 1999) or indirectly performance- salient (Cerasoli et al., 2014) increase intrinsic motivation in experimental research is explained by such a competence-enhancing informational effect. In field settings, PFP may also be informational about the competence employees possess and be interpreted as how much the organization values them for who they are, not only their recent and current performance (Kuvaas, 2006). As such, the perception of being a valued member of the organization also aligns with satisfaction of the need for relatedness,[3] which refers to the need to feel connected to and be cared for (Van den Broeck et al., 2016). However, the timing of the performance that serves as the basis for PFP probably matters. Specifically, the more PFP is based on past and current performance, it should convey information that the organization trusts an employee's future performance (e.g., Balkin et al., 2015; Kuvaas, 2006).

Applied to perceived PFP, the arguments above imply that the perception of a clear link between performance and pay can provide both mastery- enhancing information and be informational about possessing competencies that are valuable to the organization. In organizations, this logic is more relevant to performance- based base pay compared with variable

pay. Base pay is typically based on evaluations of a broad set of work behaviours and is less contingent on specific future performance standards (Balkin et al., 2015; Kuvaas et al., 2017).

As such, Kuvaas et al.'s (2016) finding that the amount of base pay received over 2 years was associated with autonomous motivation can be taken as evidence for an informational perception of pay. In their study, perceived PFP, which was included as a control variable, was, in fact, more strongly associated with autonomous motivation than was the actual amount of base pay received, underscoring the notion that pay perception may be more predictive than pay reality (Park & Sturman, 2022). Furthermore, a recent study of employee creativity also found a positive association between perceived PFP and autonomous motivation (Zhang et al., 2022). Finally, there are field studies reporting a positive association between perceived PFP and intrinsic task interest (e.g., Eisenberger & Aselage, 2009; Fang & Gerhart, 2012), which is conceptually similar to autonomous motivation. Accordingly, there is empirical support for a positive association between both objectively measured base pay levels and perceived PFP and autonomous motivation, which, according to SDT, can be explained by an informational effect.

Variable pay that is based on evaluations of a broad set of performance dimensions, rather than objective and specific results, can also convey information about competence and relatedness. Kuvaas et al. (2020), who found that a controlling perception of pay mediated the negative association between the amount of variable pay received and autonomous motivation, also observed a direct and positive relation between the amount of variable pay and autonomous motivation, which they attributed to a potential informational perception of pay. Theoretically, even variable pay that is highly contingent on future performance, so- called strong incentives such as individual bonuses based on a narrower set of objective criteria, can be informational about competence (Kuvaas et al., 2020). According to SDT, however, this requires that the

behaviours (i.e., the performance) that are the basis for variable pay are volitional or autonomous (Deci et al., 2017; Kuvaas et al., 2020). Accordingly, we hypothesize:

Hypothesis 2a. The positive association between perceived PFP/VPFP intensity and autonomous motivation is mediated by an informational perception of pay.

The meta-analysis by Van den Broeck et al. (2016) found that satisfaction of the needs for competence and relatedness related negatively to ill- being and turnover intention. Accordingly, to the extent that the above theorizing and interpretation of empirical findings are valid, an informational perception of pay should mediate negative associations between perceived PFP and VPFP intensity and both job- related anxiety and turnover intention. In addition, findings in support of a positive sorting effect of PFP, where higher performers are well- paid (e.g., Belogolovsky & Bamberger, 2014; Shaw & Gupta, 2007), may, in part, be explained by an informational perception. Thus, we hypothesize:

Hypothesis 2b. The negative association between perceived PFP/VPFP intensity and job- related anxiety is mediated by an informational perception of pay.

Hypothesis 2c. The negative association between perceived PFP/VPFP intensity and turnover intention is mediated by an informational perception of pay.

OVERVIEW OF THE STUDIES

We conducted three studies to test our hypotheses. The objective of Study 1 was to develop and validate a measure of the informational perception of pay and test the associations between perceived PFP and informational and controlling perceptions of pay, representing the left side of the theoretical model presented in Figure 1. In this study, we collected data in two waves from a diverse sample of 952 employees from 30 countries, thus ensuring representation from widely used pay plans. In Study 2, we tested the hypotheses using a three- wave survey in a

sample of 819 employees from Germany, the UK, and the US to reflect potential differences in pay plans across countries. In Study 3, we tested the hypotheses under a 'high-powered' pay plan, where a substantial amount of total pay is variable and based on sales, with data collected in two waves in a sample of 256 real estate Norwegian agents. All three studies were pre- approved by the Institutional Review Board for processing data in our country. All participants were informed about this approval, ensured strict confidentiality, and that the data would be used exclusively for research purposes.

STUDY 1

Participants and procedure

We collected data on a widely used and high- quality (Peer et al., 2022) online survey platform (Prolific). In general, using such a platform to collect data has several benefits, such as ease of access, speed of data collection for a reasonable cost, and most importantly, access to a large and diverse participant pool (Aguinis et al., 2021) working under representative pay plans. Compared with the more frequently used platform, MTurk, Prolific provides higher- quality data as reflected by participant attention,
comprehension, honesty, and reliability (Peer et al., 2022).

To take part in the survey, participants needed to be fluent in English, be full- time paid employees, and be eligible for PFP. To alleviate concerns about common method bias (Podsakoff et al., 2012), we collected data in two waves with a time lag of 1 week between the waves. At Time 1, employees provided data on perceived PFP and multiple control variables. At Time 2, employees reported their perceptions of controlling and informational perceptions of pay. To be able to respond to the first wave of data collection, participants first had to pass an attention check to ensure data quality. Our target was to recruit 1000 participants, and 952 employees passed the

attention check and completed both waves. Among the employees, 76.9% were employed in the private sector and the rest in the public sector (20.4%) or in non- governmental organizations (2.7%). About 50.3% were female, 49.7% had a lower university degree, and 24.1% had a master's degree, and 57.9% held a managerial position. They were 32.69 years old on average, and 39.2% had an organizational tenure between 1 and 3 years. With respect to pay data, 38.6% reported a small or modest merit pay increase, 63.4% were eligible for a bonus or variable pay, and on a scale from zero to 10, their average total pay position, including both base pay and bonus pay, was 5.23. Most participants were from OECD countries.

Measures

Unless otherwise noted, items were scored on a 5- point Likert response scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Informational perception of pay

To develop a measure of the informational perception of pay, we followed Hinkin's (1998) approach. First, we developed 10 items based on our construct definition and the SDT literature. Second, we conducted interviews and engaged executive students enrolled in an HRM program at our business school. Third, based on several small- scale data sets with executive students (ranging from 25 to 45 students), we examined reliability estimates by including and removing items (Hinkin, 1998), which resulted in a six- item scale (see Table 1 and Appendix A). Fourth, to test the convergent and discriminant validity (Campbell & Fiske, 1959) of our scale, we performed an exploratory factor analysis (EFA) where we included measures of two potentially confounding constructs: its theoretical cause (perceived PFP) and feedback from the job, where the latter is

theorized to represent a strong cue to an informational perception of pay (e.g., Deci et al., 2017;

Hewett & Leroy, 2019).

