

**PERFORMANCE APPRAISAL AND EMPLOYEE COMMITMENT:  
THE MEDIATING ROLE OF JOB SATISFACTION**

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**ABSTRACT**

Commitment is essential for employees to establish and maintain a long-lasting employer-employee relationship. Hence, the call for more research to investigate its antecedents. The purpose of our study was to empirically investigate the relationship between performance appraisal and employee commitment. Analysis of survey data drawn from academics across the United Kingdom (UK) Higher Education Institutions (HEIs) found a positive relationship between performance appraisal and employee commitment, explained through the mediation of job satisfaction. The study is novel as it extends performance appraisal and employee commitment theorization by highlighting how job satisfaction mediates both constructs differently at intrinsic and extrinsic levels. Practically, our study provides insights that will support the development of performance appraisal systems that influence job satisfaction and commitment of academics.

**Keywords**

Academics, employee commitment, extrinsic job satisfaction, intrinsic job satisfaction, job satisfaction, performance appraisal

## INTRODUCTION

Employees committed to an organization are willing to establish and maintain a long-lasting employer-employee relationship (Xiao and Wilkins, 2015; Meyer, Becker and Vandenberghe, 2004). Employee commitment is a feeling that they are obligated to remain in employment and a willingness to remain committed because of their awareness of the challenges that their exiting may have on their organization (Meyer and Herscovitch, 2001). Committed employees take their job seriously and positively influence their co-workers toward achieving organizational goals (Stinglhamber *et al.*, 2015). These broad explanations of employee commitment explain why investigations into its antecedents dominate the organization research debate. For example, existing research has established a relationship between variables such as corporate social responsibility (Loor-Zambrano, Santos-Roldán and Palacios-Florencio, 2022), reward (Hoole and Hotz, 2016; Newman and Sheikh, 2012), job satisfaction (Ekmekci *et al.*, 2021), and performance appraisal (Kallio and Kallio, 2014). Nevertheless, more investigations are required to understand how these variables affect employee commitment (Loor-Zambrano, Santos-Roldán and Palacios-Florencio, 2022).

While a relationship has been identified between performance appraisal systems and employee commitment, particularly in studies by Giauque, Resenterra and Siggen (2010) and Newman and Sheikh (2012), these studies needed to be more comprehensive in their explanation of the boundary conditions underpinning them. Our study attempts to take the debate further by investigating job satisfaction as a mechanism for explaining the relationship between performance appraisal and employee commitment. Job satisfaction is a way for employees to express their feeling of contentment with their job, and it mediates employee outcomes in organizational

research (Ekmekci *et al.*, 2021). Our investigative approach explores job satisfaction at an individual component level (intrinsic and extrinsic) against the composite conceptualization used in extant studies (Ekmekci *et al.*, 2021; Decker and Van Quaquebeke, 2015; Lan, Okechuku, Zhang, and Cao, 2013). This approach provides a novel contribution by highlighting the individual mediating effects of intrinsic and extrinsic job satisfaction on performance appraisal and employee commitment relationships. The study has significant implications for practice. As Slocum and Hellriegel (2009) put it, statements of intent should follow concrete acts. Perceptions of fair outcomes often result in higher levels of employee commitment. It becomes evident that the performance appraisal system can be a valuable tool for building employee commitment, particularly where employees perceive the system to be accurate and fair (Thurston and McNall, 2010). Employers can develop employee commitment by ensuring that the means for assessing performance is adequate and that they achieve their effort-to-performance expectations.

We conducted our study in the UK higher education sector due to the challenge of organizational commitment experienced in the sector (Perryman and Calvert, 2020). This lack of commitment among academics in the UK higher education sector may negatively affect the overall performance of universities (Capone, Marino and Park, 2021); and the development of any country depends on a thriving higher education sector (Aldawod, 2022). Quality higher education, through the contributions of committed academic staff members (Capone, Marino and Park, 2021), creates opportunities for people to contribute to the economy (Erlangga, 2022). Consequently, investigating how to improve the outcome of this sector will not only help improve a

country's human capital capacity but also reduce socioeconomic inequalities (Janib, Rasdi and Zaremohzzabieh, 2022).

The remainder of this paper progresses as follows: first, it presents contextual development. Second, the study draws on Organizational Justice Theory to establish a link between performance appraisal, job satisfaction, and employee commitment. Third, the methodology is presented. Fourth, we present the results from data analysis. Lastly, discussions, implications, and conclusions are presented.

## UNDERSTANDING THE CONTEXT

Traditionally, the job of academics in the higher education sector is one of stability, with an expectation that they remain employed until retirement (Perryman and Calvert, 2020). However, this view is changing rapidly, with studies suggesting that the longer academics remain employed, the lower their level of organizational commitment (Qudah, Davies and Deakin, 2018). This is because the stress associated with academic work is increasing (Padilla and Thompson, 2016; Kinman, 2019). For example, in the last 10 years, universities in the UK have experienced extensive and ongoing changes that have affected academics' workload, resources, role clarity and job control (Kinman and Wray, 2017; Kinman, 2019). The lack of clarity, increasing workload, and growing scrutiny to perform have yet to be met with a corresponding reward system to reflect their performance (Mabaso and Dlamini, 2018). Hence, the resultant decrease in academics' level of organizational commitment (Perryman and Calvert, 2020). Ensuring that academics are committed to their university employers is essential as it will influence retention intention and improve their performance and, by extension, the degree to which universities achieve their objectives (Kinman, 2019).

