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**Perception of organizational justice regarding the asymmetrical remuneration of employees of an organization in the electrical energy sector**

**Percepción de justicia organizacional ante la remuneración asimétrica de los trabajadores de una organización del sector eléctrico**

**Percepção de justiça organizacional quanto a assimetria da remuneração dos servidores de uma organização do setor de energia elétrica**

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### **Abstract**

**Purpose:** This study sought to verify the perception of employees of an organization in the electric power sector regarding organizational justice regarding remuneration asymmetry. Three dimensions of organizational justice were considered for analysis purposes: distributive, procedural and interactional justice.

**Methodology:** Descriptive research, applied through a questionnaire made possible by the Google Forms platform, whose final sample totaled 219 respondents. For data analysis, Mann-Whitney U statistical tests and Homogeneity Analysis (HOMALS) were used.

**Findings:** The main results indicate that the asymmetry of remuneration can negatively impact the perception of distributive justice in the organization. They still show little relationship with procedural justice and divergences in relation to interactional justice.

**Contributions of the Study:** Thus, it contributes theoretically and empirically by verifying that the asymmetry of remuneration can increase the feeling of injustice, provoke negative behaviors, and affect the performance at work of individuals. This study contributes to the advancement of research involving organizational justice and remuneration in the electricity sector.

**Keywords:** Remuneration systems. Organizational justice. Remuneration asymmetry.

### **Resumen**

**Objetivo:** Este estudio buscó verificar la percepción de los empleados de una organización del sector eléctrico sobre la justicia organizacional respecto a la asimetría en la remuneración. Para fines de análisis se consideraron tres dimensiones de la justicia organizacional: justicia distributiva, procesal e interaccional.

**Metodología:** Investigación descriptiva, aplicada a través de un cuestionario hecho posible por la plataforma Google Forms, cuya muestra final ascendió a 219 encuestados. Para el análisis de los datos se utilizaron las pruebas U de Mann-Whitney y el Análisis de Homogeneidad (HOMALS).

**Resultados:** Los principales resultados indican que la asimetría salarial puede impactar negativamente en la percepción de justicia distributiva en la organización. También muestran poca relación con la justicia procesal y divergencias en relación con la justicia interaccional.

**Contribuciones del estudio:** Por lo tanto, contribuye teórica y empíricamente al encontrar que la asimetría salarial puede aumentar el sentimiento de injusticia, fomentar comportamientos negativos y afectar el desempeño laboral de los individuos. Este estudio contribuye al avance de la investigación sobre justicia organizacional y remuneración en el sector eléctrico.

**Palabras clave:** Sistemas de remuneración. Justicia Organizacional. Asimetría retributiva.

### Resumo

**Objetivo:** Este estudo buscou verificar a percepção dos servidores de uma organização do setor de energia elétrica sobre a justiça organizacional referente a assimetria da remuneração. Foi considerado para efeito de análise as três dimensões da justiça organizacional: justiça distributiva, processual e interaccional

**Metodologia:** Pesquisa descritiva, aplicada por meio de questionário viabilizado pela plataforma *Google Forms.*, cuja amostra final totalizou 219 respondentes. Para análise dos dados, utilizou-se dos testes de *U de Mann-Whitney* e da Análise de Homogeneidade (HOMALS).

**Resultados:** Os principais resultados indicam que a assimetria de remuneração pode impactar de forma negativa na percepção da justiça distributiva na organização. Evidenciam ainda pouca relação com a justiça processual e divergências em relação à justiça interaccional.

**Contribuições do estudo:** Assim, contribui-se de forma teórica e empírica ao constatar que a assimetria de remuneração pode aumentar a sensação de injustiça, suscitar comportamentos negativos, e afetar o desempenho no trabalho dos indivíduos. Este estudo contribui para o avanço das pesquisas que envolvem justiça organizacional e remuneração no setor elétrico.

**Palavras-chave:** Sistemas de remuneração. Justiça Organizacional. Assimetria da remuneração.

## 1 Introduction

The concept of justice plays a central role both in society and organizations, as it aims to maintain an ideal order in social relations (Greenberg, 1993). Organizational justice focuses on how workers determine whether they have been treated fairly by their superiors and how these determinations influence job satisfaction (Moorman, 1991; Klein & Colauto, 2020; Sallaberry, Klein & Santos, 2025). In this context, understanding more about the perception of justice in the organizational environment is essential for comprehending individual and collective attitudes and behaviors (Mendonça et al., 2003).

Greenberg (1993) highlights that individuals who believe they are treated fairly in the workplace exhibit altruistic behaviors, improved job performance, increased trust,

commitment, and reduced conflicts. Previous studies (Cohen-Charash & Spector, 2001; Colquitt, 2001; Langevin & Mendoza, 2013; Klein & Colauto, 2020; Guimarães et al., 2023; Sallaberry, Klein & Santos, 2025) on the perception of organizational justice have shown that when employees perceive organizational treatment as fair, they tend to display positive workplace behaviors. Conversely, perceptions of unfair treatment can lead to negative behaviors.

However, feelings of injustice in the workplace can trigger stress, burnout, loss of commitment, absenteeism, and other individual and organizational issues (Colquitt, 2001). Cohen-Charash and Spector (2001) emphasize that individuals who feel unfairly treated at work may experience decreased performance and satisfaction, as well as health problems that can jeopardize organizational outcomes. Studies like Beuren et al. (2017) suggest that increasing perceptions of organizational justice can lead to higher levels of job satisfaction and, consequently, improved job performance. Nevertheless, significant wage disparities may negatively affect perceptions of justice, resulting in poor work performance, demotivation, and job dissatisfaction.

When individuals perceive proportionality between their compensation and the effort required to achieve it, especially when compared to others, they experience feelings of satisfaction and justice, increasing their intention to remain with the organization (Langevin & Mendoza, 2013). Conversely, Assmar, Ferreira, and Souto (2005) report that when the perception of effort and compensation is viewed as unbalanced, it can lead to negative behaviors such as absenteeism and turnover.

Compensation includes everything an individual receives in exchange for providing services under an employment contract, whether directly from the employer or third parties, including bonuses (Martins, 2010). It is a key motivational factor for achieving organizational goals and can have emotional impacts when workers perceive inequity in their remuneration. In this sense, consistency and fairness in employee remuneration is important, both in comparison with their peers in the organization and in relation to professionals with similar functions in others (Lacombe, 2020).

The perception of justice in organizations has been studied multidimensionally. Beyond equity in resource distribution (distributive justice), participation in decision-making and performance evaluation processes (procedural justice) and the relationship between boss and subordinate (interactional justice) are important dimensions of organizational justice (Cropanzano, Bowen & Gilliland, 2007).

