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The role of satisfaction with the performance appraisal: a comparative study between the public and private sectors

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### Abstract

**Purpose** – To study in Portugal (a) whether satisfaction with the performance appraisal (PA) differs depending on the sector where the workers perform their functions (private versus public), and (b) whether the relationship between workers' perception of usefulness and accuracy of the performance appraisal process (PAP) and satisfaction with the outcome of their last PA is mediated by their satisfaction with the PAP.

**Theoretical framework** – The PA has come to occupy a prominent place in organizations, because only it can be used to measure the skills of their workers and the way they contribute to achieving organizational success both qualitatively and quantitatively.

**Design/methodology/approach** – Eight hundred and sixty-six professionals from the public and private sectors participated in this study. Data were collected using two multi-item questionnaires and two single-item scales.

**Findings** – The results revealed that private sector employees showed higher levels of satisfaction with their PAs than those from the public sector. Furthermore, the results indicated that the usefulness and accuracy of the PAP had a significant and positive relationship with employees' satisfaction with their last PA, and this relationship was partially mediated by satisfaction with the PAP, both in the public and private sectors.

**Practical & social implications of research** – Regardless of the activity sector, it is fundamental that the PAP is useful and accurate; otherwise it is discredited, which prevents it from fulfilling its purpose and contributes to increasing the levels of worker dissatisfaction.

**Originality/value** – This study clarified the differences that may emerge regarding satisfaction with PAs between the Portuguese public and private sectors. In addition, this is the first national or international study to analyse the aforementioned constructs in an integrated manner.

**Keywords:** Performance appraisal process, satisfaction with performance appraisal, accuracy, usefulness, comparative study.

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## 1 Introduction

The management and appraisal of performance (PA) is a controversial subject in both the public and private sectors, and in most Portuguese organizations it more a ritual than a practice, which is why it does not achieve the results for which it was projected. Cunha et al. (2018) mentioned that much importance is given to the form and little importance to the content, which means the PA generally presents three weaknesses: (a) insufficient planning; (b) process and integrity problems; and (c) a non-meritocratic logic.

The quality and quantity of the work developed constitutes the competitive differential of any organization, and so it is highly important to understand how certain practices and processes influence organizational results (Nguyen et al., 2020). The PA has come to occupy a prominent place in organizations because only it can be used to measure the competences of their workers and the way they contribute to achieving organizational success, both qualitatively and quantitatively (Okolie et al., 2020). Consequently, workers' satisfaction with the PA is vital to reap the rewards of the most talented resources (Memon et al., 2019). Yet, it should be stressed that the performance of those who carry out similar functions should be evaluated using the same criteria, so that it can be compared in a fair, objective, transparent, and consistent way (Vuong et al., 2020). When the performance appraisal (PA) process is perceived by the workers' as inadequate and unfair, it tends to increase their demotivation, dissatisfaction with the work, and turnover intentions, leading to reduced productivity (Memon et al., 2020). On the other hand, when the PAP enables the workers to acquire more knowledge of the dimensions and procedures of their evaluation and gives them the opportunity to direct their efforts and actions toward the strategic objectives of the organization, they tend to feel more satisfied with the results of their performance (Bayo-Moriones et al., 2020). Organizations that build PAPs considered to be satisfactory by their workers "reap" and foster attitudes and behaviours that contribute significantly to organizational success (Memon et al., 2020).

In this sense, Widiani and Dudija (2020) mentioned that satisfaction with the PAP is considered one of the most important reactions to the PA per se, especially when it is seen as useful and accurate. The PAP is considered useful when it enables a diagnosis of workers' performance in a previously defined time period, because beyond having a strict relationship with all of the human resources management (HRM) practices, it contributes to improving the potential of each worker and, with that, it generates better personal and organizational results (Ahmed and Sattar, 2018). When the PAP offers accurately measured indicators, it enables grounded decision making and prevents the results from being influenced by the personal interests of the appraiser/hierarchical superior (He et al., 2020).

In Portugal, the investigation focuses essentially on the PA in the public sector (e.g., Correia et al., 2019; Lira, 2014; Lira et al., 2016; Madureira et al., 2021), with few studies examining the private sector (Cunha et al., 2018). In addition, the investigation into the differences between sectors has focused primarily on studying workers' motivation. The studies have shown that (a) workers in the public sector have greater intrinsic motivation and are less extrinsically motivated than their peers in the private sector, and (b) workers in the public sector are relatively more risk averse. The results also reveal that pecuniary incentives and variable remuneration based on merit can be counterproductive (Barbieri et al., 2023; Pagan and Malo, 2021).

In light of the above, this study is based on two essential questions:

Question 1: What differences in perception regarding satisfaction with the PA can be observed between public sector and private sector organizations?

Question 2: How does satisfaction with the PAP influence perceptions regarding the usefulness and accuracy of it by workers from different sectors?

