Work Design and Job Satisfaction: the moderating role of organizational justice

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Abstract

The economic crisis has entailed a general increase in job demands and reduction in compensating factors, modifying the fairness of the employment relationship. In this longitudinal study, we analyze the effects of the moderating role of organizational justice on the job characteristics - job satisfaction relationship. A total of 593 employees working for 42 Spanish companies answered the questionnaires at two points in time. Results showed that the job and the social characteristics, as well as distributive justice, in time 1 predict job satisfaction in time 2. Additionally, interactional justice moderated the relationship between job characteristics and job satisfaction. In conclusion, work design, as well as fair interactions at work, may increase job satisfaction.

Keywords: work design, organizational justice, job satisfaction.

Desenho do trabalho e satisfação: o papel moderador da justiça organizacional

Resumo

A crise econômica implicou em um aumento geral nas demandas de emprego e redução nas compensações, modificando a equidade nas relações de trabalho. Neste estudo longitudinal, analisamos os efeitos moderadores da justiça organizacional entre as características do trabalho e a satisfação laboral. Um total de 593 trabalhadores de 42 empresas espanholas responderam aos questionários em dois momentos temporais. Os resultados mostraram que as características da tarefa e as sociais assim como a justiça distributiva em tempo 1 prediz a satisfação laboral em tempo 2. Além disso, encontrou-se um efeito de interação entre as características da tarefa e a justiça interacional sobre a satisfação laboral. Conclui-se que além do desenho do trabalho é importante levar em consideração que interações justas no trabalho podem incrementar a satisfação laboral.

Palavras-chave: desenho do trabalho, justiça organizacional, satisfação no trabalho.

Diseño del trabajo y satisfacción: el rol modulador de la justicia organizacional

Resumen

La crisis económica ha implicado un aumento general de las demandas laborales y una reducción de las compensaciones, modificando la equidad en las relaciones laborales. En este estudio longitudinal, analizamos los efectos moduladores de la justicia organizacional entre las características del trabajo y la satisfacción laboral. 593 empleados de 42 empresas españolas contestaron el cuestionario en dos momentos temporales distintos. Los resultados mostraron que las características de la tarea y las sociales, así como la justicia distributiva en tiempo 1 predicen la satisfacción laboral en tiempo 2. Además, se encontró un efecto de interacción entre las características de tarea y la justicia interaccional sobre la satisfacción laboral. En conclusión, además del diseño del puesto es importante tener en cuenta que interacciones justas en el trabajo pueden incrementar la satisfacción laboral.

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Economic crisis has increased the emphasis of companies on productivity at the expense of employees’ social rights. For employees having more demands and less compensations have created a sense of injustice. A study by Eurostat (Quality of life in Europe – Facts and views) in 2013 shows that approximately 75% of European workers do not reach an optimal level of job satisfaction.

Once the crisis has been overcome, one of the challenges of the 21st century is to achieve economic sustainability, which means maintaining high productivity but guaranteeing fair treatment to employees, since only satisfied workers can guarantee service quality and long-term business results. Influential businesspeople and scientists have accepted this challenge. For example, the executive chairman of Santander Group, Ana Botín, claimed “In order for companies to accomplish their social purpose, they have to generate benefits. These benefits must be obtained with fairness, especially regarding our employees” (Botín, 2018). In the academic field, the construct of sustainable work well-being refers to the necessary relationship between employees’ wellbeing and sustainable companies (Peiró, Ayalà, Tordera, Lorente, & Rodríguez, 2014).

The work design has been a fundamental business instrument to influence productivity and satisfaction of employees. The present study reviews the classical relationship between work design and job satisfaction, from the perspective of organizational justice. Our aim is to explore the role of justice as an additional factor influencing job satisfaction and as a potential enhancer of the job characteristics – job satisfaction relationship.

The following is a brief theoretical introduction of the variables with which we are going to work in the present study.

**Job Satisfaction**

A large amount of research has paid attention on studying job satisfaction. Job satisfaction is an “attitude or a group of attitudes developed by a person towards his/her job in general or any of its specific aspects” (Bravo, Peiró, & Rodríguez, 1996).