In addition to the complexity of the perception of justice in relation to compensation, there are differences when observing this phenomenon in private and public entities since the latter hire through periodic public competitive exams. In these cases, the public calls for applications and the salaries can be different, so that a group of civil servants are subject to different salaries while performing similar functions. Hence, it is worth examining the potential effects of compensation asymmetry on organizational justice perceptions among individuals in this context. This research aims to assess the perception of employees in an electric energy sector organization regarding organizational justice concerning compensation asymmetry.

To this end, the study investigates employees in a mixed-economy electric energy sector organization characterized by atypical asymmetric compensation, where two groups of workers holding identical positions receive different salaries due to recruitment through exams held at different times. Methodologically, the study employs nonparametric tests (Mann-Whitney U test) to analyze divergent groups and Homogeneity Analysis (HOMALS) to identify key differences regarding the three dimensions of organizational justice. Overall,

the results suggest significant relationships between perceptions of organizational justice and compensation asymmetry.

Discussions on compensation have been prevalent across various fields of knowledge and countries in recent years (Cardoso, 2006; Mendes et al., 2017). Thus, this research is theoretically justified as it aims to contribute to the literature on compensation and provide a deeper understanding of organizational justice. For example, Magnan and Martin (2019) argue that regardless of position, the normative principles defining fair compensation should be egalitarian, which is not always the case in practice. In this sense, the discussion in this research seeks to provide arguments for increasing knowledge about the effects of this inequality or asymmetry in remuneration. From a practical point of view, the research scenario is opportune due to the fact that compensation asymmetries are widely discussed in the case study organization, whose debates are shared through union journals and disseminated via the intranet and corporate emails. As a result, we hope to gain a better understanding of the consequences of the situation in order to mitigate the negative implications.

## 2 Theoretical Framework

### 2.1 Organizational Justice

In the corporate environment, the term organizational justice is used to describe and explain the role of justice within organizations, aiming to examine individuals' perceptions of fairness in their work relationships and how this perception can impact other factors related to the organizational environment (Greenberg, 1990; Moorman, 1991). Organizational justice focuses on the perception of fairness or unfairness in the relationships between employees, superiors, and their organizations (Parker & Kohlmeier, 2005; Beuren et al., 2017). Thus, in the organizational context, for a situation to be considered fair, it must be perceived as such by the organization's members (Klein & Colauto, 2020; Guimarães et al., 2023).

The first studies on justice in the organizational environment were developed in the 1960s, based on Homans' research on the concept of social exchange and Adams' proposition of the Equity Theory (Greenberg, 2009). The concept of social exchange predicts that individuals expect proportional rewards for their contributions (Homans, 1961), meaning they perceive fairness if the rewards are proportional to the investments made. Otherwise, dissatisfaction may arise in cases of disadvantage or guilt in cases of advantage. Similarly, the equity concept also focuses on the perception of fairness in the relationship between effort and reward but adds the individual's comparison with others in similar conditions to determine if the treatment was fair or not (Adams, 1965). If the perception is one of unfairness, it creates a distressing experience, motivating individuals to develop strategies to mitigate perceived inequalities and to display behavior aimed at seeking fairness (Adams, 1965; Törnblom & Kazemi, 2015).

From the 1980s onwards, research on organizational justice intensified, and the term organizational justice was first used in 1987 by Jerald Greenberg. Initially, it described social, psychological, and sociological theories focusing on individuals' perceptions of justice, demonstrating their applicability to organizations (Greenberg, 1987a). Later, Greenberg defined the term as addressing the question: What is fair? from the perspective of various forms of organizational justice perception (Greenberg, 2009).

The concept of organizational justice is understood in dimensions (Klein & Colauto, 2020). Greenberg (1987a) proposed two dimensions: distributive justice, focusing on content

(the fairness of outcomes), and procedural justice, focusing on process (the fairness of the methods used to achieve outcomes). Later, Bies and Moag (1986) introduced a third type, interactional justice, which considers the quality of relationships between subordinates and superiors. According to Colquitt (2001), interactional justice can be further divided into informational and interpersonal justice. Thus, some researchers view organizational justice through a tripartite lens (distributive, procedural, and interactional), while others adopt a four-dimensional perspective (distributive, procedural, informational, and interpersonal) (Klein & Colauto, 2020; Guimarães et al., 2023). This study adopts the tripartite framework: distributive, procedural, and interactional justice.

Distributive justice was the first to gain the attention of researchers in the field of organizational studies. It is defined as individuals' perception of justice in relation to the results or rewards obtained from the organization in return for the efforts invested (Cropanzano & Folger, 1998; Guimarães et al., 2023). It focuses on individual perceptions of fairness in outcomes achieved, whether positive or negative, such as salary increases, bonuses, year-end awards, promotions, distribution of profits to employees, disciplinary actions, among others (Beuren et al., 2017). Cohen-Charash and Spector (2001) also corroborate the idea that distributive justice is related to the results achieved and add that the way it is perceived can interfere in the organizational environment.

Distributive justice considers the fairness of results such as performance ratings, promotions, salary increases, end-of-year awards, participation in training programs, etc. For Langevin and Mendoza (2013), if the individual perceives that there is proportionality in the relationship between reward and effort, there is a perception of fairness, which may lead to the intention to remain in the organization. When there is no proportionality between the efforts/investments and the results/rewards, there is a favorable or unfavorable inequity, the former when the person is over-rewarded and the latter when they are under-rewarded. This imbalance can generate guilt or anger depending on the case and will motivate the person to seek equity or reduce the inequity (Assmar, Ferreira & Souto, 2005).

In the organizational environment, the perception of fairness is intrinsically related to the definition of salary. In this context, Barczak et al. (2021) argue that organizations need to align their remuneration policies with strategies and work processes in order to achieve organizational objectives. Ribeiro and Bastos (2010) carried out a study on asymmetric remuneration within the same organization, and found that the distribution of results is perceived as fair when there is proportionality in the reward obtained (salary, benefits, security), according to the investment made (dedication, length of the working relationship, sacrifice of quality of life and the work itself), compared to other individuals in the same group under similar conditions. According to the authors, if employees perceive fairness in the comparison made, there is a tendency to generate satisfaction in the individual. On the other hand, when the advantages are considered unequal, it can generate tension and motivate people to seek balance. Individuals who perceive that the ratio between the investment and the reward obtained is unfair may develop strategies to seek balance in this relationship, such as reducing their commitment to work and absenteeism; and consequently, this may affect performance within the organization.