The principal component EFA, with promax rotation to allow correlations between the items used to measure the included scales, resulted in three factors. The factor loadings for the six items ranged from .81 to .90, and the Cronbach's Alpha for the scale was .93. The highest cross-loading was .19 (see Table 1).

Perceived PFP

We measured perceived PFP with three items adapted from Colquitt (2001) and one item from Grandeyet al. (2013). The items are displayed in Table 1.

Feedback

Feedback was measured by a five- item scale developed and used by Kuvaas (2011) and displayed in Table 1.

Controlling perception of pay

We measured a controlling perception of pay by six items from Kuvaas et al. (2020), but adapted it from measuring a particular type of PFP (variable pay) to a general measure referring to both base and variable pay. Example items are ‘The compensation system affects my priorities at work’ and ‘It is difficult NOT to think about the compensation system when I execute my work.’

Control variables

PFP in organizational settings is a complex and contextually sensitive phenomenon (e.g., Park & Sturman, 2022). Therefore, in further validating our measure of an informational perception of pay and performing a preliminary test of the left part of the theoretical model, we included several control variables (please see Figure A1 for a causal diagram to further justify the choice of control variables). Merit pay increase and relative pay position in the organization indicate employees' performance level (Nyberg et al., 2016) as well as reflecting an employee's

idiosyncratic value and worth to the organization (Hewett & Leroy, 2019; Scott et al., 2008; Thierry, 2001) and should, therefore, be positively related to an informational perception of pay. Variable pay or bonuses are typically more contingent on performance, and therefore, more likely to be associated with a controlling perception (Cerasoli et al., 2014; Hewett & Leroy, 2019; Kuvaas et al., 2020; Saini et al., 2025). We, therefore, controlled for these pay characteristics in terms of participants' latest merit pay increase using seven categories[1] ranging from 'a reduction' to 'an enormous increase' (Mitra et al., 2016), relative pay position compared with other employees in the organization doing similar jobs or contributing at the same level of value ranging from zero to 10 (SimanTov-Nachlieli& Bamberger, 2021), and whether employees were eligible for bonus pay or not. Perceptions of fair pay are among the most important perceptual factors influencing how employees react to pay decisions in organizations (Folger & Konovsky, 1989), and therefore, are essential in investigations of pay in general (e.g., Roussillon Soyer et al., 2022; SimanTov-Nachlieli & Bamberger, 2021) and particularly in theorizing informational perceptions (e.g., Hewett & Leroy, 2019). Thus, we controlled for both distributive and procedural pay justice using Colquitt's (2001) four- and seven- item scales, respectively. Leadership plays a significant role in how employees respond to perceived PFP (Kong et al., 2023), and close monitoring, which is an indicator of micromanagement (Zheng et al., 2023), should relate differently to controlling and informational perceptions of pay. Close monitoring was measured by three items from George and Zhou (2001).

Individual experiences are likely to influence perceived PFP and its consequences (Kong et al., 2023; Nyberg et al., 2016). Therefore, we controlled for sector of employment (1=private and 2=public or not-for-profit), educational level (from 1=no formal education to 7=

[1] Due to the impact of the recent pandemic, we added this category and did not include the "enormous change" category used by Mitra et al. (2016).

Doctorate/PhD), organizational tenure (from 1=1 year or less to 5=15 years or more), and managerial position (1=no and 2=yes). In addition, since there is an average gender pay gap in OECD countries of more than 12% (OECD, 2024), we controlled for gender (female= 0 and male=1). Following the recommendations of Hünermund et al. (2025), we added a brief causal diagram in Appendix B to justify the choice of control variables and to visualize their potential perceptions.

Analyses and results

The EFA supported the convergent and discriminant validity of our scale, and to further validate it, we performed confirmatory factor analyses (CFA). The CFA was conducted in R package lavaan (version 0.6–17) using maximum likelihood estimation. The measurement model included all the perceptual pay- related variables: perceived PFP, informational perception, controlling perception, procedural justice, and distributive justice, showing a good overall fit to the data (χ=1567.37, *df*=314, CFI=.92, TLI=.91, RMSEA=.07, SRMR=.06). The fivefactor measurement model was superior to alternative models that merged these variables.

Since both the EFA and the CFAs supported the convergent and discriminant validity of the scale. measuring an informational perception of pay, we proceeded with an ordinary least square (OLS) regression analysis to test the left side of the theoretical model predicting informational and controlling perceptions of pay.

Table 2 displays the means, standard deviations, and correlations among the study variables and shows that the control variables demonstrated associations consistent with our theorizing. An informational perception of pay was, for instance, positively correlated with distributive and procedural justice, pay position, merit pay increase, and feedback, whereas a controlling

perception was positively related to close monitoring and bonus. Furthermore, Table 3 shows the results of the OLS regression analysis and reveals that perceived PFP was positively related to both informational and controlling perceptions of pay, albeit stronger for a controlling perception (β =0.22, $p < .01$ compared with β=0.13, $p < .01$ for an informational perception).

STUDY 2

To test the hypotheses derived from the complete theoretical model, we conducted another field study in which we slightly semantically altered the scales to measure informational and controlling perceptions of pay and included additional control variables.

Participants and procedure

Except for including additional control variables and collecting data in three waves with a time lag of 1 week between the waves, we followed the same procedure as in Study 1, including using Prolific. Thus, at Time 1, employees provided data on perceived PFP and the control variables. At Time 2, employees reported their perceptions of controlling and informational perceptions of pay, and at Time 3, the dependent variables: autonomous motivation, job- related anxiety, and turnover intention.

We distributed the Time 1 survey to 1000 participants, and after the deletion of those who did not pass the attention check or did not complete all three waves, our final sample consisted of 819 full-time employees. Their country of origin was dominated by the UK with 88.4%, followed by Germany with 5.9% and the US with 5.8%. 65.2% were employed in the private sector, and the rest in the public sector (27.2%) or in non-governmental organizations (7.6%). 54.2% were female, 78.1% had a lower university degree and 18.1% had a master's degree, and 52.7% held a managerial position. They were 39.95 years old on average, and their average organizational tenure was between 4 and 7 years. With respect to pay data, 54.5% reported a small or modest

merit pay increase, and 46.9% were eligible for a bonus or variable. The PFP proportion was modest, with 74% receiving 5% or less of their total pay in performance-based pay and 13.6% receiving between 6 and 10% in performance- based pay. About 48.8% reported that their performance-based pay was mainly based on subjective evaluations of their performance, and 22.2% that it was mainly based on objective measures. 54.5% reported a small or modest merit pay increase, and their average relative pay position was 5.21.

Measures

Unless otherwise noted, items were scored on a five- point Likert response scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Perceived PFP

We measured perceived PFP with the same scale as in Study 1.

Informational and controlling perceptions of pay

We used the same scales as in Study 1 but slightly altered the items to measure informational and controlling perceptions of pay to focus the attention of the participants on the performance- based part of their pay rather than pay in general or the compensation system (see Appendix A for the items used in Studies 1 and 2).

Autonomous motivation

We measured autonomous motivation by a six- item scale from Kuvaas et al. (2020) that assesses both intrinsic motivation and identified regulation. Sample items are ‘My job is meaningful’ (identified regulation) and ‘Sometimes I become so inspired by my job that I almost forget everything else around me’ (intrinsic motivation).