It has demonstrated that job satisfaction has both direct and indirect effects on organizations. High levels of job satisfaction are related with lower absenteeism, higher productivity or performance, higher staff retention, higher engagement and commitment, higher life satisfaction and motivation (Iliescu, Ispas, Sulea, & Ilie, 2015; Nyberg & Ployhart, 2013; O’Keefe, 2014; Stavrova, Schlosser, & Baumert, 2014).

Determinants of satisfaction have been associated to job characteristics. In 1986, Griffin and Baterman conducted a meta-analysis and identified six categories of satisfaction determinants: characteristics and job design, goal setting, reward and salary systems, organizational characteristics, leadership, decision making participation and demographic variables.

Research has demonstrated that a measure of overall job satisfaction works better than measures formed from a composite of job satisfaction facets (Dolbier, Webster, McCalister, Mallon, & Steinhardt, 2005). Based on this information, we will use an overall job satisfaction measure.

**Work Design: Job Characteristics**

From the early research on job characteristics to the recent work design models, there have been many attempts to define what job characteristics are, identifying key work characteristics, and their role on work outcomes and on employees.

However, jobs and job design have changed considerably in contemporary workplaces. Teamwork, the context, the challenges, and the job itself have changed. Morgeson and Humphrey (2006) integrated new motivational aspects of work and developed a new measure of job characteristics; the “Work Design Questionnaire”. They distinguished four main dimensions of work characteristics: task characteristics, knowledge characteristics, social characteristics, and contextual characteristics.

- **Task characteristics.** These refer to how the work itself is done and the nature of the tasks associated with a job (i.e. autonomy, task significance).
- **Knowledge characteristics.** These refer to the demands regarding knowledge and skills required for the job (i.e. information processing, skill variety).
- **Social characteristics.** These are the degree to which employees feel supported by their colleagues and the extent to which employees receive information about their performance by their colleagues (i.e. social support, feedback from others).
- **Contextual characteristics.** These refer to the job context, in the sense of ergonomics, noise, temperatures and equipment conditions (i.e. physical demands, work conditions).

Some studies have found a relationship between job characteristics and job satisfaction. For instance, Morgeson and Humphrey (2006) found that “task, knowledge and social job characteristics predicted job satisfaction” in a sample of 540 workers in 243 different jobs. Meyerding (2015) found a relationship between job characteristics and job satisfaction in a sample of 280 German employees. Hsu and Liao (2016) found a positive effect of job characteristics and job satisfaction in a sample of 440 Thailand foreign workers. In particular, job autonomy was a better predictor of job satisfaction than other job characteristics.

Based on previous studies, job characteristics seem to affect positively job satisfaction. The more these job characteristics are present, the higher the job satisfaction. Following these empirical studies, we proposed our first hypothesis:

**Hypothesis 1 (H1):** Job characteristics in T1 will have a direct and positive effect on job satisfaction in T2.

**Organizational Justice**

Organizational justice attempts to explain why an employee feels fairly or unfairly treated in his/her workplace and the consequences that these perceptions have on the attitudes of employees and work-related outcomes (e.g., García-Buades, 2002). It is a multi-dimensional construct with three core dimensions: distributive justice, procedural justice and interactional justice (e.g., Cropanzano, Bowen, & Gilliland, 2007; García-Buades, 2002; Silva, Caetano, & Zhou, 2012).

Distributive justice refers to the distribution of resources in the organization, and how employees assess the fairness of the relationship between their contribution and rewards. This distribution is judged by the employees in terms of equity, equality and personal requirements (Cropanzano et al., 2007).

Procedural justice is concerned with the process whereby resources are allocated and how the employee perceives the reasoning behind the reward distribution. Fair procedures are those in which people had voice in the procedures which affected them (Folger & Konovsky, 1989) or in which other rules of justice are present such as consistency, biases suppression, accuracy, correction, representation, and ethics (Leventhal, 1980).