Universities in the UK face immense pressure from the government, students, and other stakeholders to prove their usefulness and effectiveness due to the neoliberal government approach (Waring, 2013; Tanveer, Karim and Mahbub, 2018). As a result, the race to secure government funding and win over potential students has become tighter. This competition has resulted in a metrics-based research and teaching culture alongside student consumer-orientated behaviour. The downward pressure on public spending and the politics of austerity accompanies these circumstances (Stevenson and Mercer, 2013). The effects on staff employed in the sector are indisputable. Academic workloads have increased, accompanied by somewhat high levels of turnover. While there is little evidence of the outflow from the sector, evidence suggests a staff shortage (Selesho and Naile, 2014). There is also the issue of repeated industrial action, regarding pay and pensions (Tanveer, Karim and Mahbub, 2018) and concerns about the performance evaluation system (Tanveer, Karim and Mahbub, 2018; Alsaid and Ambilichu, 2023, 2021). In responding to these challenges, universities in the UK constantly seek ways to improve their efficiency and quality of education (Smeenk, Teelken, Eisinga, and Doorewaard, 2008). One of which includes adopting performance appraisal systems as a tool for monitoring academic staff's work to improve delivery quality. Investigating performance appraisal in the higher education sector is crucial as it affects the commitment of academic staff (Smeenk *et al.*, 2008) and is vital for improving the overall value of academic institutions (Tanveer, Karim and Mahbub, 2018).

## DEVELOPMENT OF HYPOTHESIS

### *Performance appraisal and employee commitment*

In the context of this study, the relationship between performance appraisal and employee commitment is underpinned by Organisational Justice Theory (OJT) (Dusterhoff, Cunningham and MacGregor, 2014). Organizational justice refers to employees' view of the performance appraisal process's fairness (Greenberg, 1987). Employees assess fairness regarding the outcome and how they are treated during the performance appraisal process. Employees want the process to reflect their efforts while ensuring equality and a good supervisor relationship (Bauwens, Audenaert, Huisman, and Decramer, 2019). Growing evidence suggests that fairness may influence employee commitment (Seifert, Brockner, Bianchi, and Moon, 2016; Lemons and Jones, 2001). Employees with a positive view of their performance appraisal tend to feel like the outcome is commensurate with their efforts and feel a sense of control while experiencing a good social relationship with their supervisors (Colquitt *et al.*, 2001; Moliner *et al.*, 2005). Where this is the case, employees respond by showing a sense of commitment to their employer. Performance appraisal is one of the Human Resource (HR) practices that employees care about and expect their employers to implement appropriately (Aboramadan, Albashiti, Alharazin, and Dahleez, 2020; Bauwens *et al.*, 2019). Consequently, in line with OJT, performance appraisal may increase employee commitment.

*H1*- There is a positive relationship between performance appraisal and employee commitment.

#### *Performance appraisal and job satisfaction*

Aguinis, Joo and Gottfredson (2013) refer to the performance appraisal system as evaluating and enhancing employee performance and ensuring performance aligns with organizational goals. It is widely perceived as a management tool that helps to augment

organizational performance (Soltani and Wilkinson, 2020). Performance appraisal has been found to be positively related to commitment. Appraisals positively predict employee performance, commitment, and job satisfaction (Soltani and Wilkinson, 2020). According to Aboramadan *et al.* (2020), an effective and well-designed performance appraisal system encourages commitment and offers a blueprint for recognizing and rewarding top performers. The concept of performance appraisals is primarily underpinned by fairness. An element of procedural justice is involved, with emphasis on the events that determine the outcome. Research shows that performance appraisal systems that have transparency and fairness often positively affect job-related attitudes (Aboramadan *et al.*, 2020). This suggests that the process through which performance is measured and the outcomes of the process strongly affect how satisfied employees are with their work (Thurston and McNall, 2010).

Job satisfaction expresses employees' feelings of contentment in their job (Pagan and Malo, 2021). One way for employees to feel content is through a performance appraisal system used to evaluate the quality of work an employee does (Deepa, Palaniswamy and Kuppusamy, 2014). Employees assess the adequacy of the exchange process by reflecting on the information obtained in their social interactions at work. Where they feel that performance appraisal is adequate and consistent, there will be positive effects on job-related attitudes such as job satisfaction and employee commitment. Employees are also less likely to experience burnout (Bauwens *et al.*, 2019). They allow some degree of injustice in outcome distribution where they have positive perceptions of the fairness of the process (Thurston and McNall 2010). Job satisfaction has been conceptualized into two, in line with Herzberg's (1966) two-factor theories (House and Wigdor, 1967). The first, intrinsic job satisfaction, addresses

employee motivational needs and is exemplified by feelings of accomplishment and positive self-esteem (Matthews, Daigle and Houston, 2018). Employees who view the performance appraisal process as adequate take pride in their job and feel self-fulfilment. The second dimension is extrinsic job satisfaction. It focuses on hygiene factors and is mainly derived by employees' view of fairness underpinning work relationships and interaction (Dobrow, Ganzach and Liu, 2018). The relational dimension is observed mainly through employees' relationships with their supervisors (Graen and Uhl-Bien, 1995) and is particularly evident in the performance appraisal process. Therefore, we argue that if employees perceive the performance appraisal as inaccurate or biased, it can generate feelings of dissatisfaction and frustration. This leads to the second hypothesis:

*H2a*- Performance appraisal has a positive impact on employee intrinsic job satisfaction

*H2b*- Performance appraisal has a positive impact on employee extrinsic job satisfaction

### *Job satisfaction and employee commitment*

Commitment is determined by the degree to which employees identify with their organization. Mabaso and Dlamini (2018) refer to commitment as an employee's emotional attachment to their organization, such that they readily offer their talent towards the organization's interests. The concept of employee commitment has been widely researched in disciplines such as public administration, business administration, management, organizational behavior, and industrial psychology (Mabaso and Dlamini, 2018). Furthermore, employee commitment is believed to play a role in the relationship between HR functions and positive job-related attitudes (Crow, Lee and Joo, 2012). As

such, generating a high level of interest in understanding how to foster employee commitment in the public and private sectors has been generated. Notwithstanding, commitment is a less researched subject in the higher education sector. Existing research in the sector tends to focus on subject areas such as the intention to quit (Johnsrud, Heck and Rosser, 2000), job satisfaction (Smerek and Peterson, 2007), and employee morale (Aboramadan *et al.*, 2020). Job satisfaction increases employee commitment. At the intrinsic dimension, studies have shown that employees who are satisfied with their job see a promising future and are committed to their organization's goals (Panmunin, 1993). Job satisfaction influences a sense of pride in employees' work, and research has found it to be pivotal in determining employees' emotional connection to their organization (Kim, Tavitiyaman and Kim, 2009). Extrinsically, employees who perceive fair treatment at work are more likely to be emotionally connected to the employer. This, leads to the third hypothesis:

*H3a-* Intrinsic job satisfaction has a positive impact on employee commitment.