Procedural justice refers to the fairness of organizational procedures, including personnel selection processes, performance evaluation systems, and criteria for salary increases and promotions (Klein & Colauto, 2020). Several studies have found interesting results for this dimension (Thibaut & Walker, 1975; Leventhal, 1980; Lind & Tyler, 1988; Al-Zu'bi, 2010). Thibaut and Walker (1975) found in their study that for dispute resolution processes, they developed a systematic investigation method aimed at comparing people's

reactions to procedures related to conflict resolution. According to the authors, one of the assumptions is that individuals are not only concerned with what is fair or unfair in the results of a distribution, but also with the criteria adopted to make the distribution. In this way, if people perceive fairness in the criteria and procedures adopted to make the distribution, they will be able to accept results that are not favorable to them.

Studies addressing workers' perceptions of the fairness of the procedures adopted by organizations prior to the distribution of rewards have proven to be as important as the distribution itself (Leventhal, 1980; Al-Zu'bi, 2010). Researchers understand that procedural justice is a major predictor and has a strong relationship with aspects related to behavior in the organizational environment, such as commitment to the task, task performance and affective organizational behavior (Leventhal, 1980).

Lind and Tyler (1988) state that there is empirical evidence that the perception of a fair process has a strong and independent impact on individuals' reactions to organizational decisions, in some cases even surpassing the influence of distributive justice. They also suggest that employees who feel respected and valued perceive the existence of procedural justice in decision-making. Thus, when procedures are seen as fair, workers are more likely to show greater organizational commitment. On the other hand, a perception of organizational injustice can lead to counterproductive reactions and increased turnover (Cropanzano & Folger, 1989).

Leventhal (1980) defined that the perception of procedural justice depends on meeting a number of criteria: consistency of the rules and standards applied; absence of bias and personal interests on the part of those who decide; truthfulness of the information given to the individuals involved in the decision, guaranteeing credibility and transparency to the process; representativeness and participation of those involved in the decision-making process, since participation generates identification and commitment to the results; ethics in terms of moral values; and the possibility of correcting and modifying unfair decisions. The criterion of representativeness and participation of those involved in the decision-making process that affects them, proposed by Leventhal (1980), corroborates the findings of Thibaut and Walker (1975) that people consider procedures that allow them to express their opinions to be fairer, the so-called "voice effect".

Interactional justice focuses on interpersonal aspects of organizational practices, particularly the quality of communication and treatment between individuals and their superiors (Cohen-Charash & Spector, 2001; Klein & Colauto, 2020; Guimarães et al., 2023). Bies and Moag (1986) were the first authors to introduce the concept of interactional justice, linking it to individuals' perceptions of how outcomes and procedures are communicated. Researchers such as Colquitt (2001) suggest that interactional justice can be divided into two strands: informational and interpersonal. Informational justice reflects the degree to which managers or decision-makers communicate decisions that affect individuals, that is, subordinates expect their superiors to provide adequate and honest explanations for decisions, especially when the results are not favorable. The interpersonal aspect is related to the quality of interaction between subordinates and superiors and represents the degree to which people are treated in a respectful and dignified manner by superiors or third parties involved in the execution of procedures (Cohen-Charash & Spector, 2001).

## 2.2 Compensation and Organizational Justice

The terms salary, remuneration, and compensation are sometimes used interchangeably; however, they have distinct characteristics. Salary refers to the total

payments made directly to an employee by the employer due to an employment contract, whether for the performance of work, the worker's availability, contractual interruptions, or other situations provided by law (Martins, 2010). As a definition of wages, the Brazilian Consolidation of Labor Laws approved by Decree-Law No 5,452/1943, in its article 76, states that "the minimum wage is the minimum consideration due and paid directly by the employer to every worker, including rural workers, without gender distinction, for a regular workday." On the other hand, remuneration encompasses everything an employee receives for services rendered under an employment contract, regulatory rules, or customs. It functions as a form of reward for intellectual or manual labor, including benefits or salary incentives (Martins, 2010). Examples include base salary, additional pay (for hazardous work, unhealthy work, night shifts), overtime, productivity bonuses, profit sharing, and other incentives (Lacombe, 2020).

The compensation system is a complex set of elements (Mendes et al., 2017; Barczak et al., 2021). It includes non-financial elements (e.g., praise, symbolic rewards) and financial elements (e.g., base salaries, bonuses, awards, non-salary benefits). When properly implemented, it becomes part of the human capital management system, encompassing recruitment, skill development, promotions, and more. Compensation systems should be flexible and adaptive, considering not only external changes but, above all, the internal organizational environment (Barczak et al., 2021). This means aligning the company's strategy and objectives with its compensation system.

The remuneration systems commonly used by organizations use the expected contribution of the position (functional remuneration) as a reference for determining its elements, i.e. the same salary is paid to different professionals who hold the same position, with the possibility of differences based on merit and seniority (Cardoso, 2006). However, it is worth mentioning that among the alternatives to job-based systems, there are those that focus on the individual's skills ("skills-based payment") and those with an emphasis on competencies ("competency-based payment"). The former determines pay based on the personal characteristics of the professionals involved and encourages individual professional development, since it links promotions and progression to proof of the acquisition of skills or knowledge. The second seeks to expand the advantages of employee remuneration to those situations in which remuneration for skills has limitations, such as activities that are not very standardized and have a higher degree of abstraction (Cardoso, 2006).

A functional compensation system is designed to maintain internal and external balance within the organization and ensure proper recognition of employees (Cardoso, 2006). In cases where there is no equity in the bases of remuneration in the same position, there will be asymmetries in remuneration. If there is no internal balance in evaluating all roles or applying general rules to set salaries, employees may perceive the system as unfair (Wood Jr. & Picarelli Filho, 1999). Such perceptions can reduce motivation and negatively affect service quality, as compensation is intended to establish balance and fairness between inputs and outputs (Prastiwi, 2019). A well-designed system is expected to enhance employee satisfaction, motivating them to commit to the organization (Mendes et al., 2017).

Several studies have examined the relationship between compensation and organizational justice. For instance, Van den Bos et al. (1997, 2006) analyzed judgments of salary fairness in situations where individuals lacked information about others' pay or faced cognitive processing limitations. In addition to social comparisons of received compensation, deserved comparisons have been studied. These examine how judgments of fairness are influenced by comparing how someone is treated against what they believe they deserve (Folger & Cropanzano, 2001). In summary, deserved comparison differs from social



comparison in two keyways: (i) while in social comparison people assess whether they are treated fairly on the basis of comparison with peers, in deserved comparison they decide what is a fair return on the basis of their internal standards (Berkowitz et al., 1987); (ii) social comparisons are primarily self-interest-driven, as fairness prevents exploitation in groups. Deserved comparisons, however, are largely motivated by deontic principles and moral needs, as fairness is seen as the “right thing to do” (Cropanzano et al., 2002). Such dynamics are crucial to consider in various compensation system configurations, especially when dealing with compensation asymmetries.

