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Performance Management Fairness and Burnout: Implications for Organizational Citizenship Behaviors

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Performance Management Fairness and Burnout: Implications for Organizational Citizenship Behaviors

Abstract

Purpose – Drawing upon organizational justice theory, we examine how perceptions of performance management fairness affect burnout and organizational citizenship behaviors among academic employees. **Methods** – Data from 532 academic employees from a university in Flanders (Belgium) was analyzed using structural equation modelling. **Findings** – Academic employees experience less burnout when performance management fairness is perceived as high. Performance management distributive and interactional fairness increase organizational citizenship behaviors by reducing burnout and supporting partial mediation. **Implications –** Higher education institutions should carefully design and implement performance management systems with fair outcomes, procedures and treatment of employees. **Originality/value -** Our findings stress the importance of fair performance management systems and offer new insights on how these systems affect employee outcomes.

Keywords: performance management, organizational justice theory, burnout, OCB, STEM, SEM

Introduction

To increase public sector efficiency and effectiveness, the governments of many countries have engaged in a series of new public management (NPM) reforms. NPM comes in different sizes and shapes (Pollitt, van Thiel, and Homburg 2007) against the assumption that public and corporate sector organizations do not (or should not) fundamentally differ. Analyses of developments in higher education systems confirm the trend in other public sectors. For instance, Broucker and De Wit (2015) contend that – despite ambiguities and overlap – four main NPM areas can be distinguished in higher education: market-based reform (privatization, competition); budgetary reform (value for money, budgetary incentives, cost-sharing); management style and techniques (the 'right' to manage); and autonomy, accountability and performance. An important subsequent challenge for higher education institutions has been to adopt their performance management (PM) arrangements (Decramer, Smolders, Vanderstraeten, and Christiaens 2012). Here we focus on PM systems, which we define as

consisting of different interrelated performance management practices (Armstrong and Baron 2008) that serve to outline, oversee and assess the performance of employees in a cyclical process, streamlining employee performance with the overall goals of the organization (Aguinis 2013). In higher education institutions, PM systems are implemented by academic employees' supervisors, within their respective research (and teaching) units (Sousa, de Nijs, and Hendriks 2010). With research increasingly becoming a dominant goal of higher education institutions, such management practices tend to focus more on tracking and reviewing academic employees' research performance (Cadez, Dimovski and Zaman Groff 2017). Recently, it has emerged that PM systems are prone to unintended effects on employee well-being and behavior (Van Waeyenberg, Decramer, Desmidt, and Audenaert 2017). Examples include instigating unethical behavior (e.g., data fabrication), creating a too competitive culture (e.g., through focusing on individual targets) and harming employee wellbeing through increasing work pressure (Ordóñes, Schweitzer, Galinsky, and Bazerman 2009). Such unintended effects potentially undermine PM systems from delivering their promises (Audenaert, Decramer, George, Verschuere, and Van Waeyenberg in press; Teelken 2011), such as enhancing the quality and quantity of research (McCormack, Propper, and Smith 2014).

A notable unintended effect is that PM systems, through increasing workload and reduction of academic employees' sense of control, create additional pressures that can facilitate burnout (Barkhuizen, Rothmann, and Vijver 2014). Burnout is defined as a psychological and physical response to workplace stress (Maslach and Leiter 1997), characterized by emotional exhaustion (general tiredness due to excessive physical, cognitive and/or emotional demands) and disengagement from work (emotionally distancing oneself from work; Demerouti, Bakker, Vardakou, and Kantas 2003). Academic employees constitute a major risk group in developing burnout, which might have adverse consequences for higher education institutions (Watts and Robertson 2011). Prior studies found burnout associated with plummeting employee performance, high turnover, eroding satisfaction and decreasing innovation (Halbesleben and Buckley 2004). Experiencing burnout might reduce discretionary behavior among employees, such as organizational citizenship behaviors (OCB; Castanheira and Chambel 2010). OCB are discretionary behaviors that employees engage in beyond their official job obligations. They can be targeted towards colleagues or the organization as a whole (Organ 1988). In the context of academic work, OCB examples include giving feedback on a colleague's paper or sharing the team´s research on social media. PM systems might reduce such discretionary or collective-oriented behaviors, since such systems mostly target individual

performance (Zhang, Song, Hackett and Bycio 2006). While OCB is associated with higher job satisfaction, increased job performance and lower turnover intentions, this topic has thus far received little attention in studies of higher education institutions (Teh, Boerhannoeddin, and Ismail 2012).

