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Assessing the moderating and mediating role of affective commitment and procedural fairness in the relationship between rewards and job performance

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Abstract

Objective: This paper analyzes the effect of reward systems on job performance mediated by affective commitment, considering the potential moderator role of procedural fairness on the relationship between reward systems and affective commitment.

Method: A survey was conducted among the employees of cooperatives in the South and Southeast of Brazil. Structural equation modeling was used to analyze the 146 valid responses.

Results: The results confirm the direct effect of intrinsic rewards on job performance and extrinsic rewards on affective commitment. Affective commitment did not mediate the relationship between rewards and job performance. The complementary analysis indicates that intrinsic rewards influence the affective commitment of female employees, under 30 years old, with a bachelor's degree working in healthcare cooperatives. The perception of procedural fairness among female employees and those from healthcare cooperatives moderates the effect of intrinsic responses on affective commitment, whereas the affective commitment of employees in credit cooperatives influences job performance.

Contributions: This study contributes to the literature and managerial practice because it explores the effects of different types of rewards on employees' behavior and performance. It also reveals that the procedural fairness perception of specific groups of workers strengthens affective commitment.

Keywords: Extrinsic rewards; Intrinsic rewards; Affective commitment; Procedural fairness; Job performance.

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1. Introduction

The relationship between employees and organizations has changed over the years, and demands for superior individual performance are increasing (Rêgo, 2019). Job performance refers to the extent to which employees meet their jobs' requirements (Williams & Anderson, 1991). High employee performance (Sonnentag & Frese, 2002) is needed for organizations to achieve their goals and improve organizational performance (Campbell & Wiernik, 2015). Rewards play an important role in job performance (Wang, Lu & Sun, 2018) and are the main strategies organizations adopt to lead employees toward the desired direction (Bonner & Sprinkle, 2002; Lawler, 2000).

Reward systems are composed of extrinsic rewards, which result from factors external to the job, such as salary, bonuses, and support from supervisors, and intrinsic factors inherent to the job, such as autonomy, recognition, and feedback (Malhotra, Budhwar & Prowse, 2007). Despite a greater emphasis in the literature on the effects of extrinsic rewards (Ittner & Larcker, 2001), intrinsic rewards are also important for enhancing an employee's perception of psychological support and self-actualization (Wang et al., 2018). Thus, organizations should design and implement different types of rewards to improve employee performance (Khan, Shahid, Nawab & Wali, 2013).

Studies addressing reward systems and employee work performance report different results (Santos, Beuren & Issifou, 2019). Some studies, such as Santos et al. (2019), identified a direct and positive relationship between the variables; other studies found a direct and negative relationship (Agustiningsih Thoyib, Djumilah & Noermijati, 2016); while some results suggest an indirect relationship, mediated by other variables, such as affective commitment (Khalid, 2020). Garbers and Konradt (2014) found that the relationship between rewards and work performance is influenced by variables, such as the work environment. Therefore, further research is needed to investigate this relationship (Groen, Wouters & Wilderom, 2017; Bonner & Sprinkle, 2002). Hence, it is important to continue investigating the impacts of monetary rewards on employee behavior and other types of rewards, such as promotions, on performance (Van der Hauwaert & Bruggeman, 2015).

Rewards may also affect employees' affective commitment toward organizations, influencing exchange relationships (Malhotra et al., 2007; Vandenberghe, 2021). Affective commitment concerns the employees' affective attachment to an organization when they feel emotionally attached to it, identify themselves with it, and become engaged with its goals (Meyer & Allen, 1993). Affective commitment is the dimension most desired by managers and is expected to have the most substantial influence on job performance (Meyer, Stanley, Herscovitch & Topolnytsky, 2002). Additionally, affective commitment is relevant to explaining employee attitudes and behaviors (Langevin & Mendoza, 2014).

Research involving reward systems and affective commitment presents mixed results regarding the effects of different types of rewards. For example, Newman and Sheikh (2012) attribute more significant influence to extrinsic rewards, whereas Martin-Perez and Martin-Cruz (2015) argue that intrinsic rewards are more influential. However, other studies indicate that both extrinsic and intrinsic rewards are important and impact affective commitment (Williamson, Burnett & Bartol, 2009; Hadžiahmetović & Dinç, 2017; Malhotra et al., 2007). Thus, there is a gap that requires further research.

The employees' perception of fairness (Simon & Coltre, 2012) can influence affective commitment. Employees who perceive rewards as fair show positive attitudes towards their organizations (Nazir, Shafi, Qun, Nazir & Tran, 2016). Fair decision-making procedures, known as procedural fairness, are recognized for positively affecting the behavior and attitudes of employees toward their organizations as a whole (Lau & Lim, 2002; McFarlin & Sweeney, 1992), such as affective commitment (Langevin & Mendoza, 2014).

The connections between some of these elements allow us to assume that the organizational context and the way decisions are made reflect procedural fairness perceptions. The greater an employee's participation in organizational matters, the stronger his/her affective commitment to the organization (Vandenberghe, 2021) and procedural fairness perception tend to be (Mazzioni, Politelo & Lavarda, 2015). A work environment that favors the employees' well-being and the reward system is considered fair contributes to improving performance and strengthening affective commitment (Uraon & Gupta, 2020).