### 3 Methodology

#### 3.1 Research Design, Population and Research Sample

In terms of approach, this research is quantitative and descriptive. According to Creswell (2010), this approach seeks to understand a given topic, using a parsimonious set of variables as a representation of reality. It typically involves statistical analysis of empirical data to validate theories, where empirical results confirm or refute theorized relationships. Regarding its objective, the research is classified as descriptive. As noted by Raupp and Beuren (2003), descriptive studies aim to enhance understanding of a given theory by analyzing descriptions of results. For its procedures, the study used a survey methodology, employing a questionnaire applied to employees of an energy sector organization identified for its remuneration asymmetry among similar roles.

The organization has been operating since the 1950s in energy distribution and is one of the largest companies in Brazil’s electricity sector. It is nationally and internationally recognized for the quality of its services and its contributions in technical, economic, environmental, and social fields. As of December 31, 2021, the company had 3,738 employees. For the research, 2,523 respondents working in internal roles with access to the company’s compensation system were considered the study population.

The final sample consisted of 219 respondents, of whom 78 joined the company under the collective bargaining agreement signed in 2017, while 141 joined after changes made to the agreement. This distribution is detailed in Table 1.

**Table 1**  
*Respondent characteristics (n: 219)*

Position in the Company		Management Positions	
Administrator	32	Yes	51
Lawyer	8	No	168
Systems Analyst	7	<b>Gender</b>	
Administrative Assistant	53	Female	85
Sales Representative	22	Male	134
Accountant	19	<b>Entry date</b>	
Economist	7	Before 2017	78
Engineer	11	2017 or later	141
Industrial Electrical Technician	45		
Other positions	15		

**Source:** *research data.*

Employees who joined before December 2017 had higher salaries than those who joined after that date. Regarding respondent profiles, 61.19% identified as male, the largest

age group was 36 - 45 years old (39.73%), and 54.34% held postgraduate degrees, while only 14.1% had not completed higher education.

### 3.2 Data Collection

The data collection instrument was a questionnaire comprising two sections: one addressing perceptions of organizational justice and the other capturing demographic and compensation-related information. The section on organizational justice included three dimensions adapted from the Organizational Justice Perception Scale by Mendonça et al. (2003): distributive justice (6 questions), procedural justice (4 questions), and interactional justice (4 questions). Responses were measured on a five-point Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (5). The second section included demographic questions (gender, age, education, position) and the respondent’s hiring period (before or after 2017) to facilitate group segmentation.

With the organization’s management approval, data collection was conducted via a questionnaire and accompanied by an informed consent form. It should be noted that the employees accepted the instructions and were given a guarantee of anonymity with regard to their answers. On December 27, 2021, the electronic questionnaire was distributed through Google Forms and sent via email to all potential respondents. Initially, 129 responses were received, representing low participation, given the target population of 2,523 individuals. To increase participation, a second email with the questionnaire was sent on January 19, 2022, resulting in 90 additional responses. Data collection concluded on January 22, 2022, with a total of 219 responses.

### 3.3 Data Analysis

To analyze potential differences between pre- and post-December 2017 groups across the three dimensions of justice, the Mann-Whitney U test was employed. This test is suitable for identifying differences between two independent samples, particularly for ordinal qualitative variables, as in this study (Fávero et al., 2009). The hypotheses tested were: (i) Null Hypothesis (H<sub>0</sub>): There is no difference between the groups (statistically equal); and (ii) Alternative Hypothesis (H<sub>1</sub>): There is a difference between the groups (statistically different). The null hypothesis is retained if the test significance is greater than 5% ( $p > 0.05$ ). If the significance is less than 5%, the null hypothesis is rejected in favor of the alternative hypothesis, indicating statistical differences between the groups.

To apply the Mann-Whitney U-test, the factors highlighted in Table 2, adapted from Mendonça et al. (2003), were used as a basis for perception of the three dimensions of organizational justice.

**Table 2**

*Dimensions and associated factors of organizational justice*

Dimension of Organizational Justice	Factors tested with remuneration asymmetry
Distributive Justice	Effort, stress, quality, benefits, experience and responsibilities
Procedural Justice	Representativeness, feedback, decisions based on information and appeal of decisions
Interactional Justice	Concern for Rights, Availability, Form of Treatment and Personal Favors

Source: adapted from Mendonça et al. (2003).

Additionally, to better understand the perceptions of the two groups for each statement within the justice dimensions, the Homogeneity Analysis (HOMALS) technique was applied. HOMALS is an interdependence technique for ordinal qualitative variables that analyzes relationships between two or more variables simultaneously in a two-dimensional configuration (Fávero et al., 2009). The next section presents the analysis of the results separately for each of the dimensions of organizational justice and the techniques mentioned.

## 4 Results

### 4.1 Perception of Distributive Justice

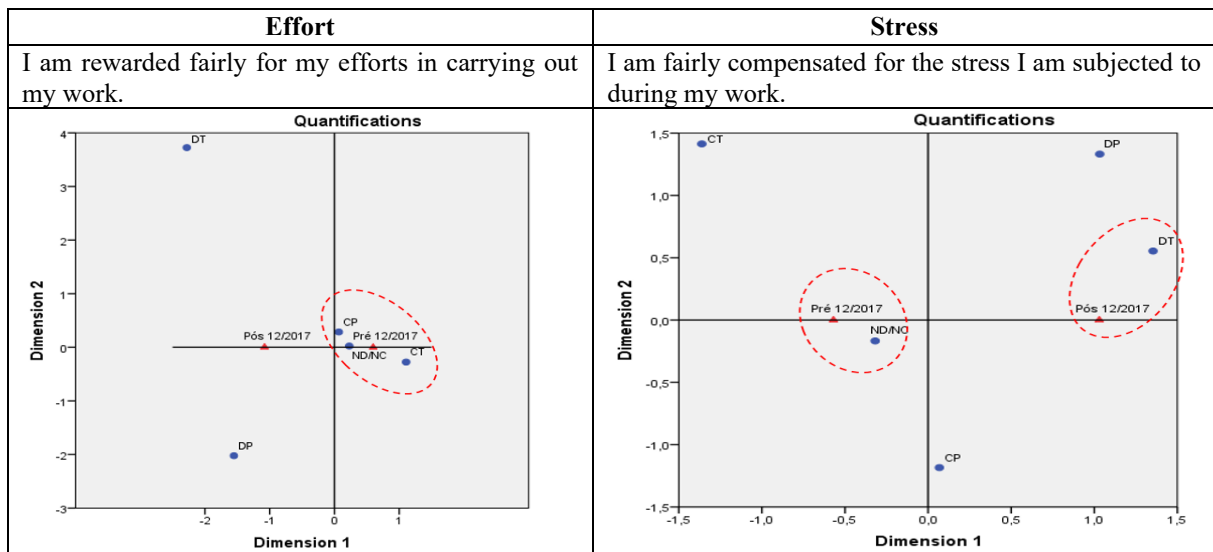
Initially, the Mann-Whitney U test was conducted to determine whether differences existed between employees hired before and after December 2017. Respondents were asked about the rewards they received across six equity factors: perception of effort level, stress, work quality, benefits received, recognition of experience, and assigned responsibilities (Table 3).