Studies that examine performance management practices in higher education institutions are scarce (McCormack et al. 2014). Few higher education scholars have addressed *how* or *why* PM systems affect academic employees (Kallio and Kallio 2014; Ringelhan, Wollersheim, and Welpe 2015). Bowen and Ostroff (2004) assert that employees' *perceptions* of PM systems strongly influence their attitudes and behaviors. Among others, perceptions can center on the transparency of the PM system (PM transparency) or the degree to which employees perceive the PM system is consistently applied (PM consistency; Bowen and Ostroff 2004). PM systems can be viewed in many ways, but of central importance to employees is the perspective of themselves as 'users', in which fairness and equity are key drivers (Bowen, Gilliland, and Folger 2000). Therefore, we focus on *PM fairness* to understand PM systems' unintended effects. PM fairness - defined as the degree to which PM systems provide fair outcomes, procedures and treatment - is a decisive factor for employees to accept the PM system and strongly guides their subsequent feelings and actions (Bowen and Ostroff 2004). The importance of PM fairness perceptions is further emphasized by organizational justice theory (Greenberg 1987), which posits that feelings of moral righteousness about organizational measures tend to steer employees' attitudes and behaviors in the workplace. Prior studies confirm the predictive value of PM fairness (e.g., Decramer, Smolders, and Vanderstraeten 2013; Dewettinck and van Dijck 2013): its presence has been linked to both lower levels of burnout (e.g., Brown and Benson 2003; Castanheira and Chambel 2010) and increased levels of organizational citizenship behavior (e.g., Cohen-Charash and Spector 2001; Katou 2013). In other words, a PM system high in PM fairness could be able to reduce some of these unintended effects. With this in mind, we ask, *how does PM fairness relate to burnout and OCB among academic employees?* Addressing this question is important to increase our understanding of the potential unintended effects of PM systems and to grasp how these systems can be designed to benefit both academic employees and their institutions (Decramer et al. 2013; Kallio and Kallio 2014).

An Organizational Justice Perspective on Higher Education Institutions

Higher education institutions may be conceived as 'special' regarding the rather intangible services (research and teaching) they offer and with respect to features such as professional autonomy. However, in many respects, the employee-organization relationship is not significantly different from other organizations (Brunsson and Sahlin-Andersson 2000). Contemporary public management literature – using the term organizational hybridity – stresses that the boundaries between corporate sector and public sector organizations are becoming increasingly blurry (see e.g., Skelcher and Smith 2015). It is therefore warranted to take a generic organization theory as a point of departure for our analysis. Applying organizational justice theory (Greenberg 1987) to PM in higher education institutions implies that academic employees' perceptions of PM fairness center around [1] the outcomes of the PM system (PM distributive fairness), [2] its procedures (PM procedural fairness) or [3] their personal treatment during the unfolding of the PM system (PM interactional fairness; Colquitt et al. 2001). *PM distributive fairness* is the perception among academic employees that the outcomes of the PM system reflect their invested efforts (Colquitt et al. 2001). For example, academic employees might perceive the outcomes of the PM system to be fair when they see their excellent publications translated into a tenure track or a promotion. *PM procedural fairness* refers to academic employees' judgement of the equity and equality of the PM system's procedures to arrive at its outcomes (Colquitt et al. 2001). For example, when academic employees view that the PM system benefits certain employees at the expense of others, they may not feel involved in the practices of the system (e.g., setting research targets or priorities) or they may feel the PM system does not provide sufficient transparency (Heffernan and Dundon 2016). *PM interactional fairness* is the interpersonal dimension of PM fairness and refers to academic employees' personal treatment by their supervisor (e.g., head of department, research leader, team leader) during the enactment of PM systems (Colquitt et al. 2001). Since PM systems are implemented by academic employees' supervisors within their respective units (Sousa et al. 2010), differences in these supervisors' personal approaches can affect academic employees' perceptions of PM fairness and their resulting feelings and actions (Heffernan and Dundon 2016). When academic employees receive a polite treatment and sufficient information from their supervisor regarding the PM system, they are inclined to judge the system as fairer (Colquitt et al. 2001). In what follows, we discuss how PM fairness impacts burnout and OCB and construct our hypotheses.

PM fairness and Burnout

A growing body of research argues that fairness perceptions constitute a key factor in understanding employee burnout (Kroon, Van de Voorde, and Van Veldhoven 2009). While fair PM systems have the potential to reduce burnout (Noblet and Rodwell 2008), unfair PM systems tend to create uncertainty, make it more difficult for academic employees to reach their goals and disrupt social relations in the workplace. In such situations, stress and burnout tendencies are likely to emerge (Moliner et al. 2008).