Job-related anxiety

Job-related anxiety was measured with Parker and DeCotiis' (1983) five- item scale. An example item is‘I have felt fidgety or nervous as a result of my job.’

Turnover intention

We measured turnover intention with three items from Khatri et al. (2001) where we replaced ‘next year’ with ‘in the near future’ and added the following item: ‘I am currently looking for a new job.’

Control variables

Consistent with this semantic specification of the measures of informational and controlling perceptions, we also controlled for PFP proportion, which refers to the estimated proportion of pay that is based on performance (or results). To measure PFP proportion, we asked participants to estimate the proportion of their total pay that was based on their individual performance or results (e.g., the number of sales, units produced, or cases handled) using eight categories ranging from 0%–5% to 96%–100%. In addition, the perceptions of PFP may depend on the extent to which the criteria and indicators used to make pay decisions are based on human subjective judgements rather than more objective metrics (He et al., 2021). We therefore controlled for PFP subjectivity, which was measured based on whether the performance- based pay was mainly based on objective measures (coded as 1), subjective evaluations of performance (coded as 3), or approximately equally on objective measures and subjective evaluations of performance (coded as 2). The rest of the control variables were measured as in Study 1.

Analyses and results

Table 4 shows the means, standard deviations, and correlations among the study variables. We used PROCESS macro (version 4.2) to test our hypotheses (Hayes, 2018). Tables 5 and 6 and Figure 2 show the results of regression and mediation analyses. In support of Hypothesis 1a, a

controlling perception of pay mediated the negative association between perceived PFP and autonomous motivation (estimate =−.014, 95% CI =[−.031, −.001]). In support of Hypothesis 1b, a controlling perception of pay mediated the positive association between perceived PFP and job-related anxiety (estimate = .026, 95% CI=[.009, .047]). In support of Hypothesis 1c, a controlling perception of pay mediated the positive association between perceived PFP and turnover intention (estimate =.029, 95% CI=[.012, .052]). With respect to an informational perception of pay, we found that it mediated the positive association between perceived PFP and autonomous motivation (estimate=.058, 95% CI= [.032, .090]), supporting Hypothesis 2a. However, Hypothesis 2b did not receive support as the confidence interval for the indirect association between perceived PFP and job-related anxiety via an informational perception of pay included 0 (estimate = −.009, 95% CI=[−.030, .012]). In support of Hypothesis 2c, an informational perception of pay mediated the negative association between perceived PFP and turnover intention (estimate =−.019, 95% CI =[−.039, −.000]).

STUDY 3

The results from our two studies show that perceived PFP can be associated with both informational and controlling perceptions and that the latter are differently related to the dependent variables (Study 2). These findings are obtained in samples representing common pay plans that are typically ‘low-powered’ (Kim et al., 2022) evidenced by modest mean scores of perceived PFP (3.13 in Study 1 and 2.74 in Study 2), and in Study 2, both low PFP proportion (i.e., 74% of the participants received 5% or less of their total pay in performance- based pay) and high PFP subjectivity. Therefore, in Study 3, we tested the hypotheses under a ‘high-powered’ pay plan where a large proportion of total pay consisted of variable performance- or results- based

pay. Taken together, the three studies provide a comprehensive understanding of PFP across different pay plans.

Participants and procedure

With assistance from executive students enrolled in our business school, we collected data through the association of real estate agents in our country, who provided emails to their members. To be allowed to collect data from the members of the association, we had to agree on limitations concerning the number of waves of data collection and the length of the surveys. We were, therefore, restricted to collecting data in two rather than three waves. The time lag between the two surveys was approximately 1 week. At Time 1, participants provided data on VPFP, informational and controlling perceptions of pay, and the control variables. At Time 2, participants reported their autonomous motivation, job-related anxiety, and turnover intention.

The first survey was sent out to approximately 4100 members of the association, of which 492 provided complete responses. Of those, 303 completed the second. Since 47 participants were currently not working as real estate agents and therefore worked under different pay plans, our final sample consisted of 256 participants. Among these, 61.7% were 39 years or older, 60.2% were male, 66.8% had an industry tenure of 12 years or more, 44% worked between 43 and 48 hours per week, and 33.2% worked more hours than that. With respect to pay data, their average relative pay position was 6.13 on a scale from zero to 10, and 65.6% received more than 40% of their total pay in variable sales commissions. Specifically, 17.2% received between 41 and 60% of their pay in sales commissions, 8.2% between 61 and 80%, 11.7% more than 80 but less than 100%, and almost one- third of the participants (28.5%)
received all their pay in sales commissions.

Measures

Unless otherwise noted, items were scored on a five- point Likert response scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Variable PFP (VPFP) intensity

Because we knew in advance that the respondents worked under high- powered pay plans, and we had to measure PFP and informational and controlling perceptions of pay in the same survey, and wanted to minimize common method bias, we measured PFP with a less perceptual measure than the one we used in Studies 1 and 2. Specifically, we measured VPFP intensity as the percentage of variable pay to total pay with eight categories ranging from 5% or less to 100%. This measure is more objective than perceived PFP and thus less susceptible to common method bias. Besides, based on the distribution reported above, the scale we used to measure perceived PFP in Studies 1 and 2 would probably have been heavily skewed towards the endpoint of the scale.

Informational and controlling perceptions of pay

We used the same scales as in Study 1 to measure informational and controlling perceptions of pay.

Autonomous motivation, job- related anxiety, and turnover intention

We used the same scales as in Study 2 to measure the dependent variables.

Control variables

Because demand for houses and apartments varies between different regions in the country where we collected data, we controlled for four regions in which the participants worked with three dummy variables. The workload is known to be high in the industry and may be associated with job- related anxiety. Therefore, we controlled for hours worked per week using five categories ranging from 26 to 30 h to more than 50 h. Turnover to other industries is typically

higher than in many other industries, and we therefore controlled for industry tenure with five categories ranging from 0 to 2 years to more than 12 years. Finally, as in Studies 1 and 2, we controlled for pay position, age, and gender.

Analyses and results

Table 7 shows the means, standard deviations, and correlations among the study variables. We used PROCESS macro (version 4.2) to test our hypotheses. Tables 8 and 9 and Figure 3 show the results of regression and mediation analyses. We found that a controlling perception of pay did not mediate the relationship between VPFP intensity and autonomous motivation (estimate=−.025, 95% CI =[−.056, .001]), failing to support Hypothesis 1a. However, the controlling perception of pay mediated the positive association between VPFP intensity and job-related anxiety (estimate=.054, 95% CI = [.017, .101]), supporting Hypothesis 1b. The controlling perception of pay also mediated the positive association between VPFP intensity and turnover intention (estimate=.029, 95% CI=[.002, .065]), supporting Hypothesis 1c. However, the relationship between VPFP intensity and an informational perception of pay was not significant (β=−.03, *p*=.64). Accordingly, the hypothesized mediating roles of the informational perception of pay in the relationships between VPFP intensity and autonomous motivation (estimate=−.009, 95% CI=[−.053, .032]), job- related anxiety (estimate=.008, 95%CI=[−.029, .048]), and turnover intention (estimate=.010, 95% CI=[−.036, .056]) were not supported. Therefore, Hypotheses 2a, 2b, and 2c were not supported.