Thus, considering that research involving the constructs adopted in this study present mixed results and that procedural fairness is generally considered a consequent or antecedent variable, the following guiding question is proposed: **What is the effect of reward systems on job performance, mediated by affective commitment, considering a potential moderating effect of procedural fairness on the relationship between reward systems and affective commitment?** This study aims to analyze the effect of reward systems on job performance mediated by affective commitment, considering the potential moderating role of procedural fairness on the relationship between reward systems and affective commitment. Considering that the organization's management configuration may influence the employees' perception of procedural fairness and affective commitment, a survey was conducted among cooperative organizations.

Brazilian studies on affective commitment were restricted to specific segments of the economy (Medeiros, Albuquerque, Siqueira & Marques, 2003). However, the literature makes room for investigations in organizations other than those traditionally studied (Stecca, 2014). Thus, we propose investigating cooperative organizations, governed by principles such as democratic management and autonomy (OCB, 2020), which guide behavior and determine the organizations' routines (Mallmann, 2018). Human values are widely disseminated in these organizations, where the focus is on people and shared decision-making, whereas the needs of cooperative members are important (Stecca, 2014). Affective commitment is impacted by organizational culture, values, and strategies. For this reason, cooperatives were the "background" for the analyses performed here (Stecca, Albuquerque & Von Ende, 2016).

Cooperatives face management challenges, considering the specific legal requirements of the sector and difficulty in building a professionalized management that ensures the rights and participation of members (Stecca, 2014). The author considers that cooperatives are essentially concerned with collective well-being, in which meeting cooperative members' needs is a priority. These organizations are neither capitalist nor state-owned though and require professional management to survive. Therefore, it is interesting to investigate these organizations.

This study contributes to the literature by investigating different types of rewards and their effects on cooperative employees' behavior and work performance. The design of a reward system to manage employees is challenging for organizations because it is expected to be integrated and aligned with the organizational objectives (Câmara, 2006). It also contributes by exploring the antecedents and consequents of affective commitment and the variables influencing the relationships in non-traditional organizations.

This study's findings are expected to contribute to the literature in the accounting field, as they show that intrinsic rewards directly impact job performance. Studies in the accounting field focus on monetary incentives to align the interests of organizations and employees (Lourenço, 2016).

This study also connects with previous studies as it meets the suggestions of authors such as Medeiros, Albuquerque, Siqueira, and Marques (2003). They indicate a need for investigating commitment as a component of models that involve antecedent and consequent variables, considering that most studies mainly address variables that predict affective commitment. Additionally, it contributes to the advancement in the field, as there are no studies analyzing the interactions proposed in this study for the four constructs under study.

In practical terms, this study allows organizations to learn about the impact of different types of rewards and implement systems that encourage their workforce (Martin-Perez & Martin-Cruz, 2015). It also allows organizations to understand how decision-making procedures are perceived and how they can be reviewed to increase employees' perception of fairness. This study is also important for accounting professionals to identify the effects of different types of rewards, as these professionals usually work in the design of reward systems (Lourenço, 2016). In general, this study's results show that individuals' performance heavily depends on organizational policies and practices (Ismail, Majid & Joarder, 2018).

2. Theoretical Framework

2.1 Reward systems and job performance

Job performance is one of the main factors that generate value for individuals and organizations; therefore, it is relevant for managing organizations and the academic field (Sonnentag & Frese, 2002; Bendasolli, 2017). Organizations want to optimize their employees' performance to meet their goals, whereas employees transform their performance into a source of satisfaction, mastery, and pride (Sonnentag & Frese, 2002). Understanding how to encourage employees to deliver the expected performance is a challenge for organizational research (Garbers & Konradt, 2014).

Reward systems are instruments used to increase employee performance (Lawler, 1983; Meyer et al., 2002). Employee perceptions about how they are rewarded can affect their work-related attitudes and behaviors (Khalid, 2020), motivating them to put more effort into their jobs and, consequently, perform better (Bonner & Sprinkle, 2002; Kuvaas, 2006).

Reward systems are composed of extrinsic and intrinsic rewards (Flamholtz, Das & Tsui, 1985). Extrinsic rewards result from factors external to the job itself (Câmara, 2006), e.g., salaries, promotions, benefits, and support from supervisors and colleagues (Malhotra et al., 2007). On the other hand, intrinsic rewards result from the content of the work itself; that is, they are inherent to the activity one performs (Camara, 2006), e.g., autonomy, feedback, and role clarity (Malhotra et al., 2007).

Understanding the most efficient rewards to encourage performance implies designing more effective reward systems (Chiang & Birtch, 2012). Rewards have different effects on work performance when applied to employees at different levels and in different contexts (Stajkovic & Luthans, 2001). Extrinsic rewards allow organizations to reward employee performance for maintaining results, while intrinsic rewards lead employees to perceive psychological support, satisfying their need for success and self-actualization (Wang et al., 2018). Both types of rewards support organizations toward the achievement of higher employee performance.