Academic employees will perceive low *PM distributive fairness* when they feel they invest more in their work than reflected in the reward allocation of the PM system (Colquitt et al. 2001). When employees feel their efforts are not recognized, resulting frustrations might build up to culminate in burnout (Maslach and Leiter 1997; Moliner et al. 2008). For example, a higher education institution's PM system might attach more publications points for tenure to international peer-reviewed publications at the expense of edited book chapters. In this situation, an academic employee that worked long hours to deliver high-quality book chapters might experience more burnout-related feelings, in response to receiving less recognition. Several studies confirm experiences of PM distributive *un*fairness to be positively associated with burnout (e.g., Brown and Benson 2003; Cole, Bernerth, Walter, and Holt 2010; Howard and Cordes 2010).

PM procedural fairness is the view among academic employees that the PM system respects righteousness throughout all of its procedures (Colquitt et al. 2001). When PM procedural fairness is absent, academic employees experience less control and more uncertainty, adding to the likelihood of developing burnout (Rousseau, Salek, Aubé, and Morin 2009). For example, academic employees might develop burnout as a result of frustrations from not having a voice in the process of the PM system or ambiguity about certain expectations. Empirical studies in other settings support this notion (e.g., Brown and Benson 2003; Elovainio, Kivimäki, and Helkama 2001; Kroon et al. 2009; Moliner et al. 2005; Riolli and Savicki 2006; Tepper 2001).

PM interactional fairness entails the feeling among academic employees that they are treated fairly during the implementation of the PM system (Colquitt et al. 2001). In general, employees are very susceptible to unfair supervisory treatment, such as rudeness or withholding certain important information (Tepper 2000). Such negative experiences can be disruptive for the social relationship between the academic employee and supervisor, leading to stress, strain, and increased feelings of burnout (Moliner et al. 2008). Since past research confirms this

relationship (e.g., Cole et al. 2010; Moliner et al. 2005; Moliner et al. 2008; Son et al. 2014; Tepper 2001), we hypothesize that:

H1(a): PM distributive fairness reduces feelings of burnout among academic employees.
H1(b): PM procedural fairness reduces feelings of burnout among academic employees.
H1(c): PM interactional fairness reduces feelings of burnout among academic employees.

PM fairness and OCB

Employees' relationships to their organization can be conceptualized as social exchange relationships, in which both parties expect that their efforts and contributions will be reciprocated by the other party (Shore, Tetrick, Lynch, and Barksdale 2006). When the organization treats its employees fairly, it signals to these employees that they are valued. Employees in such a situation might in exchange engage into more discretionary altruistic behaviors, such as OCB (Greenberg 1993; Moorman 1991). We expect similar exchange relationships to occur in higher education institutions. This means that academic employees will be more inclined to engage in OCB for the team, department or other colleagues when they perceive the PM system as fair.

The social exchange argument seems to work for *PM procedural fairness* and *PM interactional fairness*: studies found perceptions of procedural fairness (e.g., Cohen-Charash and Spector 2001; Karriker and Williams 2009; Nadiri and Tanova 2010) and interactional fairness (e.g., Cohen-Charash and Spector 2001; Karriker and Williams 2009; Moorman 1991; Rupp and Cropanzano 2002) to increase OCB. The empirical support is scarce concerning the relation between *PM distributive fairness* and OCB (e.g., Konovsky and Pugh 1994; Moorman 1991; Nadiri and Tanova 2010; Williams, Pitre, and Zainuba 2002). Since perceptions of distributive fairness concern formal rewards, they seem more capable of predicting economic exchange responses, as opposed to social exchange responses such as OCB (Konovsky and Pugh 1994). However, Niehoff and Moorman (1993) argue that social and economic exchanges in the workplace often have overlap. For example, in response to perceived fair rewards, an academic employee can decide to do unpaid overtime to finish an important task. This implies that an economic exchange (receiving fair rewards) is reciprocated with a social exchange response (doing unpaid overtime). Hence, perceptions of PM distributive fairness can potentially affect OCB as well (Niehoff and Moorman 1993). We hypothesize that:

H2(a): PM distributive fairness increases OCB among academic employees.

H2(b): PM procedural fairness increases OCB among academic employees.

H2(c): PM interactional fairness increases OCB among academic employees.