DISCUSSION

Based on decades of debate on the effects of PFP on autonomous motivation, many compensation researchers question an undermining effect of PFP on autonomous motivation in work settings (e.g., Gerhart & Fang, 2015; Kim et al., 2022; Shaw & Gupta, 2015). SDT, on the

other hand, posits that PFP can play a dual role in influencing autonomous motivation. The empirical results of our three studies provide several contributions that may better inform this debate.

Theoretical implications

The most important theoretical contribution to compensation and motivation research is that our findings support a dual role of PFP under the most common pay plans, that is, PFP may be perceived as both controlling and informational. This, in turn, can partly explain whether and to what extent we can expect favourable or unfavourable employee outcomes resulting from PFP. Therefore, our three studies provide general support for SDT and its external validity.

PFP, operationalized by perceived PFP and VPFP intensity, was consistently associated with a controlling perception of pay in the three studies, which, in turn, did not relate favourably to any of the employee outcomes. Specifically, a controlling perception of pay mediated the negative association between perceived PFP and autonomous motivation in Study 2 and the positive associations between perceived PFP and VPFP intensity and job- related anxiety and turnover intention in both Studies 2 and 3. Furthermore, perceived PFP was positively related to an informational perception of pay in both Studies 1 and 2, and an informational perception mediated the positive association between perceived PFP and autonomous motivation and the negative association with turnover intention in Study 2. Finally, the non- significant pathway via an informational perception of pay in Study 3 is also consistent
with SDT. High- powered pay plans or strong incentives, that is, PFP with a strong performance contingency, provide few informational cues about competence and worth, even if they may be informational about behavioural effectiveness, such as work effort (e.g., Gagné & Forest, 2008).

On the other hand, the lack of mediation of a controlling perception on autonomous motivation in Study 3 does not support 'the idea that the more tangible and contingent on behavior a reward is, the more detrimental it is to intrinsic motivation' (Gagné & Hewett, 2025, p. 2102). Thus, the statement that PFP in the form of variable pay or bonuses is necessarily detrimental to autonomous motivation is not supported by our data. It should be noted, however, that the parameter estimate for a controlling perception and autonomous motivation in Study 3 was negative (β=−.11, n.s.) and larger than in Study 2 (β=−.08, p<.05), but the sample size was considerably smaller. In addition, and in support of an undermining effect of the presence of performance- contingent rewards (Deci et al., 1999), being eligible for bonus payments was associated with a controlling perception and unrelated to an informational perception in both Studies 1 and 2.

It is interesting to note that it seems that an undermining effect of PFP via a controlling perception is more pronounced for job- related anxiety and turnover intention than for autonomous motivation. Thus, for employees working under what is probably representative pay plans in addition to a high-powered one, these findings may provide a more detailed explanation of why PFP can have detrimental effects on mental health (e.g., Dahl & Pierce, 2020; Sayre & Conroy, 2024). Furthermore, given that we controlled for relative pay position and merit pay increase, which should reflect employee performance under PFP plans, the findings for turnover intention probably hold across performance levels. This casts doubt over the view that PFP is an effective means to achieve positive sorting effects in terms of attaining high-performing employees (e.g., Belogolovsky & Bamberger, 2014; Gerhart & Fang, 2014).

Implications for practice

Our findings suggest that there is a fine line between incentivizing employee behaviours to attain organizational goals, which is the intention of most PFP plans (e.g., Rynes et al., 2005), and the risk that employees feel controlled by pay and the consequences thereof. Several of our control variables indicate how organizations can achieve such a balance. First, concerning pay practices, employees who were eligible for a bonus experienced higher levels of a controlling perception. Merit pay increase and pay position, reflecting pay level, on the other hand, were positively correlated with an informational perception and negatively correlated or unrelated to a controlling perception in Studies 1 and 2. Combined with findings indicating that merit-based pay can achieve sufficient incentive and sorting perceptions (Park & Sturman, 2016), our results question the necessity of having individual variable pay on top or to stress the performance contingency of pay. Yet, variable pay has the advantage of representing variable costs. Therefore, variable pay with presumably weaker incentive effects, such as collective bonuses at the group, unit, or organizational levels (Nyberg et al., 2018), should have the capacity to reduce controlling perceptions of pay.

In general, independent of whether variable pay at the individual or collective level is in place or not, our results strongly suggest that organizations and managers should administer and communicate pay decisions in non- controlling and informational ways. This involves presenting pay as symbols of acknowledgement and recognition of employees' contributions and value to the organization, and

refraining from transactional tit- for- tat communication about pay (e.g., Thibault Landry et al., 2019). Such communication would probably reduce the salience of pay (Saini et al., 2025) and be combined with more predictable means to achieve autonomous motivation and well- being, such as autonomy-supportive leadership and job design (Deci et al., 2017).

Our findings also underscore the significance of fairness when designing and implementing PFP (e.g., SimanTov- Nachlieli & Bamberger, 2021). As in previous pay research, distributive justice seems to be more important than procedural justice in reducing a controlling perception of pay (e.g., Folger & Konovsky, 1989), but certain levels of procedural justice are probably necessary for higher levels of distributive justice.

With respect to leadership, close monitoring was associated with a controlling perception in both Studies 1 and 2, in addition to accounting for additional variance in predicting job-related anxiety and turnover intention in Study 2. Accordingly, organizations should avoid recruiting or promoting managers who have demonstrated micromanagement tendencies (e.g., Zheng et al., 2023) and rather look for managers who are able and willing to provide sufficient informational cues about employees' competence and worth to the organization (Deci et al., 2017).

In sum, our results contradict a unidimensional positive view that perceived PFP should be maximized. Bamberger and Belogolovksy (2010, p. 968), for instance, argued that perceived PFP is ‘at the core of cognitive- episodic models of motivation’ and they advised managers to ‘bolster employee PFP perceptions’ (Belogolovsky & Bamberger, 2014, p. 1727). Our findings clearly support a more complex and balanced view. First, although controlling and informational perceptions of pay reflect distinct motivational pathways, their consistent positive associations with perceived PFP and their significant but modest intercorrelations suggest that they are not mutually exclusive and that they can operate simultaneously within the same employee.

Strengths, limitations, and implications for future research

Our results from Studies 1 and 2 are obtained from a considerable number of employees from different organizations and countries, probably representing typical pay plans, and our hypotheses are tested with a large number of relevant control variables. This type of data,

however, prevented us from being able to control for actual PFP characteristics beyond whether participants were eligible for bonus payments (and PFP proportion and performance subjectivity in Study 2). It also made it practically impossible to include data on in- role or contextual work performance from managers, customers, or peers. We believe, however, that the advantages of including employees from a diverse set of contexts more than outweigh such a limitation. In addition, the unequivocal association between autonomous motivation and work performance in prior research (Cerasoli et al., 2014; Good et al., 2022; Ryan et al., 2022) and the inclusion of job-related anxiety and turnover intention makes the reliance on a single source of data less disadvantageous. In our studies, we also collected data at separate data points to minimize common method variance.