Wang et al. (2018) note that both types of rewards impact employee performance in Chinese energy companies, but intrinsic rewards play a more significant role. Tippet and Kluvers (2009) identified that intrinsic rewards also played a more important role in non-profit companies. In turn, Stajkovic and Luthans (2001) verified that money has greater instrumental value, leading manufacturing employees to put more effort into their jobs. Additionally, social recognition is relevant because it indicates future rewards, while feedback presented the weakest effect, as it does not represent an explicit formal recognition. Chiang and Birtch (2012) also found that base salary, individual and team incentives, and other cash rewards have the most significant impact on performance. Despite these studies' non-congruent results, we propose the following conjecture:

H1a: Extrinsic rewards are positively related to job performance.

H1b: Intrinsic rewards are positively related to job performance.

2.2 Reward systems and affective commitment

Rewards may also influence an employee's affective commitment toward the organization (Lawler, 1983; Meyer et al., 2002). When organizations meet their employees' expectations regarding their needs, employees tend to become more committed to their organizations (Blau, 1964). Affective commitment is characterized by the degree to which an employee feels emotionally connected to an organization, experiences identification, and gets involved with its objectives (Meyer & Allen, 1991), materializing congruence and integration between organizational goals and the individuals' objectives (Teles, Lunkes & Mendes, 2021).

Rewards lead to an exchange relationship in which individuals develop a desire to stay and spend their time and energy on the organization's behalf (Martin-Perez & Martin-Cruz, 2015; Mowday, Steers & Porter, 1979). Thus, both intrinsic and extrinsic rewards contribute to affective commitment, playing a complementary role in a positive exchange relationship between employees and the organization (Vandenberghe, 2021).

Organizations may promote employee affective commitment by managing rewards (Williamson et al., 2009). However, there is no consensus on which type of reward most strongly impacts affective commitment (Newman & Sheik, 2012). Therefore, two strands are proposed in the literature: one indicates that extrinsic rewards are more important due to the organization's direct control over them, and another defends that intrinsic rewards are more important because these can be used as a supporting factor (Malhotra et al., 2007).

Martin-Perez and Martin-Cruz (2015) verified that the employees of a non-profit company placed greater value on intrinsic rewards, which led to greater employee loyalty and intention to stay in the organization. Malhotra et al. (2007) also verified that intrinsic rewards were the most significant determinants in UK call centers, while Newman and Sheikh (2012) report that only extrinsic rewards affected affective commitment. In turn, Williamson et al. (2009) and Hadžiahmetović and Dinç (2017) found that both types of rewards make employees more affectively committed. Thus, we assumed that:

H2a: Extrinsic rewards are positively related to affective commitment.

H2b: Intrinsic rewards are positively related to affective commitment.

2.3 Titulo Titulo Titulo

Strategies aimed at teamwork, sharing organizational values, and information access may lead employees to experience affective commitment (Stecca et al., 2016). The relationship between affective commitment and intrinsic and extrinsic rewards depends on contextual, organizational, and individual-related variables (Vandenberghe, 2021). How to change the relationship between affective commitment and its antecedents requires investigation. The influence of situational and personal moderating variables that influence the strength of this relationship is seldom investigated (Cohen & Gattiker, 1994; Vandenberghe, 2021).

Cohen and Gattiker (1994) proposed that the relationship between affective commitment and its antecedents can be changed by situational and personal factors, reporting that the relationship between reward and affective commitment is stronger in private than in state-owned companies. Subsequently, studies such as Newman and Sheikh (2012b) found that affective commitment varies according to employees' values.

Vandenberghe (2021) reports that the relationship between extrinsic rewards and affective commitment may be moderated by factors such as the industry, shared decision-making, involvement, and individual differences. On the other hand, the relationship between intrinsic rewards and affective commitment may be moderated mainly by the scope of work, need for growth, employee skills, and cultural variables. These relationships were generally stronger when organizations offered opportunities for employees to participate in decision-making processes.

Greater employee participation in decision-making leads to stronger perceptions of procedural fairness (Mazzioni et al., 2015). Procedural fairness concern how fair the procedures adopted in decision-making are (Greemberg 1990; Rego, 2002). Procedural fairness perception is obtained when individuals have control over decisions and decision-making processes, e.g., employees have the right to a voice and participation, leading employees to perceive procedures as fair (Thibault & Walker, 1975).

When employees perceive the environment as fair, they become emotionally attached to the organization and put effort into performing their jobs better (Sharma & Dhar, 2016). Fairness perceptions are usually investigated as a consequence of affective commitment or as a mediating variable (Jesus & Rowe, 2015; Wu & Chaturvedi, 2009). However, no studies were found investigating its role as a variable that can influence the strength of the relationship between rewards and affective commitment. Therefore, we proposed that:

H3a: Procedural fairness moderates the relationship between extrinsic rewards and affective commitment.

H3b: Procedural fairness moderates the relationship between intrinsic rewards and affective commitment.