In addition, we argue that PM fairness can influence OCB *through* academic employees' feelings of burnout. First, an unfair PM system stimulates burnout by creating uncertainty and damaging social relations between the supervisor and the employee (Moliner et al. 2008). Second, PM fairness can facilitate social exchange relations, which trigger reciprocity by engaging in or refraining from OCB (e.g., Cohen-Charash and Spector 2001). Furthermore, feelings of burnout are likely to affect OCB behaviors (e.g., Van Emmerik et al. 2005; Pettita and Vecchione 2011), since the experience of burnout in response to PM *un*fairness might lead academic employees to save their time and energy, by dropping out of OCB-related behaviors as a coping strategy (Castanheira and Chambel 2010). Finally, burnt out employees are less likely to engage in OCB, because they show lower responsiveness to the needs of others in the workplace (Barkhuizen et al. 2014). Therefore, we expect a fair PM system to reduce feelings of burnout, thus increasing the chance that fairness will be reciprocated by academic employees in the form of OCB. We hypothesize that:

H3(a): Burnout mediates the relationship between PM distributive fairness and OCB among academic employees.

H3(b): Burnout mediates the relationship between PM procedural fairness and OCB among academic employees.

H3(c): Burnout mediates the relationship between PM interactional fairness and OCB among academic employees.

Methods

In what follows, we explain the sample we used to test our hypotheses and provide some background on Flanders (Belgium) and the institution under study. We discuss the measures we utilized to operationalize the concepts and clarify the strategy of our analysis, before moving to the results.

Institutional Context

In Flanders (Belgium), the state remains a strong funder and regulator of higher education institutions. Since 2009, research performance indicators have grown in importance for

institutional funding allocation (Broucker, De Wit, and Leisyte 2016). This importance is reflected at the employee level, in PM systems' dominant occupation with outlining, overseeing and assessing academic employees' research performance. Differences may exist in how PM systems take shape *between* the different Flemish higher education institutions (Decramer et al. 2012). In part, this is due to the Codex Higher Education (Flemish Government 2013) stipulating that institutions have the obligation to oversee the their research quality and provide regular assessments (Art. II.121), without prescribing how this process should occur. PM systems are also prone to variations *within* universities due to differences in use and approach between faculties, departments, research teams and the people responsible for the implementation of these systems (Decramer et al. 2012). To control for local institutional variations, this study focuses on the PM system in one Flemish university (41,000 students / 9,000 academic employees). To account for intra-institutional variation, we added controls for gender, research field, and time allocation (see measures). We did not take into account the wage of the participants, since the institution under study is a public institution with statutory pay scales. Therefore, pay is reflected in differences in job title, role and function.

Sample and Procedure

We recruited a sample of junior academic employees from one Flemish university through an online questionnaire (Qualtrics). All employees worked in scientific disciplines related to Science, Technology, Engineering and Mathematics (STEM). Out of 4,586 invitations, we received 667 responses of which 532 were valid (response rate: 14.54%). Table 1 displays the relevant sample distributions. Most respondents were female (56.20%) worked as PhD-researchers on a grant (66.20%) and did research in a Medicine-related subfield (23.30%). On average, researchers were 30.95 years old (SD = 6.23), enjoyed a tenure of 3.81 years (SD = 3.18) in their research team and spent approximately 70.12% of their time on research (SD = 6.23) and 24.03% of their time teaching (SD = 6.23).

Table 1 here

Measures

All measures were validated in past research, but were adapted to the higher education context. Items were scored on a seven-point scale (1 = strongly disagree; 7 = strongly agree), unless stated otherwise. Cronbach alphas ranged between .80 and .92, above the .70 threshold for reliable scales (Gujarati 2008).

PM fairness was measured using the 20-item scale by Colquitt et al. (2001). Items were scored on a five-point scale (1 = to a very small extent; 5 = to a very large extent). The scale discriminates between ***PM distributive fairness***, ***PM procedural fairness*** *and* ***PM interaction fairness***. An example item of PM distributive fairness is 'The outcomes [of planning, monitoring and evaluation] reflect the effort I put into my research'. An example item of PM procedural fairness is 'The process [of planning, monitoring and evaluation] is free of bias'. An example item of PM interactional fairness is 'My research leader explains the procedures of planning, monitoring and evaluation thoroughly'. Cronbach alpha's were .90, .92 and .92 respectively.

Burnout was measured using the Oldenburg Burnout Inventory (OLBI, Demerouti et al. 2003). This scale distinguishes two subscales: ***disengagement from work*** and ***emotional exhaustion***. An example item of disengagement is 'I find my work a positive challenge' (reversed). An example item of exhaustion is 'When I work, I usually feel energized' (reversed). Cronbach's alpha were .80 and .84, respectively.

OCB was measured using 10 items from the scale by Moorman and Blakely (1995), which according to the authors better incorporates Organ's (1988) original notion of the concept. The scale includes both items that have the research team as a referent (***OCBO***) as individual research colleagues (***OCBI***). An example item is 'I voluntarily help new researchers settle into the job'. Cronbach alpha was .82.