Interactional justice reflects the perceived quality of the employee-employer relationship related to personal treatment and information management. In this dimension, the focus of attention is how the manager of the organization treats the employee (Cropanzano et al., 2007).
Some studies have found that organizational justice perceptions may predict job satisfaction (e.g., Folger & Konovsky, 1983; Masterson, Lewis, Goldman, & Taylor, 2000; Tremblay & Roussel, 2001). Kumar, Bakhshi, & Rani (2009) found distributive justice to be a good predictor of job satisfaction whereas procedural justice was not significant in a sample of 128 employees of a medical college. McFarlin and Sweeney (1992) also showed distributive justice to be a more important predictor of job satisfaction, than procedural justice in a sample of 675 employees of a Midwestern bank. Following the empirical evidences, we propose our second hypothesis:

**Hypothesis 2 (H2): Organizational justice in T1 will has a direct and positive effect on job satisfaction in T2.**

**Organizational Justice as a Moderator of the Job Characteristics – Job Satisfaction Relationship**

Only limited studies have examined organizational justice as a moderator variable. We agree with Boudrias et al. (2010) that organizational justice may be viewed as a measure of the work context because it also concerns the manner with which employees perceive being treated by the organization and the management.

However, there is no previous evidence on the moderating role of organizational justice on the job characteristics – job satisfaction relationship. We expect that a fair/unfair context will strengthen the relationship between job characteristics and job satisfaction.

**Hypothesis 3 (H3): The relationship between job characteristics and job satisfaction is moderated by organizational justice.**

**Method**

**Participants**

Forty-two Spanish companies collaborated in this study (69.3% belonged to the service sector, 30.7% were manufacturing companies). Data were gathered at two points in time separated by 6 months. A total of 593 employees voluntarily participated in the study. The main characteristics of the sample were the following: 54% were female; 63% were between 35 and 50 years old; 66% had a university degree; 62% had more than 5 years tenure.

**Instrument(s)**

**Job satisfaction.** We measured job satisfaction using a global single-item with the Faces Scale (Kunin, 1955). Respondents were asked to tick one of seven faces that best represented how satisfied they are with their job (i.e. ‘taking everything into consideration, how do you feel about your job as a whole?’). Using the faces scale adds emotionality to the measurement of job satisfaction. With responses based on emotions, respondents do not have to translate feelings into words.

**Organizational justice.** We used the organizational justice scale by Moliner et al (2008). This scale is composed of nine items, three for distributive justice (e.g. ‘the rewards I receive here are fair’), three for procedural justice (e.g. ‘the procedures for setting my work schedule and tasks are fair’), and three for interactional justice (e.g. ‘my supervisor treats me with respect and dignity’). Response options were in a five-point Likert scale from 1 (nothing) to 5 (much). Reliabilities are all acceptable: distributive justice (Cronbach’s alpha = .95); procedural justice (alpha = .74); and interactional justice (alpha = .87).

**Work characteristics.** Following Morgeson & Humphrey’s model, there are four general dimensions of work characteristics: task, knowledge, social, and work context characteristics. To measure work characteristics, we selected 9 dimensions and 27 items from the Spanish version (Bayona, Caballer, & Peiró, 2015) of the Work Design Questionnaire (Morgeson & Humphrey, 2006). Response options consisted of a five-point Likert scale from 1 (totally disagree) to 5 (totally agree).

To measure task characteristics (9 items; alpha = .79) we included: autonomy (3 items; e.g. “the job allows me to make my own decisions about how to schedule my work”; alpha = .77); task significance (3 items; e.g. “the results of my work are likely to significantly affect the lives of other people; alpha = .69); and feedback from job (3 items; e.g. “The work activities themselves provide direct and clear information about the effectiveness of my job performance”; alpha = .77).

Knowledge characteristics (6 items; alpha = .82) included information processing (3 items; e.g. “The job requires me to monitor a great deal of information”; alpha = .78), and skill variety (3 items; e.g. “The job requires a variety of skills”; alpha = .77).