2.4 Affective commitment and job performance

Increased commitment levels influence employee performance (Medeiros et al., 2003; Sotomayor, 2007). The desire to belong to an organization and psychological bonds increase the likelihood that individuals will strive to perform better and collaborate with the organizational goals (Chang & Chen, 2011). Employees who are affectively committed work harder towards achieving organizational goals, perform better, and are more enthusiastic about giving back to the organization with voluntary behaviors (Wang, Weng & Jiang, 2020). Empirical studies point to a positive association between affective commitment and individual work performance (Meyer et al., 2002; Riketta, 2002).

Employees invest emotional resources in organizations when they find their interests aligned, leading them to perform better (Sharma & Dhar, 2016). These authors report that affective commitment influenced the employee performance of the nursing staff of public health institutions in India; affective bonds encouraged them to perform better even under adverse conditions.

Kim (2014) identified that the work-life balance of Korean employees tended to increase their emotional attachment to the organization, which influenced their performance. Chang and Chen (2011) verified that high-performance work systems, which include training and other rewards, directly influence work performance in beauty salons, while affective commitment plays an indirect role. The relationship between affective commitment and employee performance was positive and significant after controlling for variables such as age and time in the company.

Fonseca and Bastos (2003) found that the affectively committed employees of a bank branch presented superior performance. Uraon and Gupta (2020) verified that the employees of state-owned companies in India with high levels of affective commitment put more effort into their jobs and showed improved performance, besides presenting voluntary behaviors to the organization. Franco and Franco (2017) identified that affective commitment is associated with all performance dimensions of employees from small and medium-sized companies in Portugal. Hence, we propose that:

H4: Affective commitment is positively related to work performance.

2.5 Affective commitment in the relationship between reward systems and job performance

When organizations satisfy their employees' socio-emotional needs, e.g., with rewards, employees feel acknowledged and perform their activities better in an exchange relationship (Khalid, 2020). In addition, this perception that the company appreciates their value by allowing them to become involved in decision-making, providing training, paying better salaries, and other benefits leads employees to establish emotional bonds with the organization (Meyer & Smith, 2001).

Affective commitment is recognized in both theoretical (Meyer et al., 2002; Riketta, 2002) and empirical literature (Chang & Chen, 2011; Fonseca & Bastos, 2003; Kim, 2014; Sharma & Dhar, 2016; Uraon & Gupta, 2020) for positively impacting employee work performance. In addition, recent studies propose that affective commitment mediates the relationship between reward systems and job performance.

Khalid (2020) reports that affective commitment mediates the relationship between pay satisfaction and the performance of professors from higher education institutions in Saudi Arabia. In addition, employee work performance is improved through an affective commitment to the organization, and rewards can promote it (Newman & Sheikh, 2012). Therefore, the next proposition is:

H5a: Affective commitment mediates the relationship between extrinsic rewards and job performance.

H5b: Affective commitment mediates the relationship between intrinsic rewards and job performance.

Figure 1 presents the theoretical model with the hypotheses proposed based on the theoretical and empirical support provided by previous studies. In line with Chang and Chen (2011) and Meyer *et al.* (2002), the control variables sex, gender, educational level, time in the company, and the cooperatives' field of activity, were included in the theoretical model.

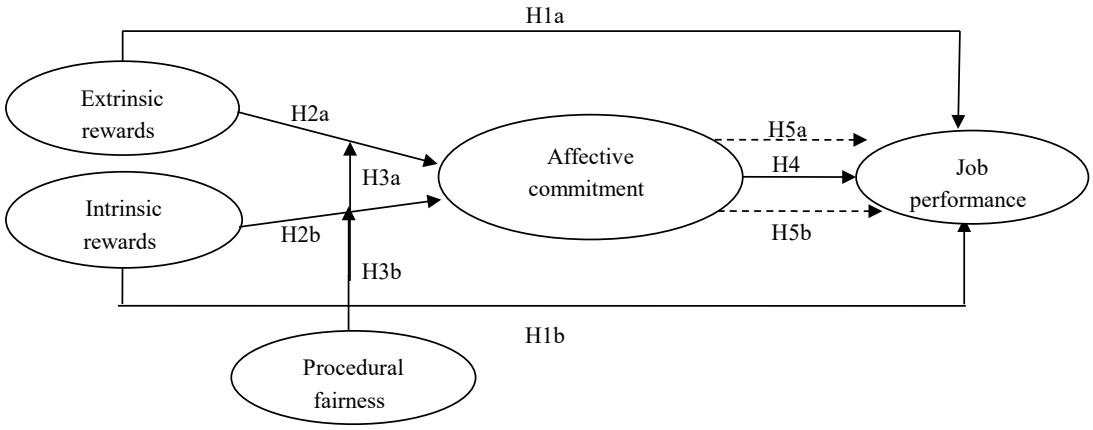

Figure 1. Theoretical model
Note: dotted lines indicate the mediating effect of affective commitment on the relationship between rewards and job performance.

Source: developed by the authors.