**Table 3**  
Mann-Whitney Test - Distributive Justice x Entry Date

	Effort	Stress	Quality	Benefits	Experience	Responsibilities
<i>Mann-Whitney U</i>	4097,500	4630,000	4317,000	4004,500	4397,500	4745,500
Wilcoxon W	7178,500	7711,000	7398,000	7085,500	7478,500	7826,500
Z	-3,292	-2,008	-2,764	-3,544	-2,554	-1,761
<b>Asymp. Sig. (2-tailed)</b>	<b>0,001</b>	<b>0,045</b>	<b>0,006</b>	<b>0,000</b>	<b>0,011</b>	<b>0,078</b>

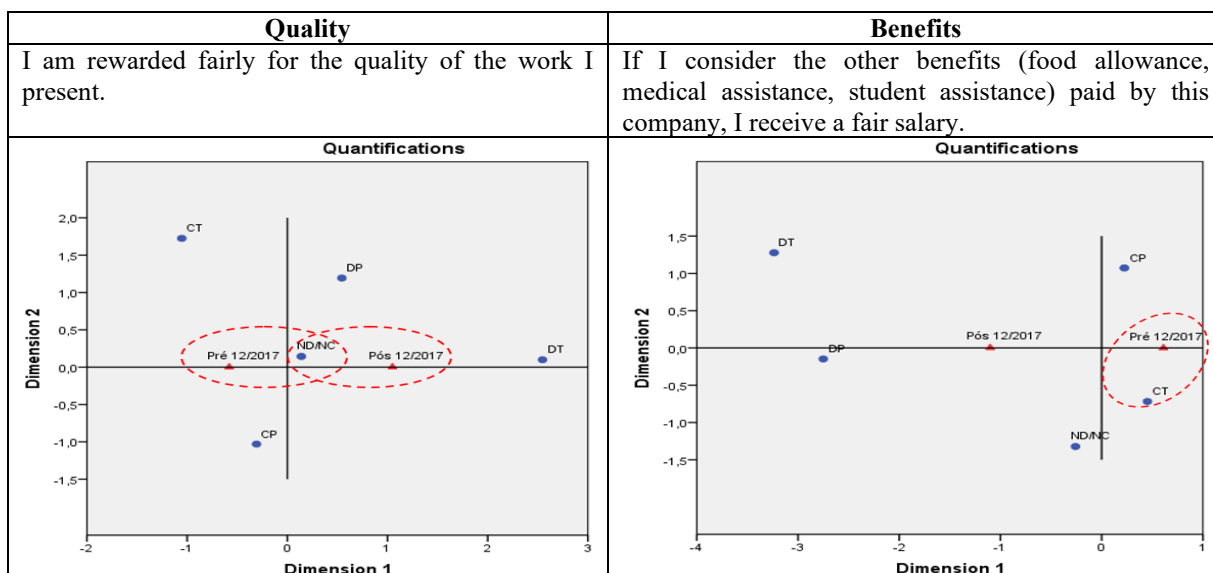
Source: *survey data*.

The results indicate differences in all factors ( $p < 0.05$ ) except for responsibilities. These findings demonstrate that remuneration asymmetry results in varying perceptions of distributive justice. According to Langevin and Mendoza (2013), this can lead to feelings of injustice and potentially trigger counterproductive workplace behaviors (Assmar, Ferreira & Souto, 2005). To better understand these differences, Homogeneity Analysis (HOMALS) was applied to compare the levels of agreement and disagreement between the two groups. In Figure 1, the perceptual map on the left shows that employees hired before December 2017 (Pre-12/2017 group) partially or fully agree with the fairness of rewards for effort put in at work, whereas the Post-12/2017 group disagrees on the fairness of the reward. Regarding stress-related rewards, the map on the right reveals that the Post-12/2017 group strongly disagrees, while the Pre-12/2017 group does not have a well-defined position in relation to agreeing or disagreeing.



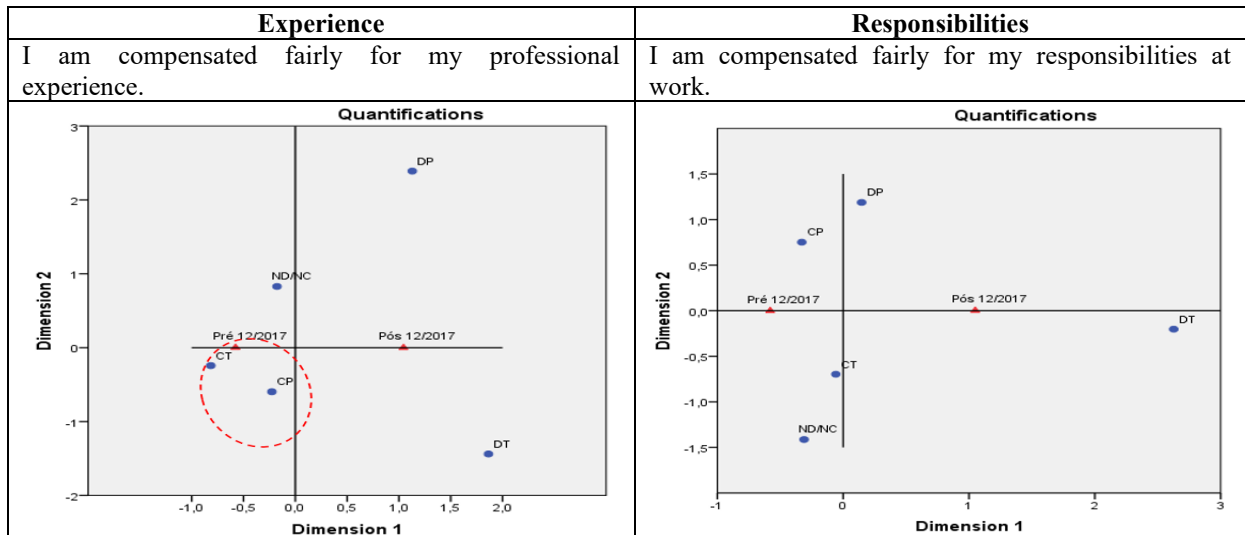
**Figure 1** Factors of distributive justice: effort and stress x income  
 Source: survey data.