Controls: a review by Bernerth and Aguinis (2016) demonstrated that gender, job title / function, tenure and workload division are key control variables to account for when studying burnout and OCB. Therefore, we added controls for academic researchers' gender (0 = female, 1 = male), function (0 = bursary, 1 = research assistant, 2 = teaching and research assistant, 3 = postdoc) and tenure (in years). Workload was operationalized following Van der Weijden et al. (2008) as the percentage of their total time academic employees devoted to research and teaching.

Data Analysis

We tested our hypotheses by structural equation modeling (SEM), a statistical technique that combines factor analysis with regression. This allows us to simultaneously test different hypotheses in one path model and assess mediation effects (Green 2016; Kline 2011). We conducted SEM following Anderson and Gerbing's (1988) two-step approach. In the first step, we calculated the *measurement model*, in which we tested the psychometric properties of the variables in the model by means of confirmatory factor analysis (CFA). In the second step, we constructed the *structural model*, which displays the relevant relations between the variables (Kline 2011). To evaluate our models, we respected indicative values of .95 for the Tucker-Lewis index (TLI) and comparative fit index (CFI), .06 for the root mean square error of approximation (RMSEA) and .08 for the standardized root mean square residual (SRMR) (Hu and Bentler 1999). We performed our analyses in R 3.2.5, complemented with the lavaan package (Rosseel 2012).

Results

The means, standard deviations and correlations are reported in Table 2. Multicollinearity was not problematic since (1) none of the correlations exceeded |.80| (Gujarati 2008) and (2) variance inflation factors (VIF) ranged between 1.28 and 2.14, remaining below 10.00 (Kline 2011). Gender negatively correlated with emotional exhaustion and disengagement. Team tenure showed a negative relation with PM procedural fairness and PM interactional fairness. The time spent on teaching showed a negative association with OCB. Congruent with the hypotheses, PM fairness dimensions correlated negatively with burnout subscales and positively with OCB. Emotional exhaustion and disengagement correlated negatively with OCB.

Table 2 here

Measurement Model

Using CFA, we tested the hypothesized six-factor measurement model against five alternative models. Table 3 displays the fit indices of the models. We tested for common-method bias (CMB) by adding a common latent factor in which all items loaded on the same factor to the hypothesized model (Podsakoff, MacKenzie, Lee, and Podsakoff 2003). Doing so significantly reduced fit ($\Delta\chi^2$ = 814; Δdf = 167; p < 0.001), suggesting that CMB is not problematic in our sample.

Table 3 here

The hypothesized model consisted of PM distributive fairness, PM procedural fairness, PM interactional fairness, emotional exhaustion, disengagement and OCB. This model shows a less than acceptable fit to the data (χ^2 [974]= 3,646; CFI = .729; TLI = .712; RMSEA = .089; SRMR = .104). Inspection of the fit indices reveals a seven-factor model (PM distributive fairness, PM procedural fairness, PM interactional fairness, emotional exhaustion, disengagement and OCB as second order of OCBO and OCBI) that yields a significantly better fit than the hypothesized model ($\Delta\chi^2$ = 459; Δdf = 6; p < 0.001). We further adjusted the model by removing three items for disengagement and one item for OCB (λ < .5). Error correlation was allowed between subscales belonging to the same concept. This final model better fits the collected data (χ^2 [760] = 1,634; CFI = .908; TLI = .901; RMSEA = .058; SRMR = .066). Since there were no theoretical argumentations for further model modification, we choose to accept the improved model.

Structural Model

Based on the measurement model, we tested four competing structural models. Models and fit indices are shown in Table 4. In the hypothesized model, the three PM fairness dimensions predict OCB through emotional exhaustion and disengagement. The fit indices suggests this model shows acceptable fit to the collected data (χ^2 [1,180] = 1,892; CFI = .894; TLI = .882; RMSEA = .050; SRMR = .059). First, we compared this model with one in which the three PM fairness dimensions only had direct effects with burnout dimensions and OCB (*Alternative model 1;* $\Delta\chi^2$ = -76; Δdf = 60; p < .1). Second, we investigated a model in which PM fairness

only indirectly affects OCB through the burnout dimensions (*Alternative model 2;* $\Delta\chi^2$ = -12; Δdf = -3; p < .01*)*. Finally, we examined an additional causal path between emotional exhaustion and disengagement (*Alternative model 3;* $\Delta\chi^2$ = -41; Δdf = -7; p < .001), as suggested by Leiter (1993). None of the competing models showed significant improvement over the hypothesized model; therefore, we retained this model for hypothesis testing.