3. Methodological Procedures

3.1 Data Collection

This descriptive study with a quantitative approach was based on a survey conducted among the operational level employees of cooperatives in the South and Southeast of Brazil, listed in the Organization of Brazilian Cooperatives (OCB). Data on the cooperatives were obtained from the websites of the OCB state units, which provide data such as the name, address, and contact details of the cooperatives headquartered in their respective states. The names of the cooperatives were searched on the professional network LinkedIn and their employees at the operational level were randomly selected (i.e., assistants, technicians and analysts).

Some organizations were not registered, nor did their employees have a profile on the social network. Finding employees from cooperatives in the fields of consumer goods, infrastructure, work, production of goods and services, and transportation was especially challenging. Another difficulty concerns the limited number of connection requests imposed by LinkedIn. Hence, a Premium account, which allowed up to 200 connections per week, was used to collect data.

A total of 1,315 connection invitations were sent to the professionals identified from December 2021 to January 2022. The 554 (42.13%) employees who accepted the invitation received a link to access the questionnaire in Google Forms. Data collection resulted in 146 valid responses, more than the minimum required of 119 responses, calculated using the G*Power 3.1.9.4 software (Faul, Erdfelder, Buschner & Lang, 2009).

Regarding the sample's profile, more than half of the respondents (54.1%) were 19 to 29 years old; 56.2% identified themselves as women; 58.9% of the sample worked in cooperatives for four years at most; 51.4% were analysts, and 28.8% were assistants in the organizations' different areas. Regarding education, 44.5% of the respondents had an undergraduate degree, 45.2% completed a specialization or MBA, and only 1.4% had a Master's degree.

Regarding the cooperatives' characteristics, most belong to the agricultural (34.2%), credit (28.8%), and healthcare (28.1%) sectors; 65.8% are located in the South and 34.2% in the Southeast of Brazil. In addition, 62.3% of the cooperatives are linked to a central cooperative, and 67.8% have up to 10,000 members; only 9.9% have more than 50,000 members. Additionally, 39.9% of the cooperatives operate in the Brazilian market, 39.0% in the regional market, and 14.4% in the international market.

3.2 Study's constructs

The questionnaire was based on instruments translated and adapted to the Brazilian context. The constructs are presented in Table 1.

Table 1
Study's constructs

Construct	Dimension	Definition	Authors
Reward systems	Extrinsic rewards	Rewards linked to factors unrelated to the job.	Malhotra et al. (2007)
	Intrinsic rewards	Rewards related to the job content.	
Procedural fairness		Procedural fairness in decision-making.	Colquitt (2001)
Affective commitment		Affective attachment with an organization where employees choose to stay.	Meyer and Allen (1993)
Job performance		The extension in which employees meet a job's requirements.	Williams and Anderson (1991) Groen et al. (2017)

Source: developed by the authors based on the literature.

The constructs were rated on a five-point Likert scale, with semantics adapted to each construct. The adapted questionnaire from Malhotra et al. (2007) with 38 statements and an original scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used to measure the reward systems. The adapted instrument from Colquitt (2001), with seven statements and a scale ranging from 1 (to a small extent) to 5 (to a large extent), was used to assess procedural fairness. This instrument was validated in Brazil by studies involving fairness perceptions and commitment (Ferreira, Assmar, Souto, Delgado, Gonzáles & Galáz, 2006).

Affective commitment was measured with the instrument proposed by Meyer and Allen (1993). It is a six-item instrument, and its original seven-point scale was adapted to a scale ranging from 1 (strongly disagree) to 5 (strongly agree). This instrument was validated in Brazil by studies such as Medeiros and Enders (1998). Job performance was measured using the instrument adapted from Groen et al. (2017), a short version of the instrument proposed by Williams and Anderson (1991) with five statements. The short scale by Groen et al. (2017) was not used in Brazilian studies, but the instrument by Williams and Anderson (1991) was validated in the context of Brazilian cooperatives by Beuren, Altoe, and Dal Vesco (2015). This instrument was adapted in this study to reflect self-assessment, and the original seven-point scale was adapted to a scale ranging from 1 (strongly disagree) to 5 (strongly agree).

A pre-test was applied to employees in the analyst position working in Brazilian credit and transportation cooperatives. Additionally, an interview was held with an employee in the management position at a credit union to validate the instrument. The pre-test participants reported that the statements were clear and used accessible language. They also stated that all questions applied to the context of cooperatives. The participants suggested changing some words so that the questionnaire would be more appropriate to the hierarchy existing in the cooperatives. Hence, the questionnaire was adjusted to meet the suggestions.

3.3 Data Analysis

Data analysis included confirmatory factor analysis and Structural Equation Modeling (SEM) estimated from Partial Least Squares (PLS) using the SmartPLS3 software. The measurement and structural models were assessed, the latter through Bootstrapping and Blindfolding.

The model's analysis included verifying its reliability using Cronbach's alpha and composite reliability; values between 0.70 and 0.95 are recommended for both indicators (Hair Jr. et al., 2019). The model's validity was assessed by convergent and discriminant validity. The construct's Average Variance Extracted (AVE) was calculated to analyze convergent validity (Hair Jr. et al., 2019); values greater than 0.50 are recommended. The constructs of extrinsic and intrinsic rewards are multidimensional and operationalized in second order; thus, the calculation of composite reliability and AVE were performed separately (Bido & Silva, 2019). The Heterotrace-Monotrace Ratio Criterion (HTMT) was used for verifying discriminant validity, and values lower than 0.90 are suggested for this indicator (Henseler et al., 2015).