*H3b-* Extrinsic job satisfaction has a positive impact on employee commitment.

*The mediating role of job satisfaction in performance appraisal-employee commitment relationship*

Performance appraisal enhances employee commitment when employees are satisfied with the employer's appraisal system (Jawahar, 2006). Employees' view of the performance appraisal system's accuracy impacts them intrinsically as they feel a sense of accomplishment for the work done. This reaction predicts their intrinsic job satisfaction attitudes. Hence, performance appraisal positively affects employee

commitment through intrinsic job satisfaction only where there is perceived accuracy in the process (Mabaso and Dlamini, 2018).

Employees often have specific perceptions of how they have performed; perceptions which develop within the context of self-perceptions of their effort and skills (Thurston and McNall 2010). Upon completing their performance appraisal, their ratings may differ from their self-perceptions of how well they have performed, resulting in dissatisfaction and reduced commitment. The degree of dissatisfaction is minimal when they perceive the performance appraisal process as fair and accurate. This aligns with the social justice theory which suggests that where employees perceive their input as balanced with their appraisal outcome, the social exchange is considered fair (Thurston and McNall 2010). This suggests that employees are motivated to perform when they observe a strong connection between their appraisal outcome and performance (Aktar, Sachu and Ali, 2012). Thus, this study postulates that performance appraisal may influence employee commitment through extrinsic job satisfaction when employees' perception of the appraisal process is fair. This, leads to the fourth hypothesis:

*H4a-* Intrinsic job satisfaction mediates the positive impact of performance appraisal on employee commitment

*H4b-* Extrinsic job satisfaction mediates the positive impact of performance appraisal on employee commitment

## METHODOLOGY

### *Measures*

Already validated scales are adopted in this study to reduce the extent to which

measurement errors affect research findings (see e.g. Malhotra and Grover, 1998). Hence, variables are operationalized by adapting measurement scales validated in previous studies (e.g. Mayer and Davis, 1999). Notwithstanding, we presented our data collection instrument to colleagues in the HRM and work psychology field and received valuable feedback. In addition, we piloted our initial survey with academics from two UK universities before finalizing the items in the variables of the study. This justified the inclusion of specific variables in our data collection instrument. We discuss these variables below:

#### Independent variable

*Performance appraisal (PA)*: It is posited that employees' commitment is enhanced by a performance appraisal system that is well structured, lays the framework for acknowledging and recompensing outstanding performers, and is effective (Aboramadan *et al.*, 2020). This involves the process and outcomes of the performance appraisal system (Thurston and McNall 2010). The equitability of such a performance system would impact job satisfaction and employee commitment. To measure PA, we adopted Mayer and Davis (1999). This scale is adequate because it covers the perceived accuracy and outcome instrumentality views. Perceived accuracy refers to the extent to which an appraisee considers the performance ratings to reflect acceptable organizational behaviour. At the same time, outcome instrumentality is how PA relates to a desired organizational outcome (Mayer and Davis, 1999).

#### Mediator variables

*Intrinsic satisfaction and extrinsic satisfaction (IS and ES)*: Job satisfaction reduces the likelihood of employees experiencing burnout (Bauwens *et al.* 2019). Intrinsic job

satisfaction addresses focus on employee motivational needs (Matthews, Daigle and Houston, 2018). On the other hand, extrinsic job satisfaction is rooted in employee perception of the equitability of work relationships and interaction (Dobrow, Ganzach and Liu, 2018), especially with supervisors (Graen and Uhl-Bien 1995). We operationalized intrinsic and extrinsic job satisfaction by adapting scales from Weiss, Dawis and England (1967), to ensure the dimensions of job satisfaction are captured. Furthermore, this scale allows for a multidimensional measurement of job satisfaction with items relating to different aspects of job satisfaction (Martins and Proença, 2012). This approach also advances the theory and practice of industrial and organizational psychology (e.g. Hirschfeld, 2000).

#### Dependent variable

*Employee commitment (EC)*: Commitment is determined by the degree to which employees identify with their organization. Mabaso and Dlamini (2018) refer to commitment as an employee's loyalty to their organisation, such that they readily offer their talent towards the organization's interests. We tested employee commitment by adapting validated scales from Brockner, Tyler and Cooper-Schneider (1992) and Shapiro and Kirkman (1999). These scales provide a broader understanding of the conceptualization of employee commitment and feeling of loyalty to their organization as well as their trust level and willingness to commit to a longer tenure (Shapiro and Kirkman, 1999).

#### Control variables

UK universities are classified as Russell Group (UT1) and non-Russell Group universities. Therefore, we define a Russell Group dummy variable as 1 (one) if a

university is in the Russell Group and zero otherwise. Further, UK universities are also demarcated by the period during which they were created; that is, a post-1992 university (UT2) is distinguished from a university that was established before 1992. Thus, we define a post-1992 university dummy variable as one if a university is post-992 and zero otherwise.

*Staff age:* Age stereotypes often reflect negative attitudes toward older employees' abilities as well as their motivations (Maurer, Barbeite, Weiss, and Lippstreu, 2008; Posthuma and Campion, 2009). Also, the incentives that motivate younger workers may be different from incentives that older workers seek (Paul and Townsend, 1993). Furthermore, organisational characteristics also seem to influence age stereotypes (Perry and Finkelstein, 1999). We control for employee age by using age ranges.

*Staff gender:* Rubery and Hebson (2018) argue that opportunities for organizational renewal will be missed if a gender perspective is not embraced in employment relations. They contend that these missed opportunities result from various resistance, including gender blindness, gender marginalization, and gender preference. This could also be the case for academics in UK HEIs. Thus, we define the employee gender variable as equal to one if an academic is male and zero otherwise.