In light of these questions, this study aims, on one hand, to clarify the differences that can emerge relating to satisfaction with the PA between the Portuguese public sector and private sector; on the other hand, it intends to broaden the scientific knowledge in this area by also analysing the mediating role of satisfaction with the PAP in the relationship between the perception of usefulness and accuracy of it and workers' satisfaction with the result of their last PA. Despite its relevance, there are no national or international studies that analyse the aforementioned constructs in an integrated way. In sum, the present study aimed to analyse (a) if satisfaction with the PA differs depending on the sector where the workers carry out their functions (private versus public), and (b) if the



relationship between the workers' perception regarding the usefulness and accuracy of the PAP and satisfaction with the result of their last PA is mediated by satisfaction with the PAP.

# 1.1 Conceptualizing the functions of the performance appraisal

The PA is a tool that enables an improvement in individual performance and the identification of workers' contributions to organizational results (Ahmed and Sattar, 2018). According to Memon et al. (2019), besides facilitating the definition of objectives and the identification of training needs, the PA has an important evaluative component that enables a comparison with other members of the organization and/or with previous individual performance. Setiawati and Ariani (2020) added that the results obtained in the PA significantly influenced workers' behaviour and consequently their performance levels.

There is consensus that, independently of the sector, the PA seeks the following: (a) to align workers' performance with the strategy of the organization; (b) to provide information about the aspects most valued by the organization; (c) the acquisition of new knowledge and competences; (d) to increase workers' motivation; (e) to provide a basis for the decisions taken in the various HRM practices (e.g., rewards management, career development, validation of the recruitment and selection process); and (f) management of the challenges resulting from the constant transformations of the work context (Stewart and Brown, 2020).

Rahman et al. (2020) added that the PA is a dynamic process that is developed over five stages: (a) definition of competences (e.g., techniques, behaviours) and of the objectives to achieve in the previously defined time period; (b) putting into practice the plan established in the previous phase; (c) the performance appraisal per se, through filling in an evaluation form and its approval by the direct boss/hierarchical superior; (d) discussion of the results obtained with the collaborator, giving them feedback about their progress and the points they need to improve; and (e) planning of the objectives for the next PA cycle in accordance with the organization's strategy. The PAP can involve various players, namely: the appraisee, the direct boss, peers, subordinates, and other stakeholders (Nguyen et al., 2020).

# 1.2 Satisfaction with the performance appraisal

Satisfaction with the PA is a crucial variable in the organizational context, as it is directly related with workers' performance (Naeem et al., 2017). Dissatisfaction with the PA creates negative attitudes and perceptions that translate into counterproductive results for the organization (e.g., low productivity, increased turnover intention), which is why the PA is essential for making the most of individual potential. Satisfaction with the PA lies in a reciprocity relationship and when the collaborator perceives that their appraisal is fair, impartial, and mutually beneficial they have a tendency to reciprocate in the same way, leading to increased performance and organizational commitment (Memon et al., 2019).

Memon et al. (2020) argued that the higher workers' satisfaction is with the results of their PA, the more motivated they feel and less willing they are to abandon the organization.

#### 1.3 Satisfaction with the performance appraisal in Portugal: differences between sectors

According to Madureira et al. (2021), the PA in the private sector implies the evaluation of workers by their managers with the aim of improving individual performance. This evaluation can result in positive consequences (e.g., productivity rewards, rapid career progress) or negative ones (e.g., penalties, slow career progress) for the evaluated party. These results influence workers' involvement with the PAP in accordance with how fair/unfair and/or positive/negative they perceive it to be.

In the public sector, the PA also implies the evaluation of the worker by their manager(s) with the aim of improving individual performance. However, it was only after the implementation of New Public Management (NPM), at the start of the 21<sup>st</sup> century, that the public sector began to focus on individual performance through PAPs that enabled the comparison and differentiation of workers' performance and their contribution to organizational objectives (Madureira et al., 2021). Despite each sector having its own characteristics, the methods and techniques used in the private sector have begun to be introduced in the public sector, namely with regard to promotions and bonuses (Al-Jedaia and Mehrez, 2020; Madureira et al., 2021), which could arouse different reactions from the workers from the different sectors. Naeem et al. (2017) highlighted that private sector workers

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feel more satisfied with the results of their PAs than those from the public sector, because they believe them to be fair and that they translate their performance.

In Portugal, and in a NPM logic, workers from the public sector are assessed through the Integrated System for Performance Appraisal in the Public Administration (SIADAP, Portuguese acronym), which was developed in 2004, with the aim of supporting decision making relating to the PA in the Public Administration. This system, which is fully available for consultation, also aims to incentivize the development of technical and behavioural competences that enable the achievement of the objectives established in each evaluative cycle and the identification of training needs in a grounded way. Based on the management by objectives logic, the SIADAP intends (a) to implement a PA system in Public Administration Units (SIADAP 1), manager performance (SIADAP 2), and employee performance (SIADAP 3); (b) to build a system for evaluating the differentiation of merits, the degree of achievement of individual goals and the degree of development of behavioural competences; and (c) to create a system of merit quotas for classifications resulting from the appraisals (Madureira et al., 2021).