The coefficient of determination (R^2), predictive relevance (Q^2), and statistical significance and relevance of the relationships were assessed to analyze the structural model (Hair Jr. et al., 2019). Additionally, the moderating role of procedural fairness in the relationship between extrinsic and intrinsic rewards and affective commitment was tested using the two-stage method. Finally, the mediation role of affective commitment in the relationship between extrinsic and intrinsic rewards and job performance was also tested. Mediation was considered total if the direct effect was not significant and the indirect effect was significant and partial if the direct and indirect effects were significant.

Data were collected from the same source in the same period, but we sought to reduce the common method bias by informing the respondents that their identities would remain confidential, that there were no right or wrong answers, and by asking the participants to provide candid answers (Podsakoff, Mackenzie, Lee & Podsakoff, 2003). Using Harman's single factor test, we identified no common method bias in the sample because no single factor individually represented more than 50.0% of the variance (Podsakoff et al., 2003).

Non-response bias (Mahama & Cheng, 2013) was also investigated using the Mann-Whitney nonparametric test, and no evidence of non-response bias was found in the sample when the responses of the first 10% (15 responses) and the last 10% (15 responses) responses were compared.

4. Analyses and Discussion of Results

4.1 Measurement model

In addition to assessing construct validity and reliability, adjustments were implemented in the assessment of the measurement model to improve these criteria (Hair Jr. et al., 2017). Hence, three reverse coding items concerning affective commitment were excluded from the questionnaire to reduce common method bias (Podsakoff et al., 2003).

The reliability of the statements in each construct was verified in the confirmatory factor analysis through factor loadings. Factor loadings must be greater than 0.70 or present values between 0.40 and 0.70, which are acceptable and would be excluded only if they do not increase AVE or CR values (Hair Jr. et al., 2017); thus, no additional statements were excluded. After analyzing the factor loadings, the model's reliability and validity were analyzed. Table 2 presents the results; the results concerning the HTMT criterion are presented at the top of the table.

Table 2
Model's Reliability and Validity

Construct	Extrinsic rewards	Intrinsic rewards	Affective commit	Job perform	Procedural
Extrinsic rewards					
Intrinsic rewards	0.849				
Affective Commitment	0.716	0.657			
Job performance	0.451	0.559	0.384		
Procedural fairness	0.733	0.891	0.602	0.491	
Cronbach's alpha	0.929	0.928	0.803	0.836	0.915
AVE	0.507	0.567	0.716	0.607	0.664
CR	0.857	0.883	0.883	0.885	0.932

Note: Affective commit = Affective commitment; Job perform = Job performance; Procedural = Procedural fairness; AVE = Average Variance Extracted; CR = Composite reliability.

Source: study's data

All indicators obtained in the model's analysis model align with the values suggested by the literature (Hair Jr. et al., 2019; Henseler et al., 2015), which enables assessing the model's reliability and validity. Finally, the multicollinearity of the variables was analyzed by the Variance Inflation Factor (VIF), which presented values below 5 in all constructs, as Hair Jr. et al. (2019) recommended. Because all the indicators presented the results suggested by the literature; we proceeded with the analysis of the structural model (Hair Jr. et al., 2019).

4.2 Structural Model

Bootstrapping was performed using SmartPLS3 (Hair Jr. et al., 2019) to test the structural model and assess the statistical significance and relevance of the path coefficients, with 5,000 resamples and Bootstrap confidence interval with corrected and accelerated bias (BCa) at a significance level of 10%. Additionally, the Blindfolding module was performed with 300 interactions. Table 3 presents the results obtained in the structural model analysis, with the beta coefficient (β), t-value, p-value, and decision for each hypothesis proposed.

Table 3

Structural Model Results

Hypothesis	Expected sign	Relationship	Beta (β)	t-value	p-value	Decision
H1a	+	ER → JP	-0.010	0.071	0.472	Reject
H1b	+	IR → JP	0.448	3.403	0.000***	Failed to reject
H2a	+	ER → AC	0.434	3.941	0.000***	Failed to reject
H2b	+	IR → AC	0.135	0.845	0.199	Reject
H3a	+	JP Modera x Extrinsic → AC	-0.178	1.446	0.074*	Reject
H3b	+	JP Modera x Intrinsic → AC	0.120	0.881	0.189	Reject
H4	+	AC → JP	0.066	0.744	0.228	Reject
H5a	+	ER → AC → JP	0.029	0.684	0.247	Reject
H5b	+	IR → AC → JP	0.009	0.455	0.324	Reject

Note 1: ER = Extrinsic Rewards; IR = Intrinsic Rewards; AC = Affective Commitment; JP = Job Performance; JP Modera x Extrinsic = Procedural fairness moderation role in the relationship between Extrinsic Rewards and Affective Commitment; JP Modera x Intrinsic = Procedural fairness moderation role in the relationship between Intrinsic Rewards and Affective Commitment. Significant at ***p<0.01; *p<0.10.
Note 2: Assessment of Determination Coefficient (R^2): Affective Commitment = 0.436; Job performance = 0.232.
Predictive Relevance (Q^2): Affective Commitment = 0.276; Job Performance = 0.125

Source: study's results.