*Longevity in academia (longevity of service):* Longevity may imply slower progression than expected with more frequent changes of organization (Stumpf, Doh and Tymon Jr, 2010). However, longevity in the job could be less influenced by the desire for progression than by satisfaction and commitment, which are, in turn, driven by the fairness of a firm's performance management and reward systems.

*Salary range:* Remuneration in organizations is often positively correlated with the organization's seniority level. This suggests that junior colleagues earn significantly less than their senior counterparts. Such salary differentials may impact job satisfaction and commitment to the organization. Therefore, we control for employee salaries by using salary ranges.

The relationships between the constructs expressed by the hypotheses and the effect of control variables are represented in Figure 1.

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**Figure 1 [About Here]**  
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#### DATA COLLECTION

We collected data for the study through a structured online survey using Qualtrics, from June 2020 to July 2020. Qualtrics is a platform that is widely used by researchers for data collection (Presbitero, 2020). We embedded our questionnaire into Qualtrics and shared its access link with sample participants (see e.g. Zahoor, Pepple and Choudrie, 2021). Two thousand academics, randomly selected from twenty universities in the UK, were invited to participate in the survey. We adopted a two-step approach in selecting our sample. First, we grouped the universities into post-1992 and pre-1992 universities. Because of the often distinct differences between the two groups of universities (the former is usually more teaching focused while the latter is researched-focused), grouping them prior to sample selection ensured that academics from both groups were included in the sample. Then we randomly selected ten universities from each group.

Second, for each sample university, we collected the list of academics from its website. We then randomly selected the sample academics from each list. We emailed each sample academic to solicit his/her participation in the survey. Four hundred and sixty (460) participants completed the survey, of which there were 363 usable observations. This gives a net usable response rate of 18.15%. Ethics approval was received from a UK university prior to data collection.

### *Descriptive statistics*

Academics who participated in the survey are from universities described in their year of establishment and classification. Of the 20 universities surveyed, 10 were post-1992, and 10 were pre-1992. Details of participants' characteristics are presented in Table 1. The descriptive statistics are presented in Table 2.

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**Table 1 [About Here]**

**Table 2 [About Here]**  
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### *Common Method Bias/Variance*

Common method variance is closely related to social desirability (Podsakoff *et al.*, 2003). Therefore, we minimized this bias by including some survey design measures. For instance, respondent anonymity and confidentiality were ensured by not including respondents' names and the name of their institutions. Also, consistent with Grewal, Chakravarty and Saini (2010), different variations of Likert scales were employed, including "totally disagree/totally agree", "completely wrong/completely right", and

"strongly disagree/strongly agree". Further, following Podsakoff, MacKenzie and Podsakoff (2012) and (Podsakoff, MacKenzie, Lee, and Podsakoff, 2003), Harman's single factor approach (Harman, 1976) was employed as a post hoc test, to statistically test for the existence of common method variance (CMV). Using IBM SPSS 24, the factor analysis shows a value of 31.93%, demonstrating that CMV does not solely influence inter-item correlations.

## ANALYSIS AND RESULTS

We employed PLS-SEM to analyse the data using SmartPLS software. PLS-SEM approach is appropriate for our study, considering variance-based PLS-SEM yields consistent estimation outcomes. However, it demands fewer requirements than CB-SEM, making it a valuable technique for theory testing (Peng and Lai, 2012, Götz, Liehr-Gobbers and Krafft, 2010). Therefore, PLS-SEM was considered appropriate for this study.

### *Evaluation of Model Fit*

#### Measurement models

We evaluated the internal reliability and internal consistency (construct reliability) to validate our measurement models. The absolute standardized loadings of the indicators of the measurement models ranged from 0.646 to 0.881. Hair, Ringle and Sarstedt (2011) argue that indicators with loading between 0.4 and 0.7 should only be considered for removal from the scale if their removal would improve construct reliability. The indicator loadings are indicated in Table 3. We used composite reliability values to evaluate the degree to which manifest variables measure the latent construct to which they are assigned (Götz, Liehr-Gobbers and Krafft, 2010). Composite reliability (CR)

values: 0.883 [PA], 0.883 [ES], 0.869 [IS], and 0.916 [EC] are considered satisfactory (Nunnally and Bernstein, 1994). The statistics are shown in Table 3.

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**Table 3 [About Here]**  
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Structural (mediation) model validation

We ascertain the validity of the structural model by evaluating construct validity, comprised of convergent validity (AVE) and discriminant validity (Bagozzi, Yi and Phillips, 1991). The AVE values are larger than the acceptable threshold of 0.5 [PA = 0.654; ES = 0.655; IS = 0.627; EC = 0.732], validating the convergent validity for all three latent constructs (see Table 3). We assess discriminant validity as follows: (i) the square root of each construct's AVE is larger than its correlation with the other latent constructs (PA-PA = 0.809; PA→ES = 0.536; PA→IS = 0.428; PA→EC = 0.513; ES-ES = 0.810; ES→IS = 0.642; ES→EC = 0.667; IS-IS = 0.792; IS→EC = 0.642; EC-EC = 0.855), thus confirming the Fornell and Larcker (1981) criterion, also see (Henseler, Ringle and Sarstedt, 2015). (ii) HTMT ratios for PA→ES = 0.623; PA→IS = 0.488; PA→EC = 0.574; ES-IS = 0.783; ES-EC = 0.771; IS-EC = 0.751. As the HTMT ratio for each pair of latent constructs is less than 0.85, discriminant validity is established (Kline, 2015). Since all three criteria are validated, discriminant validity of the structural model is established. Thus, the measurement and structural models are validated.

### Determining the effect of mediation

Hayes and Scharkow (2013) procedure was used to mediate the mediating effects of the latent construct. The procedure involves bootstrapping in a two-step procedure (consistent with Hoyle, 1999) as follows: First, the significance of the direct effect was established without the mediator. Second, we established the significance of indirect effects and associated t-values using the path coefficient when the endogenous/mediator variable is present.