According to the system of merit quotas introduced by the SIADAP, only 5.0% of workers can achieve "excellent performance" and 20.0% can achieve "relevant performance". It is impossible for the remaining 75.0% of workers to exceed "adequate performance" independently of their effort, as well as the results achieved. In Portugal, the PAP classifications have come to determine Public Administration workers' salary progression. According to article 7, n. 156 of Law n. 35/2014 of 20th June, within the same category there should be guaranteed access to a higher salary position for all workers who have accumulated ten points whilst carrying out their functions. For most workers who have "adequate performance", the waiting time to rise to a higher salary position is ten years, since they are attributed only one point per year (Madureira et al., 2021).

Over the years various gaps were identified, particularly the fact that this PAP does not enable an evaluation of manager positions, which led, in 2007 (Portugal, 2007), to it being updated to contemplate the performance of various subsystems of the Public Administration: (a) services (SIADAP 1); (b) managers (SIADAP 2); and (c) workers [SIADAP 3; General Management of the Administration and of Public Employment (Portugal, 2020). Since its implementation, the SIADAP has been the target of various criticisms (Madureira et al., 2021).

According to Correia et al. (2019), management by objectives is one of the most valued aspects because it makes the workers responsible for the development of competences and enables them to obtain better results, in a clear and rigorous way. On the other hand, the quotas system it is governed by constitutes one of the negative points, because by making the PA an extremely reductive process, it increases workers' demotivation and the development of conflicts, which are not always possible to manage. Cunha et al. (2018) argued that the major weakness of performance management in Portugal is related with its PAP, as there is always a way of perverting an individual's PA, which consequently raises reasons to question it. By violating workers' expectations regarding the process (e.g., transparency, fairness, usefulness, and accuracy), such practices have negative consequences for the satisfaction, commitment, engagement, and performance of workers. Recent studies carried out in the public sector (e.g., Lira, 2014; Lira et al., 2016) have indicated that workers from the Portuguese Public Administration tend to consider their PAP, and resulting PAs, as unsatisfactory, inadequate, and unfair.

Given the lack of generalized evidence regarding the PAPs and PAs in the private sector and the levels of dissatisfaction felt by workers from the Portuguese Public Administration with their PAP and resulting PAs, it is believed to be pertinent to compare satisfaction with the PA according to the sector where the workers carry out their roles, giving rise to the first study hypothesis.

H<sub>1</sub>: Workers' satisfaction with their PAs differs according to the sector of the organizations they belong to.

### 1.4 The perception of the usefulness and accuracy of the performance appraisal process and its relationship with satisfaction with the performance appraisal

In recent decades, reactions to the PAP have come to be an object of study (e.g., Belsito and Reutzel, 2019; Khan et al., 2019; Murphy, 2020), because when workers perceive that the process is useful (they feel the feedback they receive has usefulness) and accurate (they perceive that their classification accurately reflects their objective performance) they feel more satisfied and see the PA in a more favourable way (Pichler, 2019).

Diamantidis and Chatzoglou (2019) added that worker performance constitutes a strong strategic advantage for any organization, which is why it is essential for it to



be evaluated accurately, otherwise it does not enable the identification of characteristics that distinguish exceptional performance from reasonable performance.

When there are accurate performance indicators, the PAP provides information that enables grounded decision making and that prevents the abuse of power by the appraiser (He et al., 2020). In light of the above, Khan et al. (2020a) suggested that satisfaction with the PA involves two elements: the PAP and the results of the PA per se.

### 1.5 Satisfaction with the performance appraisal process and its relationship with satisfaction with the performance appraisal

The PA can have positive consequences (e.g., increased productivity, rewards, promotions) or negative ones (e.g., penalties, slowness in the career progression process) both for the organization and for the workers (Kim and Holzer, 2016). Thus, it is to be expected that its results influence workers' involvement with the PAP and the way it is perceived, which in turn can influence the satisfaction with the PA obtained (Madureira et al., 2021).

Various studies (e.g., Naeem et al., 2017; Memon et al., 2019; Murphy, 2020) have argued that the perception regarding the PAP influences the workers' behaviour and attitude in relation to the PA system adopted by the organization, which is why it is very important for the appraisees and appraisers to perceive how the PAP works and its consequences. Within this context, Ismail and Rishani (2018) suggested then even if the organization has an apparently fair and accurate PAP, if it is not accepted by the workers, it will never be successful nor correspond to their expectations. However, when the PAP is well executed, it incentivizes the workers to improve their performance and contributes to increasing organizational sustainability and success, because when people accept they will be treated fairly during their PA, they develop positive feelings toward the organization and commit to its objectives (Singh and Singh, 2018).