Table 3 shows that only significant hypotheses at the 1% level were accepted (p-value <0.01). The remaining hypotheses were not supported at a significance level of 10% (p-value >0.10). The hypothesis predicting the moderation role of procedural fairness in the relationship between extrinsic rewards and affective commitment was rejected because it obtained a negative Beta coefficient.

The coefficient of determination (R^2) and the Stone-Geisser indicator (Q^2) was analyzed to assess the predictive validation indicators. The Stone-Geisser indicator (Q^2) allows us to assess how close the model is to what was expected. Affective commitment and job performance showed a predictive relevance of 0.276 and 0.125, respectively, and, as recommended by Hair Jr. et al. (2017), the values were above 0. Regarding the R^2 values, which allow measuring the model's predictive power, the independent variables explain affective commitment in 43.6% and job performance in 23.2%, representing moderate and weak explanatory power, respectively.

4.3 Discussion of results

The discussion is based on the hypotheses tested. The results presented in Table 3 show that hypothesis H1a, which predicted a positive relationship between extrinsic rewards and job performance, was not confirmed. This finding diverges from the results reported by Stajkovic and Luthans (2001) and Chiang and Birtch (2012), in which extrinsic rewards lead employees to put more effort into their tasks, directly impacting their performance. Other intervening variables are believed to influence this relationship, such as the employees' cognitive ability, skills, personality, previous experiences, and task importance (Rêgo, 2019; Sonnentag & Frese, 2002). In addition, the cooperatives' peculiarities may also intervene, as the performance of the individual depends on the practices adopted by organizations (Ismail et al., 2018).

Hypothesis H1b, which predicted that intrinsic rewards have a positive relationship with job performance, failed to be rejected. This result corroborates Wang et al. (2018) and Tippet and Kluvers (2009), who found that intrinsic rewards lead to increased performance. Tippet and Kluvers (2009) report that employees of nonprofit companies were more concerned with doing a good job, giving greater importance to intrinsic rewards when it comes to job performance.

H2a, which predicted that extrinsic rewards impact affective commitment, failed to be rejected. The employees in the sample agreed that the superiors were accessible, had technical competence, and supported more pleasant work environments and work team cooperation. Leadership and support from supervisors and colleagues influence affective commitment (Simon & Coltre, 2012), which converges with the results found in this study.

Hypothesis H2b, predicting a positive relationship between intrinsic rewards and affective commitment, was not accepted. This finding diverges from the literature stating that extrinsic and intrinsic rewards affect affective commitment (Hadžiahmetović & Dinç, 2017). Martin-Perez and Martin Cruz (2015) verified that intrinsic rewards are more important for affective commitment in non-profit companies, an aspect not observed in the cooperatives addressed here. The employees agreed that cooperatives apply intrinsic rewards, but their impact on affective commitment was not confirmed. This information allows us to infer that there may be other intervening factors in this relationship, as it can be impacted by individual characteristics, work experience, and organizational variables (Vandenberghe, 2021).

Hypotheses H3a and H3b were not confirmed. These hypotheses proposed that procedural fairness moderates the relationship between rewards and affective commitment. However, cooperatives have standardized management models, especially credit unions, which are authorized and regulated by the Central Bank of Brazil (BCB), which issues the norms and resolutions to be followed by these organizations (Mallmann, 2018). Additionally, cooperatives have difficulties in professionalizing management so that the dominant political group's opinions and issues may impact personnel management strategies (Stecca, 2014). This context may lead to a perception that employees cannot express their opinions in decision-making processes, influence decisions, or contest results; consequently, procedural fairness did not moderate the relationship proposed here.

H4, which predicted that affective commitment would influence job performance, was not accepted. This result differs from that found by Franco and Franco (2017), Kim (2014), and Uraon and Gupta (2020), that employees who were more emotionally committed performed their tasks better. Differently from what was expected, affective commitment presented the lowest mean among all the constructs, though the employees agreed that they always perform their essential functions and comply with their responsibilities and the formal performance requirements demanded by their jobs. Note that the survey was applied during the covid-19 pandemic, which impacted organizational management dynamics, such as the face-to-face relationship between those involved in routines and services. Face-to-face services decreased, and employees started working in the home office (Sausen, Baggio, Dallabrida & Bussler, 2020). This context may have contributed to decreased affective commitment among cooperative employees due to suspended face-to-face organizational activities.

Hypotheses H5a and H5b, predicting the mediating role of affective commitment in the relationship between extrinsic and intrinsic rewards, respectively, and job performance, were not confirmed. Table 3 shows that the indirect effects were not significant and did not enable confirming the mediating role of affective commitment. These findings differ from the results that Khalid (2020) reported, in which the affective commitment of professors from higher education institutions in Saudi Arabia was found to mediate the relationship between pay satisfaction and performance.