Table 4 here

Hypotheses Testing

The final structural model is visualized in Figure 1. The regression effects are in Table 5. The results reveal that male academic employees report less emotional exhaustion (b = -.449***) and disengagement from work (b = -.327*). Postdocs experience lower levels of disengagement compared to PhD bursaries (b = -.440*). Significant effects were also found by research field, with academic employees in bioscience (b = .512**) and engineering (b = .485*) sensing greater levels of emotional exhaustion compared to their colleagues in medicine. The time spent on teaching (b = .008**) and time spent on research (b = .011*) were both found to increase academic employees' perceptions of PM distributive fairness.

Confirming H1(a), academic employees that experienced more PM distributive fairness felt lower levels of emotional exhaustion (b = -.222*) and less disengagement from work (b = -.269**). In partial support of H1(c), academic employees reported lower disengagement from work when they perceived more PM interactional fairness (b = -.954*), but a similar effect with emotional exhaustion could not be observed. Contrary to H2, PM fairness did not impact OCB directly. While disengagement reduces OCB behaviors among academic employees (b = -.446*), similar results could not be observed for the emotional exhaustion dimension of burnout.

Figure 1 here

Next, we tested the mediation of PM distributive and PM interactional fairness through disengagement on OCB, as specified in H3. Both independent variables (PM distributive fairness, PM interactional fairness) were correlated with the mediator (disengagement) and the outcome variable (OCB). In the SEM model, direct effects of the independent variables turned out to be insignificant, indicating full mediation. We assessed the robustness of these mediations using Preacher and Hayes' (2008) bootstrapping method. We estimated indirect effects with 95% confidence interval (*CI*) for 1,000 samples. The unstandardized indirect effect was .156*** for PM distributive fairness (*CI* = .152, .159; *SE* = .037) and .280*** for PM interactional fairness (*CI* = .270, .289; *SE* = .092). Both indirect effects were significant in the bootstrapped samples, supporting full mediation and partially confirming H3(a) and H3(c).

Table 5 here

Discussion

While higher education institutions have adopted PM systems to increase their efficiency and effectiveness (Decramer et al. 2012), these systems might in some cases facilitate burnout (Barkhuizen et al. 2014) and reduce academic employees' willingness to engage in OCB (Teh et al. 2012). In response to such unintended effects, we examined PM fairness as a mechanism to understand burnout and OCB-related behaviors among academic employees. Our results reveal that academic employees experience less burnout when they perceive high PM distributive and PM interactional fairness. These academic employees engage more frequently in OCB by experiencing less disengagement from work. Contrary to expectations (e.g., Moliner et al. 2008; Moorman 1991), PM distributive fairness emerged as a strong predictor of burnout in our sample. Potentially, this results from our operationalization of PM distributive fairness in terms of non-monetary rewards, since performance was not related to pay in the institution under study. An alternative explanation is that academic employees in the sample work more individually than in a team. Academic employees working individually are considered to more sensitive to PM distributive fairness than those working in team (Erkutlu 2011).

Implications for Theory

By showing how PM fairness perceptions relate to burnout and OCB, this study demonstrates the value of organizational justice theory (Greenberg 1987) in understanding employees'

reactions to PM systems in hybrid organizations, such as higher education institutions (Skelcher and Smith 2015). Organizational justice theory draws attention to the *user-perspective* of PM systems (Bowen et al. 2000), strengthening the idea that employees' personal perceptions and experiences with PM systems guide their attitudes and behaviors more strongly than the system's managerial design (Nishii, Lepak and Schneider 2008). Few studies in higher education institutions have addressed the effects of management practices in relation to the institution's *internal environment*, let alone subjected these effects to empirical scrutiny (McCormarck et al. 2014). Nevertheless, the theoretical lens of organizational justice theory does not suffice to explain the full complexity of unintended effects of PM systems in higher education institutions. Therefore, other perceptions of PM systems need to be addressed in this context and examined in relation to different employee outcomes.

Implications for Higher Education Institutions

Our findings have practical implications for those who bear the responsibility for PM systems in higher education. PM fairness should be considered early on in the process of designing and implementing PM systems. Doing so, allows higher education institutions to diagnose whether unintended effects are due to academic employees' responses to structural problems (PM distributive fairness), procedural problems (PM procedural fairness) or relational problems (PM interactional fairness). PM systems can have unintended effects on academic employees (Teelken 2011), but when these systems are designed (distributive and procedural fairness), implemented (procedural and interactional fairness) and perceived as fair, they have the potential to reduce burnout and indirectly stimulate employee discretionary behavior (Aguinis 2013). The mediation effect of PM interactional fairness through disengagement on OCB further stresses the importance of supervisors as key intermediaries in PM implementation (Sousa et al. 2010). By respecting fair treatment (e.g., refraining from rudeness or inappropriate remarks, providing sufficient information on the PM system), supervisors can reduce disengagement and increase OCB within the department or team. In certain circumstances, fair treatment by the supervisor can even buffer the negative effects of a PM system lower in PM distributive fairness and PM procedural fairness, although our data does not allow such extrapolation.