We also tested our hypotheses in a sample of employees working under a high- powered pay plan in Study 3. For job-related anxiety and turnover intention, our findings suggest that under high-powered PFP plans, the controlling perception of pay is amplified while the informational perception is mitigated. The result that a controlling perception of pay did not mediate a negative association between VPFP intensity and autonomous motivation questions the external validity of SDT in such pay contexts. However, this sample was relatively small, data were collected at two rather than three points in time, and we were not able to include several relevant control variables. Therefore, the results of Study 3 should be interpreted with caution, and future research on employees working under similar high- powered pay plans is needed before we can conclude that PFP is not a threat to autonomous motivation in such contexts.

Among other potential avenues for future research are investigations that scrutinize how and when perceived PFP increases or decreases control and informational perceptions of pay. Concerning how, satisfaction of the basic needs for autonomy, competence, and relatedness is a

relevant mediating factor (Gagné & Forest, 2008). With respect to when, relevant moderator candidates are leadership and justice perceptions (Hewett & Leroy, 2019; Kong et al., 2023), motivational climates focusing on mastery versus rivalry (Nerstad et al., 2018), and individual differences in how much employees value money at work, such as desire for money (Hur & Nordgren, 2016) or how much they are concerned for others rather than themselves at work, such as other orientation (Buch et al., 2019). With respect to leadership, another interesting research opportunity is to explore the causal relationship between close monitoring and a controlling perception. Does the presence of bonuses make managers perceived as more controlling, or do controlling managers make bonus systems more controlling?

Finally, more field studies on pay and motivation are strongly needed (Kim et al., 2022), and longitudinal research on the development and dynamism of controlling and informational perceptions of pay would be particularly relevant. For instance, employees may perceive higher levels of being controlled by pay immediately after the implementation of variable pay. To understand such and similar maturation effects, longitudinal research on controlling and informational perceptions of pay is needed. Finally, and mainly to assist practitioners in the design of PFP plans, we deem it important to investigate how actual PFP characteristics influence controlling and informational perceptions of pay.

CONCLUSION

There has been much controversy concerning the perceptions of PFP on autonomous motivation in the ‘real world’. Our studies suggest that PFP can both increase and decrease autonomous motivation, job-related anxiety, and turnover intention through controlling and informational perceptions of pay.

AUTHOR CONTR IBUTIONS

Bård Kuvaas: Conceptualization; investigation; funding acquisition; methodology; validation; visualization; formal analysis; project administration; data curation; supervision; resources; writing – original draft; writing – review and editing. **Haien Ding:** Methodology; validation; visualization; writing – review and editing; formal analysis; data curation.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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APPENDIX A

A.1 | A Note on Content Validity for the Informational Perception Scale

To focus the attention of the participants on the performance-based part of their pay rather than pay in general or the compensation system, we slightly alter the wording of the scales to measure an informational perception of pay in Study 2. The exact changes are present in Table A1 below. We define an informational perception of pay as the extent to which PFP received at work is perceived as conveying information about competence and worth to the organization. As shown in the table below, all items align with the construct definition.

TABLE A1 Items used in Studies 1 and 2.

Study 1	Study 2
The pay I receive for doing my job makes me feel valued by my organization	The pay I receive for my performance makes me feel valued by my organization
The pay I receive for doing my job makes me feel competent at work	The pay I receive for my performance makes me feel competent at work
I view the pay I receive for doing my job as a confirmation of my worth to the organization	I view the pay I receive for my performance as a confirmation of my worth to the organization
I consider the pay I receive for doing my job as a thank you for the high efforts I spend at work	I consider the pay I receive for my performance as a thank you for the high efforts I spend at work
The pay I receive for doing my job gives me a feeling that my effort is being acknowledged by the organization	The pay I receive for my performance gives me a feeling that my effort is being acknowledged by the organization
I feel that the pay I receive for doing my job values me for who I am for the organization and not only my latest contributions to the organization	I feel that the pay I receive for my performance values me for who I am for the organization and not only my latest contributions to the organization

Finally, it is important to distinguish an informational perception of pay from more general perceptions of performance feedback. That is why we included a measure of feedback from the job that assesses performance feedback in the EFA to test discriminant validity and included this measure as a control variable. As shown in Table 1, there are no cross- loadings among the items measuring the two constructs.

APPENDIX B

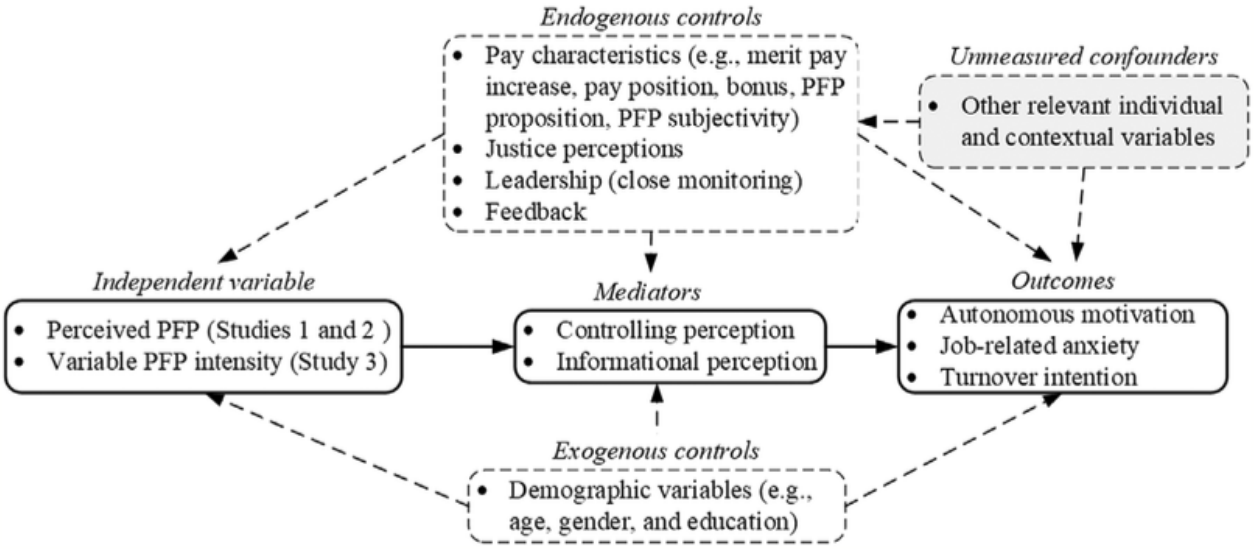

FIGURE A1 Performance.

Causal diagram to justify the choice of control variables. *Note*: Solid lines represent study variables and hypothesized relationships, and dashed lines represent control variables and their potential perceptions. PFP, Pay for Pefromance.

Figure 1

Theoretical model. *Note*: Dashed lines represent negative relationships, and solid lines represent positive relationships.