In Figure 2, the HOMALS bidimensional map on the left shows that both groups generally exhibit an undefined stance between agreement and disagreement. However, considering dimension 1, it can be seen that the Post-12/2017 group is closer to disagreement, while the Pre-12/2017 group is closer to agreement. It can be inferred that older employees agree more with being fairly rewarded for the quality of their work. The map on the right shows that the Pre-12/2017 group is better defined in terms of agreement and the Post-12/2017 group is undefined. This means that older employees perceive greater fairness in terms of being rewarded for the quality of service provided and the additional benefits received.



**Figure 2** Factors of distributive justice: quality and benefits x income  
 Source: survey data.

With regard to experience (map on the left), it can be seen that the Pre-12/2017 group of older employees feel more strongly about being rewarded for their experience. Regarding the responsibility (map on the right), which was the only factor that did not show statistical differences in the Mann-Whitney test, it is possible to see that the respondents are undefined, but with a greater tendency to agree for the Pre-12/2017 group.



**Figure 3** Factors of distributive justice: experience and responsibilities vs. entry  
 Source: survey data.

These findings suggest that perceptions of distributive justice differ between the two employee groups. This shows that the asymmetry in remuneration generates a difference in the perception of distributive justice. This is because it is possible to compare older and younger civil servants. In this case, the asymmetry of remuneration generates a sense of injustice for the most recent group of employees, not necessarily because they consider the factors unfair, but because they consider them inferior to their peers. This comparison was also highlighted in the study by Parker and Kohlmeyer (2005). One of the assumptions of the distributive justice dimension is that, for a distribution of results to be perceived as fair, it is necessary for the efforts made by an individual and the rewards obtained to be in the same proportion as another with whom they are compared, since a comparative process is inherent in the perception of unfairness or justice (Adams, 1965).

#### 4.2 Procedural Justice

For procedural justice, the Mann-Whitney test was used to identify differences between the two groups across four procedural factors: representation, feedback, decision-making based on information, and the ability to appeal decisions (Table 4).

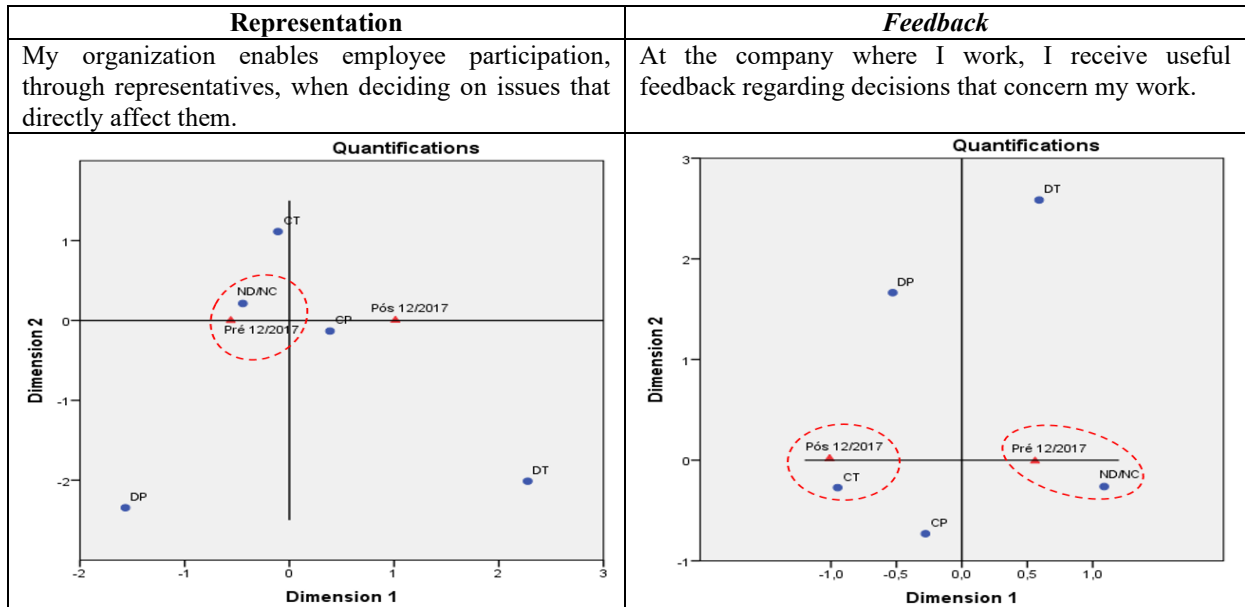
**Table 4**

Mann-Whitney Test - Procedural Justice x Date of Entry

	Representativeness	Feedback	Information-based decisions	Decision resources
Mann-Whitney U	5423,000	5027,000	5402,000	5006,500
Wilcoxon W	15434,000	15038,000	8483,000	8087,500
Z	-0,177	-1,093	-0,225	-1,143
Asymp. Sig. (2-tailed)	<b>0,860</b>	<b>0,274</b>	<b>0,822</b>	<b>0,253</b>

Source: research data.

As can be seen in Table 4, none of the procedural factors showed any statistical differences, with the p-value exceeding 0.05 in all cases. However, even though there were no differences, HOMALS showed greater detail in each factor (Figure 4).