The bootstrap settings used were: 5000 subsamples, parallel processing, no significant changes, complete bootstrapping, Bias-Corrected and Accelerated (BCa) bootstrap, two-tailed, and  $\alpha = 0.05$ . From the results of the bootstrap procedure, we calculated the specific indirect effects of (mean, STDEV, t-values, and p-values). Also, 95% confidence intervals and bias-corrected confidence intervals were constructed from the bootstrap results to determine the mediating effects. Existing research has used bias-corrected bootstrap confidence interval to detect the mediating effects when such effects are present (that is, Type-II error or power), while the use of percentile bootstrap confidence interval (non bias-corrected)) is good to allay concerns about Type-I errors (Hayes and Scharkow, 2013). In this regard, the indirect effect is significant if zero (0) is not included between the lower range and upper range of the 95% confidence interval estimates (Nitzl, Roldan and Cepeda, 2016).

## RESULTS

Hypothesis 1 predicts a positive relationship between performance appraisal and the organization commitment of academics in HEIs. The model estimates for the direct PA→EC relationship without the mediators show a path coefficient with a strong effect

( $\beta = 0.517$ ;  $p < 0.001$ ), providing clear support for Hypothesis 1. The  $f^2 = 0.366$  also indicates a large effect of PA on EC (see e.g. Cohen, 2013).

Hypothesis 2a predicts a positive relationship between performance appraisal and intrinsic job satisfaction. The path coefficient supports this suggestion ( $\beta = 0.428$ ;  $t\text{-value} = 9.089$ ;  $p < 0.001$ ;  $f^2 = 0.224$ ), thus supporting  $H_{2a}$ . In Hypothesis 2b, we predicted a positive relationship between performance appraisal and extrinsic job satisfaction. The path coefficient supports this suggestion ( $\beta = 0.536$ ;  $t\text{-value} = 13.403$ ;  $p < 0.001$ ;  $f^2 = 0.402$ ), thus  $H_{2b}$  is supported.

Hypothesis 3a predicts a positive relationship between intrinsic job satisfaction and organizational commitment. The path coefficient shows a positive relationship between the two constructs ( $\beta = 0.339$ ;  $t\text{-value} = 7.107$ ;  $p < 0.001$ ) and supports  $H_{3a}$ . Hypothesis 3b predicts a positive relationship between extrinsic job satisfaction and organizational commitment. The path coefficient shows a positive relationship between the two constructs ( $\beta = 0.353$ ;  $t\text{-value} = 6.903$ ;  $p < 0.001$ ) and supports  $H_{3b}$ .

Furthermore, in hypotheses  $H_{4a}$  and  $H_{4b}$ , we predicted a mediating effect of intrinsic job satisfaction ( $H_{4a}$ ) and extrinsic job satisfaction ( $H_{4b}$ ) on the relationship between performance appraisal and organizational commitment. To establish the mediating effect of these variables on the PA→EC relationship, a model that contains both direct and indirect effects between PA and EC is estimated. The parameter estimates for the direct path coefficient of PA→EC in the mediation model is statistically significant ( $\beta = 0.178$ ;  $t\text{-value} = 3.843$ ;  $p < 0.001$ ). The indirect relationship between PA→EC, and IS→EC, is also statistically significant (see results of hypotheses

$H_{2a}$  and  $H_{3a}$ ). Further, the indirect relationship between PA→EC, and ES→EC, is statistically significant (see results of hypotheses  $H_{2b}$  and  $H_{3b}$ ). See Figure 2.

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**Figure 2 [About Here]**

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To determine the significance of the specific indirect effects of job satisfaction as a potential mediating variable, we employed bootstrap estimates to calculate the standard deviation (standard error (in PLS)). The results show a statistically significant specific indirect effect of: (i) IS on the PA→EC relationship (t-value = 5.636,  $p < 0.001$ ). The 95% confidence intervals (0.144, 0.146) and bias-corrected confidence intervals (0.146, 0.148) also indicate a significant indirect effect. (ii) ES on the PA→EC relationship (t-value = 5.858,  $p < 0.001$ ). The 95% confidence intervals (0.188, 0.190) and bias-corrected confidence intervals (0.190, 0.192) also indicate a significant indirect effect.

In determining the total effect, we used Variance Accounted For (VAF) analysis to ascertain the size of the indirect effect. A VAF of less than 20% indicates no (or nearly zero) mediation, a VAF between 20% and 80% indicates partial mediation and a VAF of more than 80% demonstrates full mediation (Nitzl, Roldan and Cepeda, 2016). The parameters obtained for the mediation effects of IS: (i) original sample: 0.145; sample mean = 0.147; standard error = 0.026. (ii) Confidence Intervals (studentised): 0.144 (at 2.5%), 0.146 (at 97.5%). (iii) Confidence Intervals Bias Corrected (studentised): 0.002 (Bias); 0.146 (at 2.5%); 0.148 (at 97.5%). The direct path coefficient ( $\beta = 0.178$ ,  $p < 0.001$ ), the indirect path coefficient ( $\beta = 0.189$ ,  $p <$

0.001), and VAF = 44.92%, suggest that 44.92% of the effect of PA on EC can be explained via the IS mediator. The parameters obtained for the mediation effects of ES: (i) original sample: 0.189; sample mean = 0.191; standard error = 0.032. (ii) Confidence Intervals (studentised): 0.188 (at 2.5%), 0.190 (at 97.5%). (iii) Confidence Intervals Bias Corrected (studentised): 0.002 (Bias); 0.190 (at 2.5%); 0.192 (at 97.5%). The direct path coefficient ( $\beta = 0.178, p < 0.001$ ), the indirect path coefficient ( $\beta = 0.145, p < 0.001$ ), and VAF = 51.53%, suggest that 51.53% of the effect of PA on EC can be explained via the ES mediator. These results suggest that IS and ES both partially mediate the PA→EC linkage and support Hypotheses H<sub>4a</sub> and H<sub>4b</sub>. The results of the hypotheses tests are summarised in Table 4.