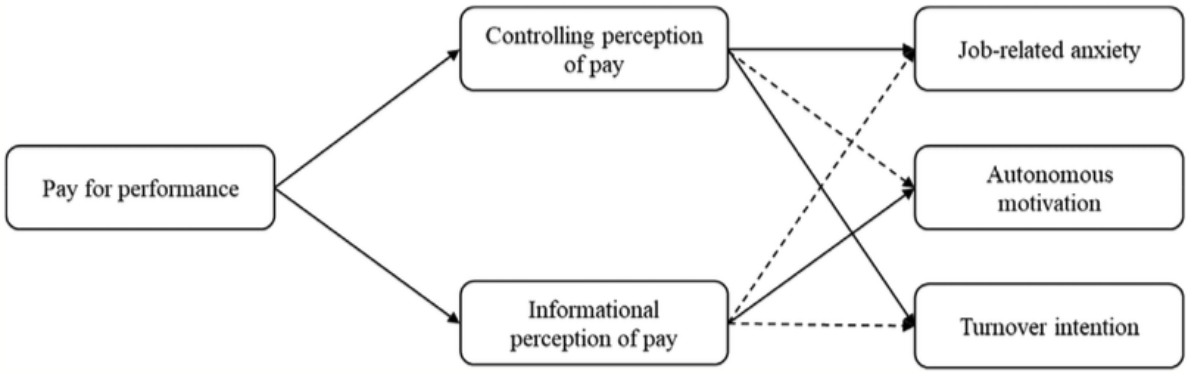

Figure 2

The mediating roles of informational and controlling perceptions of pay between perceived pay for performance and the dependent variables (Study 2). Standardized coefficient estimates are reported. *N*=819. **p<.01; *p<.05.

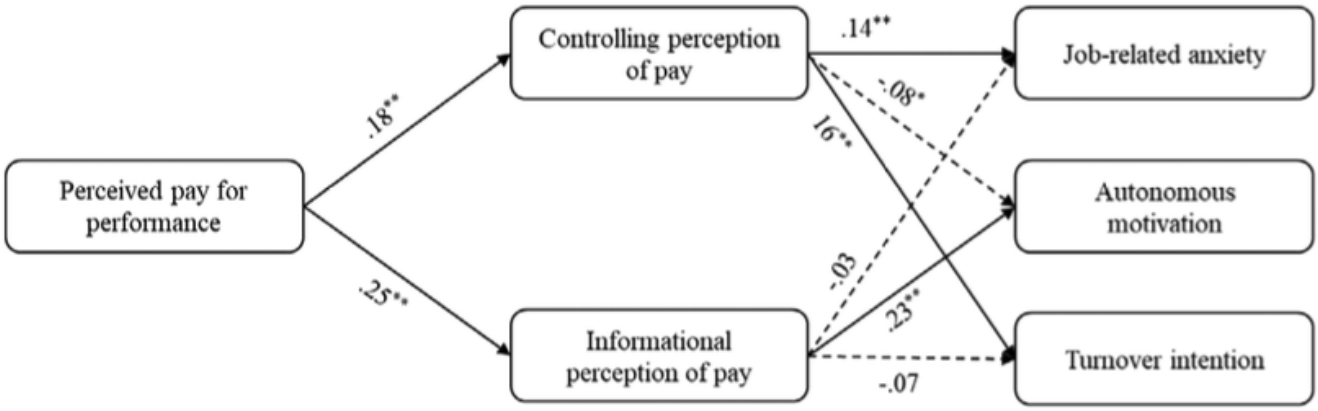

Figure 3

The mediating roles of informational and controlling perceptions of pay between variabel pay for performance intensity and the dependent variables (Study 3). Standardized coefficient estimates are reported. N=256. **p<.01; *p<.05.

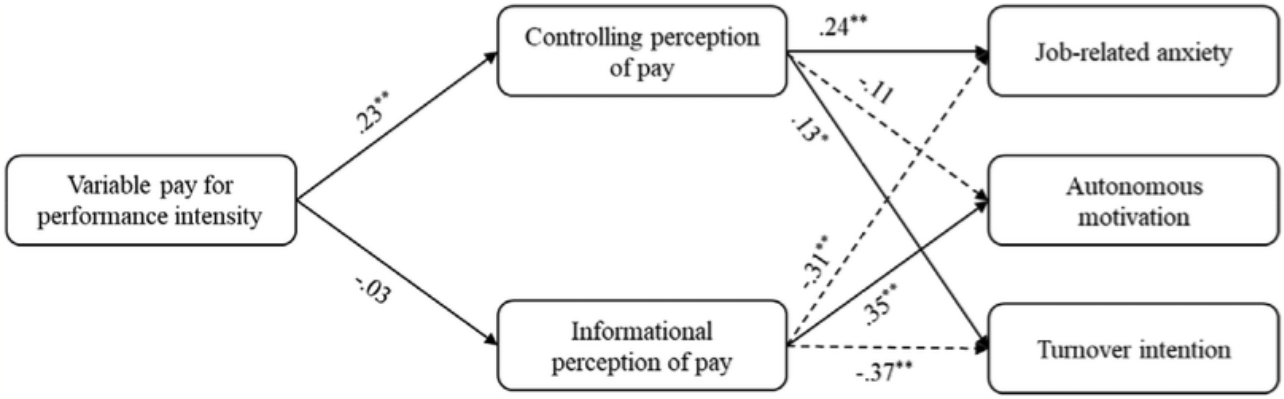

Table 1

Exploratory factor analysis of informational perception of pay (Study 1).

Items	IEP	FB	PPFP
IPP: The pay I receive for doing my job gives me a feeling that my effort is being acknowledged by the organization	.90		
IPP: The pay I receive for doing my job makes me feel competent at work	.89		
IPP: The pay I receive for doing my job makes me feel valued by my organization	.87		
IPP: I feel that the pay I receive for doing my job values me for who I am for the organization and not only my latest contributions to the organization	.86		
IPP: I view the pay I receive for doing my job as a confirmation of my worth to the organization	.84		
IPP: I consider the pay I receive for doing my job as a thank you for the high efforts I spend at work	.81		
FB: I receive frequent and continuous feedback on how I do my job		.87	
FB: I rarely get feedback, except for formal feedback systems such as performance appraisal (R)		.86	−.11
FB: I receive clear and direct information about my work performance through continuously provided feedback		.83	
FB: In my job, I'm continuously informed about what I have done well or what I could have done better		.78	
FB: I know little about what my colleagues think about my work performance (R)		.47	−.12
PPFP: If I perform especially well on my job, it is likely that I will be well-paid			.89
PPFP: I see a clear linkage between my performance and the pay I receive			.87
PPFP: There is a definite relationship between the quality of my work and the pay I receive			.87
PPFP: There are significant pay differences across employees in my organization that represent their differences in performance	−.19		.81
Eigenvalues	6.31	2.43	1.74
% of variance	42.10	16.19	11.49

Note: $N = 952$. (R) = Reverse scored. Factor loadings <0.10 are not shown.

Abbreviations: FB, Feedback; IPP, Informational Perception of Pay; PPFP, Perceived Pay for Performance.

Table 2

Means, standard deviations, and correlations of variables for Study 1.