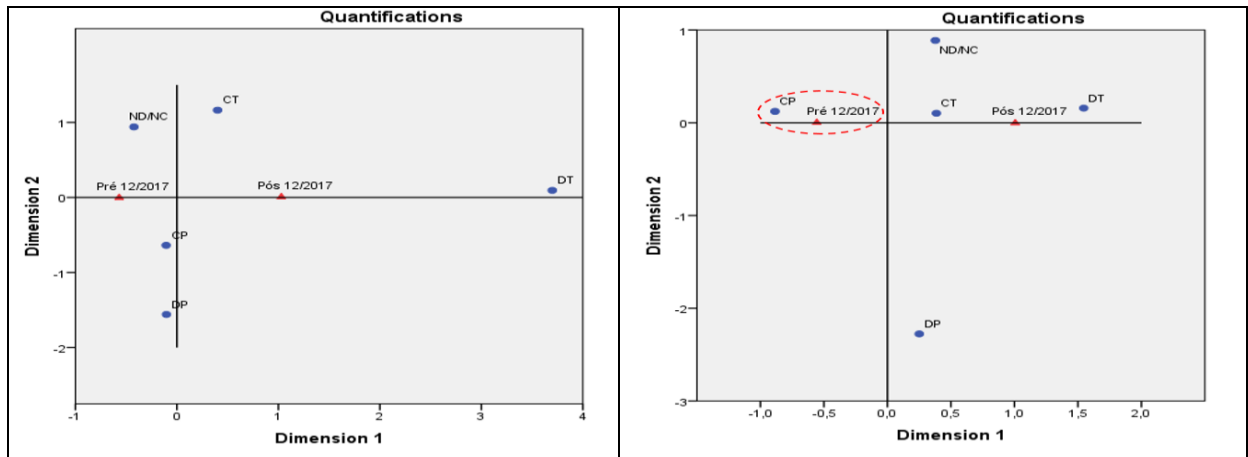


**Figure 4** Procedural justice factors: representation and feedback vs. admission  
 Source: survey data.

Considering the map for representativeness (left), it is clear that there is not a significant difference between the two groups. However, HOMALS shows that for the Pre-12/2017 group there is a greater lack of definition as to whether they agree or disagree, while the Post-12/2017 group is closer to partial agreement. This means that, although it is not possible to show a statistical difference between the two groups, younger employees seem to consider participation in the processes to be fairer. The Post-12/2017 group is also more likely to agree with the usefulness of the feedback map (right), while the Pre-12/2017 group does not have a definition. In any case, neither group disagrees with the feedback they receive on the work they do.

In Figure 5, the HOMALS map (left) shows the two groups with the respondents' opinion on the objectivity of information for decisions at work, and it can be seen that there is no significant definition of the differences between the groups, although the majority of respondents agree with the statement. In the map relating to the possibility of appealing decisions (right), the Pre-12/2017 group is more likely to agree than the Post-12/2017 group.

<b>Information-based decisions</b>	<b>Appealing decisions</b>
In the company where I work, work-related decisions are made based on objective and accurate information.	The company I work for gives employees the opportunity to appeal decisions made.



**Figure 5** Factors of procedural justice: Decisions based on information and appealing decisions vs. admission

Source: research data.

Although the Mann-Whitney test showed no differences between the groups, the two-dimensional HOMALS maps show that the two groups tend to agree on the statements and, therefore, the asymmetry does not seem to affect the perception of procedural justice. However, there is a divergence in which the Pre-12/2017 group agrees more strongly that they can appeal decisions while the Post-12/2017 group agrees more strongly that they receive feedback. These results are important because they show that different factors are perceived differently by the two groups, even if the asymmetry of remuneration does not cause an apparent problem in terms of procedural justice.

### 4.3 Interactional Justice

For interactional justice, in order to identify differences between the Pre-12/2017 and Post-12/2017 groups, the Mann-Whitney test was applied. Four factors were considered: the concern that bosses show for the rights of employees, the availability to explain decisions at work, sincerity in treatment and the issue of personal favors (Table 5).

**Table 5**

*Mann-Whitney Test – Interactional Justice x Entry Date*

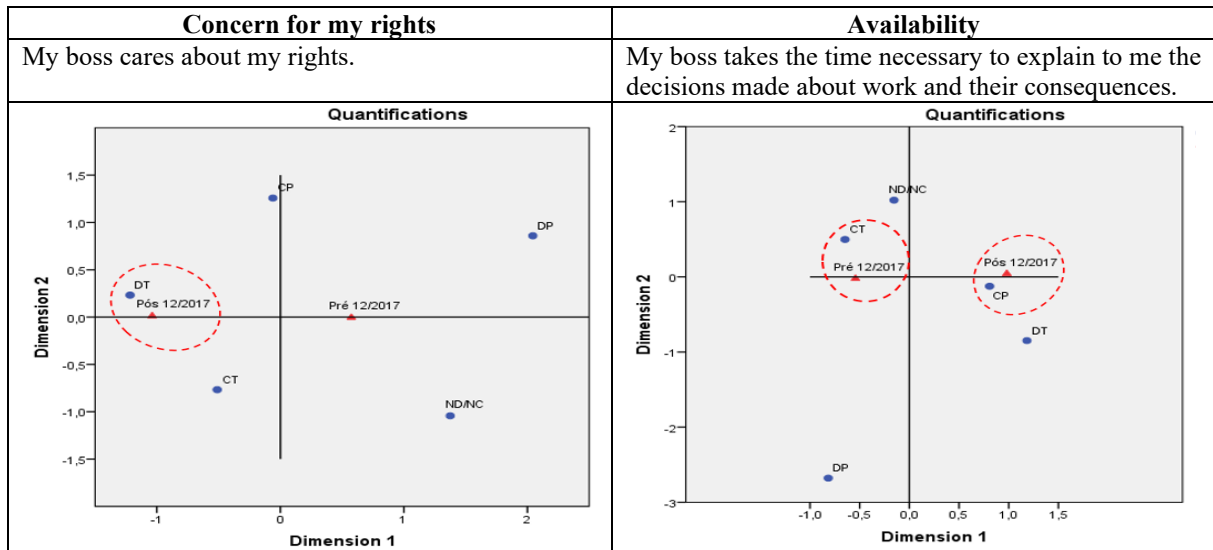
	Rights	Availability	Treatment	Personal favoritism
Mann-Whitney U	4631,500	5406,000	5402,500	4668,000
Wilcoxon W	14642,500	8487,000	15413,500	14679,000
Z	-2,072	-,216	-,235	-1,967
Asymp. Sig. (2-tailed)	0,038	0,829	0,814	0,049

Source: research data.

There are significant differences between the two groups for rights and personal favoritism ( $p < 0.05$ ). Interactional justice is associated with interpersonal relationships between superiors, subordinates, peers and the organization as a whole (Klein & Colauto, 2020; Guimarães et al., 2023; Sallaberry, Klein & Santos, 2025), and these results show that it is possible that the Post-12/2017 group perceives unfairness in relation to their rights and that they are not personally favored. However, it is worth noting that although the dimension of interactional justice is based on the relationship between the decision-makers and the people affected by the decisions, the fact that the statement includes the expression rights may have

generated an association with labor rights, which meant that the Post-12/2017 group, which receives lower salaries and benefits than the Pre-12/2017 group, has a more negative perception of justice.

To better explore the intensity of the factors, homogeneity analyses (HOMALS) were conducted (Figure 6).