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**Table 4 [About Here]**  
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*Effects of Control Variables*

We note that University Type 1 (whether belonging to Russell Group or non-Russell Group universities) does not have a statistically significant effect on employee extrinsic satisfaction (UT1 on ES:  $\beta = -0.006, t\text{-value} = 0.143, p < 0.886$ ). Equally, university type has no significant effect on employee commitment (UT1 on EC:  $\beta = 0.029, t\text{-value} = 0.819, p < 0.413$ ). However, university type has a statistically significant effect (on intrinsic satisfaction (UT1 on IS:  $\beta = -0.101, t\text{-value} = 2.251, p < 0.024$ ).

The results for the effect of University Type 2 (Post1992 University vs Non-Post1992 University) are as follows: UT2 on ES:  $\beta = 0.033, t\text{-value} = 0.722, p < 0.470$ ;

UT2 on IS:  $\beta = 0.014$ ,  $t\text{-value} = 0.229$ ,  $p < 0.765$ ; UT2 on EC:  $\beta = 0.013$ ,  $t\text{-value} = 0.370$ ,  $p < 0.413$ . These demonstrate that belonging to a Post-1992 university or non-post 1992 university has non-significant (statistical) impact on an academic's extrinsic satisfaction, intrinsic satisfaction, and employee commitment.

Further, the results for the effect of gender are as follows: Gender on ES:  $\beta = -0.016$ ,  $t\text{-value} = 0.371$ ,  $p < 0.711$ ; Gender on IS:  $\beta = 0.062$ ,  $t\text{-value} = 1.188$ ,  $p < 0.235$ ; Gender on EC:  $\beta = 0.043$ ,  $t\text{-value} = 1.200$ ,  $p < 0.230$ . Therefore, gender does not significantly impact an academic's extrinsic satisfaction, intrinsic satisfaction, and employee commitment. The age of an academic does not have a statistically significant effect on employee extrinsic satisfaction (Age on ES:  $\beta = -0.025$ ,  $t\text{-value} = 0.533$ ,  $p < 0.594$ ), and on employee commitment (Age on EC:  $\beta = -0.008$ ,  $t\text{-value} = 0.267$ ,  $p < 0.789$ ). However, age has a significant effect (at  $\alpha = 0.10$ ) on intrinsic satisfaction (Age on IS:  $\beta = 0.060$ ,  $t\text{-value} = 1.670$ ,  $p < 0.095$ ).

The length of service (longevity) of an academic does not have a statistically significant effect on employee extrinsic satisfaction (Longevity on ES:  $\beta = -0.041$ ,  $t\text{-value} = 0.841$ ,  $p < 0.401$ ). At  $\alpha = 0.10$ , longevity has a significant effect (at  $\alpha = 0.10$ ) on intrinsic satisfaction (Longevity on IS:  $\beta = 0.084$ ,  $t\text{-value} = 1.717$ ,  $p < 0.086$ ), and on employment commitment (Longevity on EC:  $\beta = 0.067$ ,  $t\text{-value} = 1.903$ ,  $p < 0.057$ ). The salary of an academic does not have a statistically significant effect on employee extrinsic satisfaction (Salary on ES:  $\beta = 0.056$ ,  $t\text{-value} = 1.228$ ,  $p < 0.219$ ), and on employee commitment (Salary on EC:  $\beta = -0.031$ ,  $t\text{-value} = 0.846$ ,  $p < 0.398$ ). However, salary has a significant effect (at  $\alpha = 0.001$ ) on intrinsic satisfaction (Salary on IS:  $\beta = 0.190$ ,  $t\text{-value} = 4.186$ ,  $p < 0.000$ ).

## DISCUSSIONS, CONTRIBUTIONS AND CONCLUSION

Our paper sought to investigate the relationship between performance appraisal and employee commitment. Our investigation explored how and when performance appraisal enhances the extent to which employee commitment is attained through the mediating role of job satisfaction. We found that job satisfaction at intrinsic and extrinsic levels also promoted employee commitment. Our results are consistent with the behaviour expected from employees in line with Organisational Justice Theory. This theory suggests that employees become more committed when they perceive their performance appraisal is fair (Bauwens *et al.*, 2019).

In uncovering the boundary conditions underpinning the PA-EC relationship, we found that PA enhanced job satisfaction. Our findings provide more understanding to the relationship, considering we investigated job satisfaction at the individual component level (intrinsic and extrinsic) rather than as a composite construct (Lan *et al.*, 2013; Decker and Van Quaquebeke, 2015). The nature of PA could explain this finding. Existing studies have classified PA as a hygiene factor which significantly impacts how employees perceive their condition of work (Smerek and Peterson, 2007). Overall, hygiene factors have been found to have a stronger effect on extrinsic job satisfaction than intrinsic job satisfaction. While our investigative approach to job satisfaction at the individual component level is novel, our findings corroborate extant theorization (House and Wigdor, 1967; Smerek and Peterson, 2007). This provides increased validation to our study.

Our finding that job satisfaction positively influenced EC also provided interesting insights. This finding was corroborated by extant theorization (Kim, Tavitiyaman and Kim, 2009; Mabaso and Dlamini, 2018). Our conceptualization of job satisfaction at the individual component level also provided more insights into the relationship. We found that intrinsic job satisfaction has a stronger relationship with EC than extrinsic job satisfaction. This clarifies the complex nature of the PA-EC relationship through the mediation of intrinsic and extrinsic job satisfaction (Ekmekci *et al.*, 2021).

To understand the PA-EC relationship through intrinsic and extrinsic job satisfaction, we controlled for demographic factors and found that the institution types were not significant. This was also the case for the gender of participants. Interestingly, intrinsic satisfaction was significant for age and length of service, and so was employee commitment (especially longevity). This may be because older employees, especially those who have worked in their universities for a long time and nearing their retirement, may want to avoid losing their jobs. Our finding that salary significantly influences intrinsic satisfaction was surprising especially as salary is categorised under hygiene factors. Future qualitative research may provide more insights here.