Limitations and Future Directions

This study has limitations. First, we used cross-sectional data, while a PM system in a higher education environment typically unfolds over longer periods of time (Decramer et al. 2013). Academic employees' perceptions of fairness can take some time to develop (Ambrose and Cropanzano 2003). Future research could benefit from longitudinal research to gain a temporal understanding of PM system dynamics. Second, data was gathered from one Flemish university. While this poses potential limits to the external validity of our findings, our case concerned a comprehensive research university, representative for the country. We invite subsequent studies to examine PM fairness in other geographical and policy contexts. Finally, fairness perceptions are not the only PM perceptions to affect academic employees' attitudes and behaviors (Bowen and Ostroff 2004). Thus far, PM consistency and PM fairness have been addressed in higher education environments (Decramer et al. 2013), but other kinds of perceptions remain unexplored (e.g., perceptions of PM understandability, PM legitimacy and PM visibility). In addition, recent research suggests that PM fairness is only effective when consistently applied over time (Matta, Scott, Colquitt, Koopman, and Passantino 2017), in other words, when employees also perceive PM consistency. Therefore, higher education institutions should pay attention to the coexistence of different PM perceptions, though this necessarily implies more research in this area.

Conclusion

The study examined how PM systems relate to burnout OCB among academic employees. Our findings support the importance of fair PM systems in higher education institutions. Our analysis shows that PM fairness, more specifically PM distributive and PM interactional fairness, do not impact OCB directly but indirectly through the disengagement dimension of burnout. Research leaders and department heads responsible for implementing PM systems should focus on maintaining fair outcomes, treating academic employees fairly and providing them with adequate information. Overall, our observations stress the importance of employee perceptions of PM fairness, contributing to our understanding of the complex dynamics of PM systems in higher education.

Disclosure Statement

No potential conflict of interest is reported by the authors.

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Table 1. Sample characteristics (N = 532)

	Frequency	Valid percent
Gender		
Male	295	56.2%
Female	230	43.8%
Function		
PhD bursary	338	7.8 %
Research assistant	40	14.1%
Teaching and research assistant	72	66.0%
Post-doc	62	12.1%
Research field		
Medicine	124	23.3%
Pharmaceuticals	20	3.8%
Vetrinary medicine	45	8.5%
Applied Sciences	115	21.6%
Bioscience	113	21.2%
Engineering	115	21.6%

Table 2. Means, standard deviations and correlations

	Mean	SD	1	2	3	4	5	8	9	10	11	12	13
1 Gender	0.44	0.50											
2 Function	1.82	0.74	.025										
3 Research field	3.98	1.56	.271**	0.060									
4 Team tenure (yrs.)	3.81	3.18	.057	0.004	.013								
5 Time spend on teaching (%)	24.46	19.83	-.118*	0.192**	0.012	-0.172**							
6 Time spend on research (%)	70.12	23.03	.098	-0.097	-0.015	-0.007	-0.643**						
8 PM distributive fairness	3.31	0.85	.060	-0.059	0.013	-0.067	0.001	(α = 0.90)					
9 PM procedural fairness	3.38	0.77	.000	-0.017	-0.079	-0.137*	0.059	0.526**	(α =0.92)				
10 PM interactional fairness	3.61	0.88	.091	0.019	0.063	-0.055	-0.018	0.404**	0.616**	(α =0.92)			
11 Emotional exhaustion	3.83	0.98	-.123**	0.079	0.061	-0.117*	0.096	-0.277**	-0.324**	-0.244**	(α =0.80)		
12 Disengagement	3.65	1.07	-.094*	-0.054	-0.020	-0.081	0.024	-0.321**	-0.374**	-0.406**	0.597**	(α =0.84)	
13 OCB	5.21	0.99	.061	0.071	-0.017	0.053	-0.135*	0.290**	0.341**	0.396**	-0.261**	-0.417**	(α =.82)