### 1.6 The mediating role of satisfaction with the performance appraisal process in the relationship between the perception of usefulness and accuracy and satisfaction with the performance appraisal

The PA is only beneficial when it is accepted by all of its participants, which is why it is essential for it to be

considered useful and accurate (Murphy et al., 2018). Even when they are accurate, the results of the PA are usually seen as excessively severe, because workers generally view their performance more favourably than their supervisors, peers, and/or other stakeholders. Thus, it is verified that when the results of the PA do not correspond to those expected, they are generally rejected or distorted instead of being accepted and put into practice (Murphy, 2020). To avoid direct conflict with the workers and maintain a positive image of the organization, there is some reluctance by managers to give less favourable feedback, which calls into question the accuracy of the PAP (Khan et al., 2020b). This practice can create a barrier to the implementation of an accurate and useful PAP, compromising its effectiveness and preventing an improvement in workers' performance (Pedersini and Ensslin, 2020).

In this sense, Al-Jedaia and Mehrez (2020) mention that the PAP constitutes a motivating instrument in the organizational context, because it directly influences the results of the PA and the workers' perception in relation to it, and it provides information that enables the validation of the decisions taken in the various HRM practices (e.g., remuneration, career development, training actions). Widiani and Dudija (2020) added that, independently of the technical soundness of the PA system and of the sector of the organization, the workers' reaction to the PA should constitute one of the concerns of the HRM because worker satisfaction with the PA plays a fundamental role in the longterm effectiveness of any PAP. According to Correia et al. (2019), satisfaction with the PAP significantly influences the workers' reaction in relation to their PAs because people only feel satisfied when they perceive that the procedures inherent to their appraisal are fair, useful, and transparent.

Since the perception regarding the usefulness and accuracy influence the success of the PAP, and this is a critical factor for satisfaction with the PA, it is important to analyse the relationship between the variables. In light of the empirical evidence, the following hypotheses were formulated:

- H<sub>2a</sub>: Satisfaction with the PAP mediates the relationship between the perception of usefulness of the PAP and the satisfaction of private sector workers with their PAs.
- H<sub>2b</sub>: Satisfaction with the PAP mediates the relationship between the perception of usefulness of the PAP and the satisfaction of public sector workers with their PAs.

To illustrate the relationship that exists between the independent variables and the dependent one, as well as the mediating effects, a conceptual model was outlined, which is presented in Figure 1.

## 2 Methodology

For the operationalization of this comparative study, a quantitative methodology was used, based on a deductive approach. The data were collected at a single moment through a survey questionnaire of the convenience sample. This type of sampling was based on the ease of access to the participants and on their availability to answer the questionnaire (Mweshi and Sakyi, 2020). Thus, the items that evaluate the perception regarding the accuracy and usefulness of the PAP, satisfaction with the PAP, and the PA per se and the set of socio-demographic questions were included in *Google Forms* and the link was sent by email to the contacts in the investigators' professional social networks.

### 2.1 Characterization of the sample

A total of 866 professionals participated, 52.8% from the private sector and 47.2% from the public sector, whose samples are described below.

### 2.1.1 Private sector

The participants from the private sector (n = 444) varied in age between 20 and 62 years old (M = 33.58; SD = 9.68) and were mostly of the female sex (62.4%). Most of the respondents had a degree (55.0%).

To enable the reading of the data it was considered pertinent to group the participants' professions according

to the last edition of the Portuguese Classification of Professions (CPP, Portuguese acronym; *Instituto Nacional de Estatística* [INE]). This way, it was possible to find that 43.2% belonged to the group of technicians and intermediate level professions. Regarding company size, it was observed that 55.9% worked in large organizations (Table 1). The company classification followed Recommendation 2003/361/EU of the European Commission of 6<sup>th</sup> March 2003 (European Union, 2003).

### 2.1.2 Public sector

Most of the participants from the public sector (n = 409) belonged to the female sex (60.1%) and were aged between 19 and 68 years old (M = 42.35; SD = 10.13). Regarding academic achievements it was verified that more than 70.0% of the respondents had a degree or higher (Table 1).

As in the private sector, the professions were grouped according to the CPP (Instituto Nacional de Estatística, 2011) and it was found that 60.9% performed technical or intermediate level roles (e.g., pharmacy technicians, security agents, telecommunications technicians) and that more than half (53.1%) worked in large organizations (251 workers or more).