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Private sector	1.77	0.42	-														
2. Education	4.64	1.36	−.13**	-													
3. Organizational tenure	2.50	1.08	−.09**	−.04	-												
4. Manager	1.58	0.49	.02	.02	.17**	-											
5. Gender	1.50	0.50	.06	−.07*	.06	.02	-										
6. Feedback	3.08	0.49	.04	−.02	−.11**	.10**	.00	(.82)									
7. Close monitoring	2.33	0.97	.03	−.07*	−.10**	.04	.02	.21**	(.88)								
8. Merit pay increase	3.41	1.33	.05	.03	.09**	.07*	.06	.02	−.11**	-							
9. Pay position	5.23	1.99	.01	.10**	.21**	.17**	.06	.07*	−.11**	.23**	-						
10. Bonus	1.63	0.48	.18**	.00	.03	.18**	.01	.17**	.04	.13**	.17**	-					
11. Procedural justice	2.85	0.88	.07*	.02	.06	.14**	.08*	.29**	−.08*	.29**	.40**	.24**	(.86)				
12. Distributive justice	2.92	1.12	.06	.03	.04	.07*	.11**	.23**	−.02	.30**	.45**	.21**	.58**	(.93)			
13. Perceived PFP	3.13	1.07	.25**	−.07*	.01	.24**	.02	.34**	.09**	.22**	.32**	.49**	.49**	.50**	(.84)		
14. Informational perception	3.23	0.98	.00	.06	.04	.10**	.04	.24**	−.02	.24**	.35**	.14**	.43**	.56**	.39**	(.93)	
15. Controlling perception	2.84	0.74	.13**	−.04	−.14**	.03	.05	.07*	.18**	−.09**	−.08*	.17**	−.06	−.16**	.15**	−.10**	(.74)

Note: $N = 952$. Private sector was coded as 1/2 (public or not-for-profit sector/private sector). Gender was coded as 1/2 (female/male). Manager was coded as 1/2 (no/yes). Bonus was coded as 1/2 (no/yes). Values on the diagonal represent Cronbach's alpha reliability estimates.

Abbreviation: PFP, Pay for Performance.

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

Table 3

Regression results for Study 1.

	Informational perception		Controlling perception	
Variable	*β*	(SE)	*β*	(SE)
Controls				
Private sector	−.06*	(.06)	.06	(.06)
Education	.04	(.02)	.00	(.02)
Organizational tenure	.01	(.03)	−.11**	(.02)
Manager	.02	(.06)	−.01	(.05)
Gender	−.01	(.05)	.08**	(.05)
Feedback	.09**	(.06)	.01	(.05)
Close monitoring	−.01	(.03)	.12**	(.02)
Merit pay increase	.05	(.02)	−.05	(.02)
Pay position	.08*	(.02)	.01	(.01)
Bonus	−.05	(.06)	.12**	(.05)
Procedural justice	.09*	(.04)	−.03	(.03)
Distributive justice	.39**	(.03)	−.27**	(.03)
Independent variable				
Perceived PFP	.13**	(.03)	.22**	(.03)
R^2	.36		.15	

Note: Standardized coefficient estimates are reported.

Abbreviation: PFP, Pay for Performance.

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

Table 4

Means, standard deviations, and correlations of variables for Study 2.

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. Private sector	1.65	0.48	-																				
2. Education	4.52	1.39	−.18**	-																			
3. Organizational tenure	3.17	1.26	.04	−.11**	-																		
4. Manager	1.53	0.50	.10**	.05	.18**	-																	
5. Gender	0.46	0.50	−.13**	.08*	−.16**	−.12**	-																
6. US	0.06	0.23	.03	.08*	−.06	−.05	−.03	-															
7. Feedback	2.97	0.89	.02	−.06	−.07*	.03	.02	.05	(.84)														
8. Close monitoring	2.16	1.08	.09*	−.01	−.13**	.04	.02	.02	.14**	(.93)													
9. Merit pay increase	3.60	1.16	−.07	.06	.08*	.09*	−.05	−.04	.10**	−.05	-												
10. Pay position	5.21	1.98	.10**	.09**	.25**	.23**	−.18**	.03	.05	−.20**	.16**	-											
11. Bonus	1.47	0.50	.33**	−.05	−.02	.11**	−.12**	.04	.10**	.06	.08*	.14**	-										
12. Procedural justice	2.52	0.90	.16**	−.02	.03	.17**	−.15**	.02	.26**	−.09*	.20**	.37**	.18**	(.87)									
13. Distributive justice	2.71	1.13	.17**	.02	.06	.14**	−.16**	.02	.22**	−.13**	.20**	.47**	.18**	.59**	(.94)								
14. PFP subjectivity	2.27	0.80	−.10**	.05	.01	−.05	.02	.06	−.08*	−.05	.08*	−.01	−.05	−.10**	−.06	-							
15. PFP proportion	1.60	1.40	.17**	−.01	−.01	.10**	−.10**	.01	.01	.11**	−.03	.14**	.15**	.21**	.16**	−.11**	-						
16. Perceived PFP	2.74	1.06	.36**	−.09*	.03	.17**	−.12**	.08*	.24**	.13**	.11**	.24**	.45**	.42**	.45**	−.12**	.30**	(.89)					
17. Informational perception	3.26	0.97	.21**	−.01	.05	.11**	−.08*	.05	.31**	−.04	.13**	.27**	.24**	.39**	.47**	−.05	.12**	.46**	(.94)				
18. Controlling perception	2.81	0.74	.16**	.05	−.10**	.05	−.08*	.03	.00	.26**	−.04	−.12**	.18**	.00	−.11**	−.08*	.06	.18**	.12**	(.74)			
19. Autonomous motivation	3.19	0.82	−.07	.07*	.06	.08*	.02	−.04	.33**	−.08*	.13**	.20**	.04	.27**	.28**	−.03	.05	.26**	.37**	−.08*	(.89)		
20. Anxiety	2.71	0.95	−.08*	.12**	−.05	.04	.19**	−.02	−.14**	.30**	−.11**	−.25**	−.07*	−.22**	−.28**	−.02	.00	−.15**	−.18**	.20**	−.25**	(.81)	
21. Turnover intention	2.67	1.23	.02	.03	−.14**	−.04	.07	.01	−.21**	.24**	−.17**	−.27**	.00	−.31**	−.42**	−.02	−.05	−.12**	−.24**	.26**	−.46**	.45**	(.94)

Note: $N = 819$. Sector was coded as 1/2 (public or not-for-profit sector/private sector). Gender was coded as 0/1 (female/male). US was coded as 0/1 (no/yes). Manager was coded as 1/2 (no/yes). Bonus was coded as 1/2 (no/yes). Values on the diagonal represent Cronbach's alpha reliability estimates.

Abbreviation: PFP, Pay for Performance.

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

Table 5

Regression results for Study 2.