*Note. *p < .05; **p < .01; ***p < .001;* Gender (0 = female, 1 = male); Function (0 = PhD bursary, 1 = research assistant, 2 = teaching and research assistant, 3 = postdoc); Scientific discipline (0 = medicine, 1 = pharmaceuticals, 2 = veterinary medicine, 3 = applied sciences, 4 = bioscience, 5 = engineering)

Table 3. Measurement models and fit indices

	χ^2	df	CFI	TLI	RMSEA	SRMR
1 factor (CMB)	7.003	989	.390	0.362	0.133	0.122
3 factors (PM fairness, burnout, OCB)	5.205	986	.572	0.551	0.111	0.100
4 factors (PM fairness, disengagement, exhaustion, OCB)	5.027	983	.590	0.568	0.109	0.099
5 factors (IF, DF, PF, burnout, OCB)	3.825	979	0.711	0.695	0.092	0.106
6 factors (IF, DF, PF, disengagement, exhaustion, OCB)	3.646	974	0.729	0.712	0.089	0.104
7 factors (IF, DF, PF, disengagement, exhaustion, OCBO, OCBI)	3.186	968	0.775	0.759	0.082	0.095
7 factors (adjusted: items removed, 2nd order)	1.634	760	0.908	0.901	0.058	0.066

Note. PM = performance management; IF = interactional fairness; DF = distributive fairness; PF = procedural fairness

Table 4. Structural models and fit indices

	χ^2	df	CFI	TLI	RMSEA	SRMR
Hypothesized model (direct + indirect effects)	1.892	1.180	0.894	0.882	0.050	0.059
Alternative model 1 (direct effects only)	1.968	1.240	0.891	0.885	0.049	0.065
Alternative model 2 (indirect effects only)	1.904	1.183	0.892	0.880	0.050	0.065
Alternative model 3 (suggestion Leiter 1993)	1.934	1.187	0.888	0.877	0.051	0.074

Table 5. Regression Results for the Hypothesized Model

	PM distributive fairness		**PM procedural fairness**		**PM interactional fairness**		**Emotional exhaustion**		**Disengagement**		**OCB**	
	b	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*
Gender (0 = female, 1 = male)	0.115	0.124	0.067	0.102	0.123	0.082	**-0.449*** **	0.130	**-0.327***	0.130	0.016	0.142
Function												
PhD bursary (ref.)	-	-	-	-	-	-	-	-	-	-	-	-
Research assistant	0.066	0.250	-0.038	0.206	-0.217	0.165	-0.211	0.253	-0.287	0.267	-0.215	0.285
Teaching and research assistant	-0.042	0.179	-0.077	0.147	-0.104	0.118	-0.104	0.175	0.019	0.182	-0.059	0.194
Post-doc	-0.106	0.207	-0.098	0.170	0.070	0.136	-0.126	0.206	**-0.440***	0.216	0.261	0.232
Research field												
Medicine (ref.)	-	-	-	-	-	-	-	-	-	-	-	-
Pharmaceuticals	-0.279	0.302	-0.400	0.250	-0.237	0.199	0.517	0.298	0.339	0.307	0.048	0.330
Veterinary medicine	-0.177	0.231	-0.177	0.191	-0.057	0.152	0.399	0.228	0.175	0.235	0.013	0.253
Applied Sciences	-0.217	0.184	-0.159	0.152	-0.054	0.121	0.347	0.182	0.032	0.187	0.015	0.205
Bioscience	-0.093	0.179	-0.235	0.148	-0.095	0.118	**0.512****	0.181	0.258	0.182	-0.080	0.201
Engineering	-0.123	0.192	-0.281	0.159	-0.031	0.126	**0.485***	0.197	0.387	0.202	-0.077	0.220
Team tenure (yrs.)	-0.012	0.021	-0.029	0.017	-0.008	0.014	-0.020	0.021	0.016	0.022	0.039	0.024
Time spend on teaching (%)	0.006	0.004	**0.008****	0.003	0.003	0.003	0.002	0.004	0.001	0.004	-0.005	0.004
Time spend on research (%)	0.009	0.006	**0.011***	0.005	0.006	0.004	0.008	0.006	0.006	0.006	-0.004	0.006
PM distributive fairness							**-0.222***	0.097	**-0.269****	0.102	0.066	0.107
PM procedural fairness							-0.135	0.208	0.144	0.239	0.026	0.249
PM interactional fairness							-0.280	0.351	**-0.954***	0.422	0.567	0.460
Disengagement											**-0.446***	0.172
Emotional exhaustion											0.236	0.159

Note. N = 242. *p < .05; **p < .01; ***p < .001. χ^2 = 1892 df = 1180, CFI = .894, TLI = .882, RMSEA = .050, SRMR = .059.