### 2.2 Measurement instruments

# 2.2.1 *Perception regarding the accuracy of* the performance appraisal process

The workers' perception regarding the accuracy of the PAP was assessed using the questionnaire developed by Stone et al. (1984), but following the method indicated



Figure 1. Conceptual model

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# Table 1Socio-demographic characterization of the participants

	Privat	e sector	Public	sector
-	(n = 444; 52.8%)		(n = 409; 47.2%)	
_	n	%	n	%
Sex				
Male	167	37.6	163	39.9
Female	177	62.4	246	60.1
Age				
Younger than or equal to 30	239	53.8	52	12.7
Between 31 and 40	102	23.0	138	33.7
Between 41 and 50	63	14.2	125	30.6
Older than or equal to 51	40	9.0	94	23.0
Academic achievements				
Lower than a degree	143	32.2	116	28.4
Degree	244	55.0	213	52.1
Higher than a degree	57	12.8	80	19.6
Profession				
Specialists in intellectual and scientific activities	125	28.2	127	31.1
Technicians and intermediate level professions	192	43.2	249	60.9
Administrative personnel	52	11.7	18	4.4
Workers in personal and protection and security services and salespeople	75	16.9	15	3.7
Size of the organization				
Small company (fewer than 50 workers)	101	22.7	41	10.0
Medium company (between 51 and 250 workers)	95	21.4	151	36.9
Large company (more than 251 workers)	248	55.9	217	53.1

Note: n = 866.

in the study of Keeping and Levy (2000), and only three of the nine items of the original questionnaire were used (e.g., *The classification I obtained in the last performance appraisal solely reflected my individual performance and was not influenced by personal, political, or other criteria*). The answers were given through a seven-point Likert-type scale, in which 1 = totally disagree and 7 = totally agree (Appendix A).

# 2.2.2 Perception regarding the usefulness of the performance appraisal process

To evaluate the respondents' perception regarding the usefulness of the PAP, the questionnaire developed by Greller (1978) was used. This is composed of four items (e.g., *During the PAP, training and personal development needs were identified to improve my performance*; Appendix A) that were answered through a seven-point Likert-type scale that varied between totally disagree (1) and totally agree (7).

### 2.2.3 Satisfaction with the performance appraisal process and with the performance appraisal per se

The workers' satisfaction in relation to the PAP (*I'm satisfied with my PAP*) and to the PA (*I'm satisfied with the classification obtained in my last PA*) were assessed using a single item (Appendix A). According to Dolbier et al. (2005), this format is the most appropriate when the intention is to obtain a quick and easily-interpretable answer, as occurs in the work context. Both items were answered through a seven-point Likert scale of agreement/ disagreement.

Despite this type of scale often being criticized, due to the impossibility of calculating its psychometric indicators, Littman et al. (2006) argued that its use has advantages in relation to the scales constituted of various items, as it enables more effective results to be obtained.



### 3 Results

The data were collected in public sector and private sector organizations mainly located in the Lisbon Metropolitan Area. Before applying the questionnaire, the aims of the study were explained and the anonymity and confidentiality of the results were guaranteed. The protection of the participants' data was ensured according to the General Data Protection Regulation of the European Union [Regulation (EU) n. 679/2016 of 26<sup>th</sup> April].

The answers were analysed using the Statistical Package for the Social Sciences (SPSS; version 27) and AMOS (version 22) software packages.

# 3.1 Satisfaction with the performance appraisal: differences between sectors

Initially, we sought to analyse whether the satisfaction with the PA differed according to the sector ( $\mathbf{H}_1$ ). The results revealed that the private sector workers (M = 5.02; SD = 1.67) presented higher mean values than the public sector ones (M = 4.23; SD = 2.13), with the differences being statistically significant [ $t_{(864)} = -6.139$ , p < 0.001]. It is noteworthy that the values associated with the standard deviation for the public sector were higher than those for the private sector, indicating greater variability in the answers (Table 2).

The results suggested that the private sector participants felt more satisfied with the results of their last PA than the public sector ones. In light of this result, we chose to analyse the proposed mediation model separately.

# 3.2 Satisfaction with the performance appraisal: the mediating role of the PAP

In an initial phase, we sought to ascertain whether the model outlined fits the sample under study. For the effect, a path analysis was carried out, which through a structural model based on the theory enabled us to describe all of the existing relationships between the constructs involved in the analysis. It is important to mention that despite the model being the same, the results for the private sector and public sector are presented separately.

#### 3.3 Private sector

The analysis of the structural model was based on the cut-offs recommended in the literature (e.g., Hair et al., 2018; Xia and Yang, 2018), whose results revealed that after the error covariance indicated by the AMOS modification indices (According to Marôco (2021), a model can be artificially improved through an analysis of the modification indices and consequent establishment of the paths suggested by the indices, providing the alterations made are theoretically supported) (Table 3), the model was revealed to fit the data from the sample  $[\chi^2_{(14)} = 3.17, p < .01, CFI = .99, GFI = .97, RMSR =$ .02, RMSEA = .07, LO90 = .04, HI90 = .09].