	Controlling perception		Informational perception		Autonomous motivation		Anxiety		Turnover intention	
Variables	***β***	**(SE)**	***β***	**(SE)**	***β***	**(SE)**	***β***	**(SE)**	***β***	**(SE)**
Controls										
Private sector	.09*	(.06)	.07*	(.07)	−.14**	(.06)	−.04	(.07)	.05	(.09)
Education	.10**	(.02)	.03	(.02)	.08**	(.02)	.11**	(.02)	.02	(.03)
Organizational tenure	−.06	(.02)	.03	(.02)	.04	(.02)	.06	(.03)	−.08*	(.03)
Manager	.03	(.05)	.00	(.06)	.01	(.05)	.09**	(.06)	.03	(.08)
Gender	−.09**	(.05)	.02	(.06)	.05	(.05)	.16**	(.06)	.01	(.08)
US	.01	(.10)	.01	(.12)	−.07*	(.11)	−.00	(.13)	.01	(.16)
Feedback	−.04	(.03)	.19**	(.03)	.23**	(.03)	−.10**	(.04)	−.14**	(.05)
Close monitoring	.19**	(.02)	−.05	(.03)	−.07*	(.03)	.25**	(.03)	.14**	(.04)
Merit pay increase	−.01	(.02)	.00	(.03)	.02	(.02)	−.04	(.03)	−.06*	(.03)
Pay position	−.09*	(.01)	.04	(.02)	.04	(.02)	−.12**	(.02)	−.04	(.02)
Bonus	.09*	(.06)	.04	(.06)	−.06	(.06)	−.00	(.07)	.03	(.08)
Procedural justice	.05	(.03)	.06	(.04)	.06	(.04)	−.02	(.04)	−.07	(.05)
Distributive justice	−.18**	(.03)	.24**	(.03)	.00	(.03)	−.07	(.04)	−.28**	(.05)
PFP subjectivity	−.05	(.03)	−.02	(.04)	−.00	(.03)	−.02	(.04)	-,02	(.05)
PFP proportion	−.02	(.02)	−.02	(.02)	.00	(.02)	.04	(.02)	−.03	(.03)
Independent variable										
Perceived PFP	.18**	(.03)	.25**	(.04)	.17**	(.03)	−.08	(.04)	.05	(.05)
Mediators										
Controlling perception					−.08*	(.04)	.14**	(.04)	.16**	(.05)
Informational perception					.23**	(.03)	−.03	(.04)	−.07	(.05)
R^2	.16		.34		.26		.24		.29	

Note: Standardized coefficient estimates are reported.

Abbreviation: PFP, Pay for Performance.

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

Table 6

Mediation analysis for Study 2.

Independent variable	Mediator	Outcome	Effect	Boot SE	95% confidence intervals
Perceived PFP	Controlling perception	Autonomous motivation	**−.014**	.008	[−.031, −.001]
	Informational perception		**.058**	.015	[.032, .090]
	Controlling perception	Anxiety	**.026**	.010	[.009, .047]
	Informational perception		−.009	.010	[−.030, .012]
	Controlling perception	Turnover intention	**.029**	.010	[.012, .052]
	Informational perception		**−.019**	.010	[−.039, −.000]

Note: Completely standardized indirect effects are reported. Bootstrap samples = 5000. Bold values indicate the indirect effects where their 95% confidence intervals excluded zero.
Abbreviation: PFP, Pay for Performance.

Table 7

Means, standard deviations, and correlations of variables for Study 3.

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Region 1	0.09	0.28	-													
2. Region 2	0.25	0.43	−.18**	-												
3. Region 3	0.16	0.37	−.13*	−.25**	-											
4. Industry tenure	4.24	1.25	−.06	−.02	.04	-										
5. Age	4.16	1.26	−.10	−.02	.01	.86**	-									
6. Gender	1.60	0.49	.08	.01	−.04	.19**	.14*	-								
7. Hours worked	5.07	0.83	−.08	−.16*	.12	.16**	.14*	.19**	-							
8. Pay position	6.38	2.48	.01	−.06	.19**	.40**	.33**	.24**	.32**	-						
9. Controlling perception	3.09	0.86	−.08	.08	−.07	−.10	−.12	.01	.00	−.11	(.84)					
10. Informational perception	3.29	0.96	.09	−.08	.15*	.17**	.15*	.03	.06	.54**	−.18**	(.94)				
11. VPFP intensity	5.25	2.47	−.12	−.17**	.06	−.02	−.08	.17**	.17**	.08	.21**	−.01	-			
12. Autonomous motivation	3.98	0.58	.08	−.05	.00	.00	−.02	−.15*	.07	.17**	−.14*	.36**	.09	(.83)		
13. Turnover intention	2.34	1.03	−.01	−.01	−.09	.02	.02	.02	−.13*	−.28**	.19**	−.42**	.01	−.47**	(.92)	
14. Anxiety	3.38	0.96	−.07	.02	−.03	−.12	−.07	−.21**	.07	−.22**	.30**	−.36**	.07	−.26**	.50**	(.87)

Note: $N = 256$. Gender was coded as 1/2 (female/male). Values on the diagonal represent Cronbach's alpha reliability estimates.
Abbreviation: VPFP, Variable Pay for Performance.
*$p < .05$. **$p < .01$.

Table 8

Regression results for Study 3.

	Controlling perception		Informational perception		Autonomous motivation		Anxiety		Turnover intention	
Variables	***β***	**(SE)**	***β***	**(SE)**	***β***	**(SE)**	***β***	**(SE)**	***β***	**(SE)**
Controls										
Region 1	−.05	(.20)	.07	(.19)	.07	(.13)	.02	(.20)	.02	(.22)
Region 2	.09	(.13)	−.04	(.13)	.01	(.08)	.02	(.13)	−.07	(.15)
Region 3	−.05	(.15)	.05	(.15)	−.08	(.10)	.02	(.16)	−.01	(.17)
Industry tenure	.02	(.08)	−.06	(.08)	.02	(.05)	−.12	(.09)	.13	(.09)
Age	−.09	(.08)	.03	(.08)	−.07	(.05)	.13	(.08)	.02	(.09)
Gender	−.00	(.12)	−.09	(.11)	−.20**	(.07)	−.23**	(.12)	.05	(.13)
Hours worked	.02	(.07)	−.11	(.07)	.07	(.04)	.13*	(.07)	−.12	(.08)
Pay position	−.10	(.03)	.60**	(.02)	.01	(.02)	−.02	(.03)	−.10	(.03)
Independent variable										
VPFP intensity	.23**	(.02)	−.03	(.02)	.15*	(.01)	.05	(.02)	−.00	(.03)
Mediators										
Controlling perception					−.11	(.04)	.24**	(.06)	.13*	(.07)
Informational perception					.35**	(.03)	−.31**	(.07)	−.37**	(.07)
R^2	.08		.33		.20		.25		.23	

Note: Standardized coefficient estimates are reported.

Abbreviation: VPFP, Variable Pay for Performance.

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

Table 9

Mediation analysis for Study 3.

Independent variable	Mediator	Outcome	Effect	Boot SE	95% confidence intervals
VPFP intensity	Controlling perception	Autonomous motivation	−.025	.015	[−.056, .001]
	Informational perception		−.009	.022	[−.053, .032]
	Controlling perception	Anxiety	**.054**	.022	[.017, .101]
	Informational perception		.008	.019	[−.029, .048]
	Controlling perception	Turnover intention	**.029**	.016	[.002, .065]
	Informational perception		.010	.023	[−.036, .056]

Note: Completely standardized indirect effects are reported. Bootstrap samples = 5000. Bold values indicate the indirect effects where their 95% confidence intervals excluded zero.
Abbreviation: VPFP, Variable Pay for Performance.