Finally, the tests with the control variables revealed that intrinsic rewards were positively related to affective commitment among female ($\beta = 0.406$; $p<0.05$), younger employees – below 30 years old ($\beta = 0.361$; $p<0.05$), and holding a bachelor's degree ($\beta = 0.336$; $p<0.10$). H3b also failed to be rejected among female employees. It concerns the moderating effect of procedural fairness in the relationship between intrinsic rewards and affective commitment ($\beta = 0.216$; $p<0.10$). The impact of intrinsic rewards on the affective commitment of the female employees was strengthened in environments perceived as fair.

A direct effect of intrinsic rewards on affective commitment and the moderating role of procedural fairness in this relationship were found in healthcare cooperatives. This finding suggests the effect of intrinsic rewards is strengthened when employees perceive decision-making procedures to be fair. However, no type of rewards directly influenced job performance in these cooperatives, showing that there may be other intervening variables. H4, which predicted the relationship between affective commitment and job performance, was accepted in credit unions; credit union employees were slightly more committed than the remaining employees.

These results corroborate the literature in which the development of affective commitment may be facilitated in specific organizational contexts and impacted by individual characteristics (Langevin & Mendonza, 2014; Vandenberghe, 2021). Even though these organizations are governed by the cooperativism principles and obey the rules applied to cooperatives in general, each cooperative may present management particularities depending on the sector in which they operate. For example, França et al. (2020) report the need to establish and disseminate clearer career plans in credit and healthcare cooperatives. The staff in healthcare cooperatives often lacks an understanding regarding the experience and qualification required to compete in internal recruitment processes – such information should integrate into a career plan (França et al., 2020) – which possibly leads to a perception of insufficient promotional policies.

5. Conclusions and Recommendations

This study investigated the effect of reward systems on work performance and the intervenient role of affective commitment and procedural fairness. The results indicate that intrinsic rewards are important antecedents of employees' positive attitudes and behaviors, impacting employee work performance. Extrinsic rewards are also relevant when acting directly on employees' affective commitment, a bond desired by organizations. No mediating effect of affective commitment was found on the relationship between rewards and job performance.

The complementary analysis revealed that intrinsic rewards influence the affective commitment of female employees under 30 years of age with a bachelor's degree and working in healthcare cooperatives. Additionally, the perception of procedural fairness appeared as an important variable in the model, as it strengthened the relationship between intrinsic rewards and affective commitment among female workers from healthcare cooperatives, whereas affective commitment impacted job performance in credit unions.

The conclusion is that extrinsic and intrinsic rewards generate distinct effects on employees, which highlights the importance of implementing reward systems composed of varied rewards and appropriate to the context in which they are applied to meet the needs of employees. The effects of extrinsic and intrinsic rewards were different according to the sector, emphasizing that management particularities may contribute to different variables impacting affective commitment and job performance in each organization. The results found for the cooperatives were different from those reported in the literature for traditional companies. Both extrinsic and intrinsic rewards were found to impact the job performance and affective commitment of employees from traditional companies, a result not found among the cooperatives addressed in this study. The more emotionally committed employees of traditional companies present higher job performance, a result found only in credit unions. Furthermore, the mediating role of affective commitment in the relationship between rewards and job performance reported in the literature was not found in the cooperatives addressed here.

This study has implications for the literature addressing management because it explores gaps, proposing a model with antecedents and consequents of affective commitment, as suggested by Medeiros et al. (2003). Additionally, it addresses variables influencing the relationship between affective commitment and its antecedents, following the suggestions of Cohen and Gattiker (1994). The results show that affective commitment does not mediate the relationship between rewards and performance; though, they found interesting evidence regarding the relationship between affective commitment and its antecedents. Additionally, the results show that for some groups, procedural fairness perceptions can strengthen/weaken these relationships. Finally, the rejection of some hypotheses opens the way for the literature to investigate new variables that possibly intervene in the relationship between reward systems and work performance.

In practical terms, the results allow managers to identify how different types of rewards and decision-making procedures influence employee behaviors and attitudes and implement systems and procedures that meet the organization's objectives and the employees' needs. Additionally, this study allowed us to identify which groups of rewards impact affective commitment and job performance; thus, cooperatives can use these findings to direct the behaviors of their workforce towards their goals, granting rewards that meet their employees' needs.

This study has limitations that demand caution when interpreting results. The survey method exposes the study to the subjectivity of the respondents' interpretation. Additionally, the fact that data were collected via LinkedIn may have impacted the participants' age, considering that younger individuals more frequently use social networks. The selection of constructs and the fact that operational employees were selected also configure limitations; different results could have been reached if different choices had been made.

This study did not use the characteristics of cooperatives as control variables in the model, which also represents a limitation. Therefore, including and more deeply investigating the particularities of cooperatives management may lead to different results.

Thus, future studies could adopt different methods such as case studies; other means to collect data such as e-mail; address other constructs and/or instruments; and investigate different hierarchical levels, such as managers.

The discussions addressed here allow us to emphasize the importance of this topic, as organizations are increasingly looking for committed employees able to present superior job performance, whereas employees seek organizations that meet their needs.

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