The reliability was analysed using Cronbach's alpha coefficient, whose results revealed a high internal consistency both for the usefulness ( $\alpha = .88$ ) and for the accuracy of the PAP ( $\alpha = .83$ ). To evaluate the quality of measurement of the instruments, the composite reliability (CR) and average variance extracted (AVE) were calculated, whose values were revealed to be adequate.

The convergent and discriminant validities were calculated according to the procedures recommended by Fornell and Larcker (1981). The results revealed that the discriminant validity of the variables, the average shared variance (ASV), and the maximum shared variance (MSV) were below the AVE score (Table 4).

Next, it was analysed whether satisfaction with the PAP mediated the relationship between the perception of usefulness ( $H_{2a}$ ; Figure 2) and of accuracy of the PAP ( $H_{2b}$ ; Figure 3) and the workers' satisfaction with the results of their last PA.

The data analysis revealed that satisfaction with the PAP positively influenced ( $\beta = .434$ , t = 9.494, p < .001) the workers' satisfaction with the PA, indicating that the greater the satisfaction with the PAP, the more positive the workers' satisfaction with their last PA tended to be (Table 5). It was also verified that the perception

Table 2

Comparison of satisfaction with the PA according to the sector where the workers perform their roles

	Priv	Private		Public		<i>c</i> :
	М	SD	М	SD	t-test	Sig.
Satisfaction with the PA	5.02	1.67	4.23	2.13	- 6.139	.001**

Note: M = mean; SD = standard deviation; \*\*p < .001.

# Table 3Fit measures of the private sector model

	χ²/df	CFI	GFI	RMSR	RMSEA	LO90	HI90
Private sector	4.87	.97	.95	.03	.09	.47	.50
	Er	ror covariance s	uggested by the	e AMOS modific	cation indices		
	χ²/df	CFI	GFI	RMSR	RMSEA	LO90	HI90
Private sector	3.17	.99	.97	.02	.07	.04	.09

Note:  $\chi^2/df = Qui$  square/degree of freedom; CFI = Comparative Fit Index; GFI = Goodness of Fit Index; RMSR = Root Mean Squared Residuals; RMSEA = Root Mean Squared Error of Aproximation; LO90 = Lower boundary of a 90% confidence interval; HI90 = Higher boundary of a 90% confidence interval

# Table 4Composite reliability, convergent and discriminant validity.

Variables	CR	AVE	MSV	ASV
Usefulness of the PAP	.75	.76	.56	.25
Accuracy of the PAP	.83	.84	.65	.74

Note: CR = composite reliability; AVE = average variance extracted; MSV = maximum shared variance; ASV = average shared variance.



*Note*. \*\**p* < .001

Figure 2. Investigation model with validation of the hypotheses regarding the private sector





Figure 3. Investigation model with validation of the hypotheses regarding the public sector



regarding the usefulness and accuracy of the PAP had a significant impact on satisfaction with the PA, but when the mediating variable entered into the model, the effects of the independent variables decreased, despite continuing to be significant. The usefulness of the PAP decreased from  $\beta = .335$ , t = 9.962, p < .001 to  $\beta = .094$ , t = 2.362, p < .001 and the accuracy decreased from  $\beta = .591$ , t = 17.611, p < .001 to  $\beta = .422$ , t = 11.886, p < .001. Therefore, we are presented with partial mediation, which translates into an indirect effect of the usefulness and

#### Table 5

### Mediation of satisfaction with the PAP in the relationship that exists between the usefulness and accuracy of the PAP and the private sector workers' satisfaction with their last PA

Predictive variables	Satisfaction with the PA $(\beta)$
Usefulness of the PAP	.335**
Accuracy of the PAP	.591**
Adjusted R <sup>2</sup>	0.727
$F_{(2,441)}$	591.154**
Usefulness of the PAP	.094*
Accuracy of the PAP	.422**
Satisfaction with the PAP	.434**
Adjusted R <sup>2</sup>	0.773
F <sub>(3,440)</sub>	503.804**
Note: $*a < 05$ , $**a < 001$	

Note: \*p < .05; \*\*p < .001.

## Table 6Fit measures of the public sector model

accuracy of the PAP on satisfaction with the PA, with this effect being significant both for the usefulness (Sobel Z = 8.331, p < .001) and for the accuracy of the PAP (Sobel Z = 7.507, p < .001; Preacher, 2022).

### 3.4 Public sector

The results obtained after the error covariance recommended by AMOS (Table 6) showed an adequate quality of fit to the sample under study [ $\chi^2_{(16)} = 3.08$ , p < .001, CFI = .98, GFI = .97, RMSR = .01, RMSEA = .07, LO90 = .04, HI90 = .09].

As in the private sector, the reliability was determined using the internal consistency method, resorting to the Cronbach's alpha coefficient, whose values were revealed to be adequate both for the usefulness ( $\alpha = .83$ ) and for the accuracy of the PAP ( $\alpha = .81$ ).