Our paper has significant contributions to the theory. First, it extends the understanding of the antecedents of employee commitment by highlighting the role of performance appraisal (Kallio and Kallio, 2014; Hoole and Hotz, 2016; Newman and Sheikh, 2012; Taba, 2018; Alsaid and Ambilichu, 2023). This contribution is important as PA is one of the controversial areas among HR practitioners (Soltani and Wilkinson, 2020) and, yet, an effective process for improving employee commitment. Secondly, existing studies have been limited in explaining how performance appraisal enhances

employee commitment (Newman and Sheikh, 2012). Our study further extends PA-EC theorization by highlighting job satisfaction as an explanatory mechanism for the PA-EC relationship. Thirdly, our analytical approach provides new insights by investigating the mediating role of job satisfaction at individual component levels (intrinsic and extrinsic). We show that intrinsic job satisfaction has a stronger effect in comparison to extrinsic job satisfaction and thus, providing more insight into the mediation mechanism underpinning the PA-EC relationship (Ekmekci *et al.*, 2021). Findings from the demographic variables add layer of insights into PA-EC relationship through job satisfaction by highlighting the significance of age and tenure in employment.

There are practical implications for this study. At the university level, our investigations provide insights to support the development of performance appraisal systems that influence academic commitment and job satisfaction. This is especially important as it may reduce the occurrence of gaming of the performance management system (Franco-Santos and Otley, 2018; Alsaïd and Ambilichu, 2023, 2021) prevalent in the higher education sector (Franco-Santos and Otley, 2018). Organizations generally contend with exploiting performance management systems to foster committed employees (Nazir and Islam, 2017). However, this challenge is more severe for the higher education sector (Aboramadan *et al.*, 2020). This is because of increasing pressure on the sector to perform and the continuous decrease in resources allocated to the sector (Perryman and Calvert, 2020). The higher education sector in the UK is especially worthy of further investigation as it has been inundated with increased cuts, scrutiny, and number of performance metrics (National Student Survey (NSS), Research Excellence Framework (REF), Teaching Excellence Framework (TEF), and

Postgraduate Taught Experience Survey (PTES)) (Dean, Shubita and Claxton, 2020). Thus, it is important to shed more light on the issues of performance management (see e.g. Alsaid and Ambilichu, 2021), job satisfaction, and employee commitment in the UK context.

This study is not without limitations. For example, job satisfaction and employee commitment may be influenced by time; hence, our cross-sectional data collected from a single source may limit our understanding of how both constructs are formed. We, therefore, recommend that future studies take a longitudinal approach and collect data from multiple sources. Our quantitative methodological approach has also limited our understanding of the complexities associated with the PA-EC relationship. We, therefore, call for future qualitative studies to provide a deeper understanding. We also know that EC may be influenced by factors other than PA and job satisfaction; for instance, leadership and/or reward. Thus, an area that could be explored further in the future.

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## End notes:

**Data availability-** Supporting data, analysis code and research materials for our study are available at (<https://doi.org/10.25392/leicester.data.19416335>).

## Appendix

**Table 1** : Participant Demographic Characteristics

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<i>University classification 1</i>	
Working in Russel group	99
Working in non-Russel group	243
Did not disclose classification	21
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<i>University classification 2</i>	
Working in Post 1992 universities	144
Working in non-Post 1992 universities	140
Other universities	79
<i>Years in academia</i>	
Less than 5 years	67
Between 5 and 10 years	85
Between 10 and 15 years	57
Between 15 and 20 years	49
Over 20 years	105
<hr/>	
<i>Gender</i>	
Male	176
Female	181
Other	6
<hr/>	
<i>Age</i>	
Less than 25 years	2
25 to 40 years	96
41 to 50 years	109
51 to 60 years	112
over 60 years	40
Did not disclose age	4
<hr/>	
<i>Salary range</i>	
Less than £40,000	94
£41,000 to £50,000	128
£51,000 to £60,000	72
£61,000 to £70,000	33
above £70,000	32
Did not disclose salary	4

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**Table 2:** Mean, standard deviation and correlation matrix of key variables

Variables	Mean	Std. Dev	1	2	3
Performance Appraisal	4.205	1.216			
Intrinsic Satisfaction	5.132	1.278	.432**		
Extrinsic Satisfaction	3.84	1.558	.582**	.634**	
Employee Commitment	4.025	1.575	.524**	.630**	.659**

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 3:** Indicator loadings and model fit criteria

	Standardised loadings	t-values
<b>Performance Appraisal (<math>\alpha = 0.827</math>; CR = 0.883; AVE = 0.654)a</b> (seven-point scale, anchored by 7 = "Totally agree"; 1 = "Totally disagree")		
How much work I get done is important to my performance review.	0.756	22.355
How much effort I put into my job is important to my performance review.	0.859	64.911
How many "extra" things I do (e.g. participation in Open Days, conferences, symposiums) is important to my performance review.	0.769	22.533
Coming up with good ideas for the University improves my performance review.	0.846	50.216
<b>Intrinsic Satisfaction (<math>\alpha = 0.801</math>; CR = 0.869; AVE = 0.627)b</b> (seven-point scale, anchored by 7 = "Completely right"; 1 = "Completely wrong")		
I have the opportunity to do different things from time to time (e.g., community involvement, field trips).	0.646	14.086
I am happy with the way my job provides for steady employment.	0.81	33.526
I have the freedom to use my own judgment and/or the chance to try my own methods of doing the job.	0.837	37.871
I have the feeling of accomplishment (I get) from the job.	0.857	49.762
<b>Extrinsic Satisfaction (<math>\alpha = 0.823</math>; CR = 0.883; AVE = 0.655)c</b> (seven-point scale, anchored by 7 = "Strongly agree"; 1 = "Strongly disagree")		
I am satisfied with the praise I get for doing a good job.	0.858	42.859
I am satisfied with the chances for advancement on this job.	0.865	62.928
I am satisfied with my pay and the amount of work I do.	0.758	27.399
I am satisfied with the way my Line Manager handles his/her direct reports.	0.751	26.17
<b>Employee Commitment (<math>\alpha = 0.878</math>; CR = 0.916; AVE = 0.732)d</b> (seven-point scale, anchored by 7 = "Totally agree"; 1 = "Totally disagree")		
I expect to work at this University for a long time.	0.838	40.451
I feel loyal to this University.	0.87	51.671
I feel trust toward management of my University.	0.832	57.437
I intend to stay in this University.	0.881	61.195