**Figure 6** Interactional justice factors: rights and availability vs. access

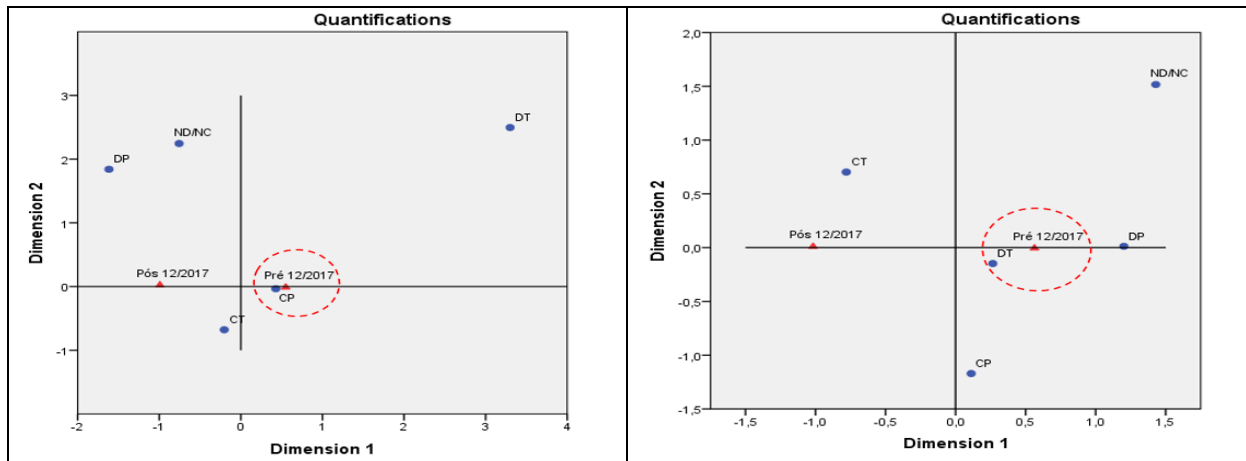
Source: survey data.

The map on the left shows the relationship between the two groups and their perception of their bosses' concern for their employees' rights. It can be seen that employees in the Post-12/2017 group are more likely to totally disagree with this statement than those in the Pre-12/2017 (older) group. In the map on the right, with reference to the availability of bosses to explain decisions at work, it can be seen that both groups agree, but the Pre-12/2017 group agrees more strongly. The results show differences between the groups in terms of rights and similarities in terms of the availability of bosses, as seen above in the Mann-Whitney test. These differences between the factors reinforce the concern of authors such as Colquitt (2001) who defend the interactional view as dissociated from the procedural one.

As reported by Colquitt (2001), one of the aspects of the interactional justice dimension is interpersonal relationships, and in Figure 7 we can see two important factors (treatment and personal favors).

Form of treatment	Personal favors
My boss treats me with sincerity and openness.	When interacting with employees, my boss manages to overcome personal favors.





**Figure 7** Factors of interactional justice: personal treatment and favoritism vs. admission  
 Source: survey data.

In the first (map on the left), it can be seen that both groups agree that their bosses treat them with sincerity and, therefore, there are no differences between agreeing and disagreeing as seen in the Mann-Whitney test. However, it is possible to see that the Pre-12/2017 group is more strongly related to partial agreement while total agreement is divided between the two groups. This shows that there is a lower intensity of agreement for older employees. As for the personal favors factor (map on the right), there were statistically significant differences. The HOMALS map shows that the Pre-12/2017 group disagrees with the statement and therefore believes that the boss tends towards personal favoritism. The Post-12/2017 group, on the other hand, is more likely to agree with the statement. These results provide an important observation because the asymmetry of remuneration can lead bosses to seek alternative compensation through favoritism and, if this occurs, it can generate a sense of interactional injustice and affect performance at work.

## 5 Conclusions

This research aimed to investigate the impact of remuneration asymmetry on the perception of distributive, procedural, and interactional justice within an organization characterized by such asymmetry. The organization comprises two distinct groups based on their hiring date: before and after December 2017, a period during which significant changes were made to compensation policies. These changes occurred because compensation policy is a critical element of organizational management, requiring systems that are both flexible and adaptive. They must consider not only changes in the external environment, but above all the changing needs of the internal environment. In practice, this means aligning the organization's strategy and objectives with its compensation system. Moreover, the compensation policy must be consistent with all personnel sub-strategies, systematically fostering an integrated human capital management approach (Barczak et al., 2021).

The results indicate that remuneration asymmetry is closely related to perceptions of organizational justice. Among the three dimensions of justice, distributive justice displayed the most related factors. Differences in salaries and benefits for employees performing similar roles led to feelings of injustice concerning remuneration, particularly regarding the effort invested, work-related stress levels, rewards for work quality, benefits received, recognition of experience, and assigned responsibilities. Overall, employees hired after December 2017 feel less rewarded or more unjustly treated. It was also observed that remuneration asymmetry

has a smaller impact on procedural justice issues. This is because, despite differences in pay, both groups recognize equity in participation in processes such as recruitment, performance evaluation systems, and procedures for salary increases and promotions (Beuren et al., 2017; Klein & Colauto, 2020; Guimarães et al., 2023; Sallaberry, Klein & Santos, 2025).

For interactional justice, the results are less conclusive. While it was anticipated that compensation asymmetry would impact interactions, divergences were observed between the groups regarding personal favoritism and the defense of employee rights by management. In the case of favoritism, future research could delve deeper into the possibility of managerial compensation efforts to address pay disparities. It is plausible that managers instinctively seek to enhance perceptions of justice through personal favors. Regarding the defense of rights, employees in the lower-paid group (Post-12/2017) may attribute differences in the defense of their rights to their immediate supervisors, creating an environment where injustice is perceived.

This research highlights an important area that requires further exploration and empirical application. This study provided significant contributions by reinforcing factors associated with the three dimensions of organizational justice and demonstrating their links to remuneration asymmetry. From a practical perspective, the findings underscore how aspects related to compensation asymmetry lead to varying employee perceptions of justice and may affect work performance. From a theoretical standpoint, the discussions provoked by this research point to critical aspects to be examined across all dimensions of organizational justice in various contexts.

Finally, some limitations were noted in conducting this research. The main limitation is that the findings are specific to the analyzed sample. While this allowed for depth and detail, the case study approach does not enable generalizations. Future studies could use these findings to pursue more generalizable confirmations. Therefore, in order to advance the line of research, this work presents exploratory aspects that need to be explored in greater depth and, as such, the results presented here should be seen as guidelines for further studies rather than definitive conclusions.

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