Observing Table 7, it is possible to verify that the CR of the usefulness of the PAP = .75 and the CR of the accuracy of the PAP = .83, which was equal to or higher than.75, thus revealing good reliability. The AVE was higher than .50, supporting convergent validity. Discriminant validity was also ensured based on the results, since the ASV and the MSV presented values below the AVE (Hair et al., 2018).

To ascertain whether satisfaction with the PAP mediated the relationship between the usefulness and accuracy of the PAP and the public sector workers' satisfaction with

	χ²/df	CFI	GFI	RMSR	RMSEA	LO90	HI90
Public sector	4.32	.97	.95	.02	.09	.07	.11
Error covariance suggested by the AMOS modification indices							
	χ²/df	CFI	GFI	RMSR	RMSEA	LO90	HI90
Public sector	3.08	.98	.97	.01	.07	.04	.09

Note:  $\chi^2/df = Qui$  square/degree of freedom; CFI = Comparative Fit Index; GFI = Goodness of Fit Index; RMSR = Root Mean Squared Residuals; RMSEA = Root Mean Squared Error of Aproximation; LO90 = Lower boundary of a 90% confidence interval; HI90 = Higher boundary of a 90% confidence interval

# Tabela 7Composite reliability, convergent and discriminant validity.

Variables	CR	AVE	MSV	ASV
Usefulness of the PAP	.75	.76	.56	.25
Accuracy of the PAP	.83	.84	.65	.74

Note: CR = composite reliability; AVE = average variance extracted; MSV = maximum shared variance; ASV = average shared variance.



the results of their last PA  $(H_{2b})$ , we followed the same procedures used for the private sector (Figure 3).

The satisfaction with the PAP mediator had a significant and positive impact ( $\beta = .437$ , t = 10.244, p < .001) on the workers' satisfaction with their last PA, suggesting that the greater the satisfaction with the PAP, the greater the satisfaction with the PAP, the entry of the mediator into the model, the effect of the usefulness of the PAP ceased to be significant (it went from  $\beta = .202$ , t = 5.811, p < .001 to  $\beta = - .015$ , t = - .404, p > .05), that is, we are presented with total mediation (Table 8).

The accuracy of the PAP, in turn, decreased in the presence of the mediator, but nonetheless remained significant (it went from  $\beta = .699$ , t = 20.141, p < .001 to  $\beta = .516$ , t = 14.405, p < .001). In this case, we are presented with partial mediation of satisfaction with the PA, with there being an indirect effect of the accuracy of the PAP. Thus, it is possible to conclude that the indirect effect of the usefulness (Sobel Z = 8.219, p < .001) and of the accuracy of the PAP (Sobel Z = 7.696, p < .001) on satisfaction with the PA was significant (Preacher, 2022).

### 4 Discussion of the results

The PA is one of the most important activities in HRM, since it contributes significantly to the organization's strategic objectives (Naeem et al., 2017). Rubin and Edwards (2020) add that its importance in the work

#### Table 8

### Mediation of satisfaction with the PAP in the relationship that exists between the usefulness and accuracy of the PAP and the public sector workers' satisfaction with their last PA

Predictive variables	Satisfaction with the PA $(\beta)$
Usefulness of the PAP	.202**
Accuracy of the PAP	.699**
Adjusted R <sup>2</sup>	0.709
F <sub>(2,406)</sub>	497.703**
Usefulness of the PAP	-0.015
Accuracy of the PAP	.516**
Satisfaction with the PAP	.437**
Adjusted R <sup>2</sup>	0.768
F <sub>(3,405)</sub>	451.737**
Note: $** p < 0.01$	

Note: \*\*p < .001.

 $(\mathbf{i})$ 

context is increasingly greater because it is by means of it that organizations motivate their workers and incentivize them to achieve quality performance. Ishak et al. (2021) stated that satisfaction with the PA is the dimension that most contributes to motivating workers to improve their performance. Based on this framing, the present study aimed to analyse (a) whether satisfaction with the PA differed depending on the sector where the workers carry out their functions (private versus public), and (b) whether the relationship between workers' perceptions regarding the usefulness and accuracy of the PAP and satisfaction with the result of their last PA is mediated by satisfaction with the PAP.

It was found that workers who carry out roles in the private sector present higher levels of satisfaction with the PA than those from the public sector, which supports the first hypothesis. This result enables it to be highlighted that, in Portugal, workers' satisfaction with the PA differs between the two sectors. This finding is consistent with the arguments of Naeem et al. (2017), according to which private sector workers feel more satisfied with the results of their PA than public sector ones, because they believe that they are fair and translate their performance. Thus, and in line with the work of Cunha et al. (2018), it can be assumed that the implementation of the PAP of private sector organizations better fits their workers' development needs. Consequently, this result theoretically reinforces the studies developed by Lira (2014) and Lira et al. (2016), which showed that public sector workers tend to consider their PAP, and consequent PAs, as unsatisfactory and inadequate. Besides the aforementioned studies, theoretically speaking the present study contributes nationally and internationally by being the first to present a study of the difference between sectors in the level of satisfaction with the PA.