Note: a= performance appraisal, b= intrinsic satisfaction, c =extrinsic satisfaction, d= employee commitment.

a: Adapted from Mayer and Davis (1999)

b: Adapted from Weiss et al. (1967)

c: Adapted from Weiss et al. (1967)

d: Adapted from Brockner et al. (1992); Shapiro and Kirkman (1999).

**Table 4:** Summary results of hypothesised tests

Hypothesised Paths	Expected sign	Standardised coefficient	t-value	Hypothesis test
H1: PA → EC	+	0.178	3.843*	Supported
H2a: PA → IS	+	0.428	9.089*	Supported
H2b: PA → ES	+	0.536	13.403*	Supported
H3a: IS → EC	+	0.339	7.107*	Supported
H3b: ES → EC	+	0.353	6.903*	Supported
H4a: PA → EC (with IS as mediator)		0.145	5.858*	Supported
H4b: PA → EC (with ES as mediator)		0.189	8.321*	Supported

Note: \*p-value < 0.01

Figure 1: The relationship between the constructs in the study

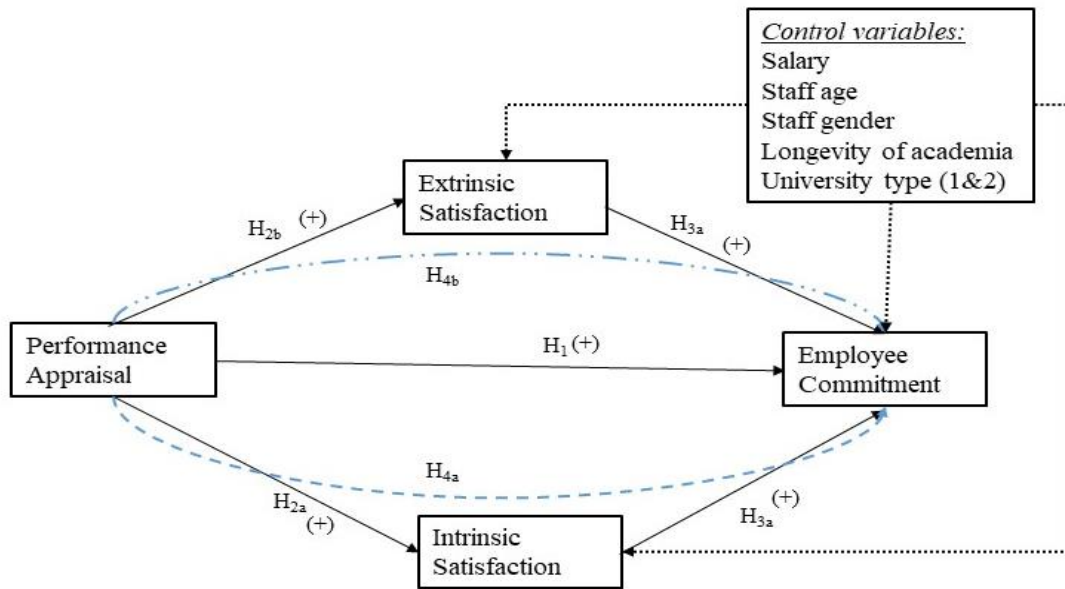
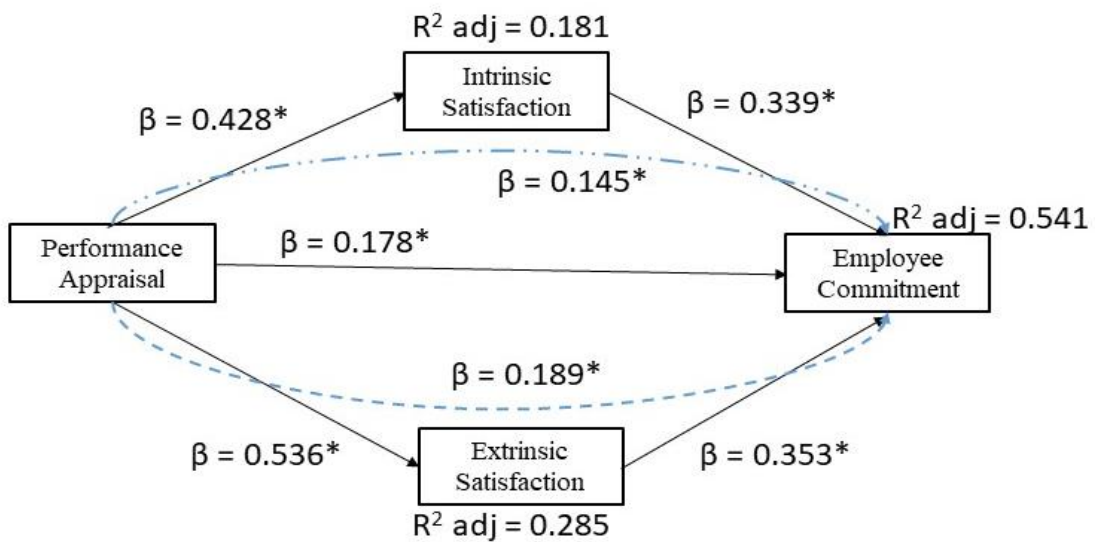


Figure 2: Path coefficients and statistical significance of relationships in the mediation model



\* $p < 0.01$