In terms of practical implications, and considering what was mentioned by Pedersini and Ensslin (2020) and Soni (2020), who indicate that the dissatisfaction of public sector collaborators with their PAs may be due to the appraisal instrument/model used, this study reinforces the need, as already mentioned in previous studies (e.g., Correia et al., 2019; Cunha et al., 2018; Madureira et al., 2021), to change the PA system of the public sector (SIADAP). There are various authors (e.g., Lira, 2014; Lira et al., 2016; Correia et al., 2019; Madureira et al., 2021) who argue that the main challenge of public sector organizations is not to hire the best workers, but rather motivate them to improve their performance. Similarly, Cunha et al. (2018) suggested that more attention should be paid to the content (implementation of the PA) than to the form (design of the PA), since it is hard to trust the PA processes when their internal logic is seen with suspicion and when the crucial conditions for their legitimate functioning are not guaranteed.

Besides the difference between the sectors, this investigation also enables it to be perceived which mechanism acts as a mediator for satisfaction with the PA to occur. The results reveal that in both sectors the PAP partially mediates the relationship that exists between the workers' perception regarding the usefulness and accuracy of the PAP and their satisfaction with the result of their last PA, which supports the second hypothesis. This study goes beyond previous ones (e.g., Correia et al., 2019; Memon et al., 2019) as it adds to the national and international literature that the perception of usefulness and accuracy of the PAP significantly influences satisfaction with it, which in turn has a positive impact on the workers' satisfaction with their last PA.

In terms of practical implications derived from the second result obtained, it is evident that the PAP should be perceived as useful and accurate, otherwise workers remain unsatisfied and have a tendency to boycott the quality and quantity of the work they carry out (Nguyen et al., 2020). Independently of the sector, the PAP is a fundamental instrument for keeping workers motivated (Cunha et al., 2018; Rubin and Edwards, 2020). In this context, and as Ishak et al. (2021) already reinforced, the PAP should be projected so that it is understood, because it is only when the workers believe they have been fairly assessed that they improve their performance and feel satisfied with their PAs. In addition, by highlighting satisfaction with the PAP as a mechanism for satisfaction with the PA in both sectors, reinforcement is given to the need for there to be a fit between the individual and organizational objectives, because only this way is it possible to maintain a competitive advantage in relation to the competition (Murphy, 2020). As such, it is important for the goals to achieve to be clear because when workers are aware of the objectives, they make efforts to achieve them and increase their performance, which in turn drives productivity (Al-Jedaia and Mehrez, 2020). Ishak et al. (2021) add that when workers know the criteria of their PAs they feel more satisfied and motivated to carry out their tasks, boosting general satisfaction with the work and levels of organizational commitment.

## 5 Conclusion

This study highlighted that there are differences in the level of satisfaction with the PA between the two sectors. Specifically, the individuals from the private sector presented greater satisfaction with their PAs, compared with those from the public sector. Despite this difference, it was concluded that with regard to the mediation model, the usefulness and accuracy of the PAP have a significantly positive impact on the workers' satisfaction with their last PA, with this relationship being partially mediated by satisfaction with the PAP, both in the private and in the private sector.

# 5.1 Limitations of the study and suggestions for future investigations

As limitations, we report the fact that a convenience sample was used. Another limitation lies in the data collection instrument and methodology used, because the self-reporting questionnaire only enables an understanding of the workers' attitudes and not their real behaviours. It is also important to mention that this is a cross-sectional and self-report study, which could in some way have biased the results, since social desirability was not controlled. The fact that satisfaction with the PAP and satisfaction with the PA per se were assessed using a single item may have caused some bias. As a way of rectifying the common method variance, as recommended by Jordan and Troth (2020), attention was paid to the following aspects: (a) clarification of the purpose of the research and reinforcement of the instructions given to the interviewees, and (b) the use of a clear scale, keeping the questions concise and simple, in order to avoid items with a double meaning. However, Harman's single factor test including all of the items revealed a solution with an eigenvalue higher than one (5.4) that explains 68.3% of the total variance, which suggests that the results may have been influenced by common method bias. It should also be stressed that the participants were not asked about the specificities of the PAP used in the organizations where they perform their roles.

It is recommended that future studies rectify the aforementioned methodological limitations and, in line with Cunha et al. (2018), the type of PAP should be evaluated and the variables that have a relevant impact on it should be explored, such as the different reactions to the PAP according to the various professional categories and the true purpose of the PA. Despite that not being the focus of this investigation, we believe it would be



interesting to analyse control variables (e.g., sex, age, time in the role) to perceive whether these influence the results.

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