Social characteristics (5 items; alpha = .77) included social support (3 items; e.g. “People I work with take a personal interest in me”), and feedback from others (3 items; e.g. “I receive a great deal of information from my manager and co-workers about my job performance”; alpha = .77). Social support originally consisted of three items, one of them (i.e. “I have the chance in my job to get to know other people”) was deleted after reliability testing (initial alpha = .47; alpha after deletion = .69).

Work context characteristics (6 items; alpha = .73) included physical demands (3 items; e.g. “The job requires a lot of physical effort”; alpha = .88) and work conditions (3 items; e.g. “The climate at the workplace is comfortable in terms of temperature and humidity”; alpha = .67).

**Data Collection Procedures and Ethical Considerations**

Research team members contacted company managers and invited them to collaborate. Once collaboration was agreed upon, research assistants visited the companies and administered the questionnaires to employees during work hours. They also guaranteed confidentiality and anonymity of responses.

**Data Analysis Procedures**

We used structural equation modelling (SEM) to test the hypothesized relationships in the model. The statistical technique used was the maximum likelihood estimation method. All the proposed hypotheses were tested on the same model; thus, model fit was assessed only once for that set of hypotheses. We reported multiple fit indices to assess global model fit: Chi-squared index ($\chi^2$), degrees of freedom ($df$), Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR), Comparative Fit Index (CFI), and Incremental Fit Index (IFI). We adopted the cut-offs values from Hu and Bentler (1999): For RMSEA, a value of .05 indicate good fit. For SRMR, a value lower than .09 indicate good fit. For CFI and IFI, a value higher than .90 indicate good fit.

In order to analyse the moderating effect (Hypothesis 3), we used SEM methodology. The analytical strategy used to assess the moderator effects was the strategy proposed by Kenny and Judd (1984) and revisited by Li, Harmer, Duncan, Acoc, and Boles (2010). This strategy consists of forming products of multiple indicator variables. First, we standardized the work characteristics and organizational justice scores. Second, we multiplied them obtaining a total of twelve interaction terms (e.g. TaskWC*DistJust, TaskWC*ProJust, TaskWC*InterJust). Finally, we included the twelve interaction interactions.
variables in the model. We used the statistical software AMOS (23 version) for all the analyses.

Results

Table 1 displays the descriptive statistics and correlations among the study variables. The correlations indicate significant positive relationships between all study variables.

Hypotheses Testing

We proceeded with testing the full model through structural equation modelling. The structural model fits the data, and all the fit indices are adequate (Table 2).

Table 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Scale response</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task characteristics</td>
<td>3.81</td>
<td>.67</td>
<td>1-5</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge characteristics</td>
<td>4.21</td>
<td>.68</td>
<td>1-5</td>
<td>.58**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social characteristics</td>
<td>3.56</td>
<td>.79</td>
<td>1-5</td>
<td>.39**</td>
<td>.26**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Context characteristics</td>
<td>3.89</td>
<td>.87</td>
<td>1-5</td>
<td>.19**</td>
<td>.22**</td>
<td>.10*</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distributive justice</td>
<td>2.92</td>
<td>.98</td>
<td>1-5</td>
<td>.13**</td>
<td>.09*</td>
<td>.22**</td>
<td>.22**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedural justice</td>
<td>3.29</td>
<td>.80</td>
<td>1-5</td>
<td>.36**</td>
<td>.26**</td>
<td>.25**</td>
<td>.32**</td>
<td>.33**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Interactional justice</td>
<td>4.26</td>
<td>.78</td>
<td>1-5</td>
<td>.31**</td>
<td>.15**</td>
<td>.32**</td>
<td>.27**</td>
<td>.37**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Job satisfaction T2</td>
<td>5.47</td>
<td>1.05</td>
<td>1-7</td>
<td>.27**</td>
<td>.12**</td>
<td>.25**</td>
<td>.15**</td>
<td>.29**</td>
<td>.27**</td>
<td>.28**</td>
</tr>
</tbody>
</table>

Notes. N = 593; *p < .05; **p < .01; ***p < .001 (2-tailed).

Table 3

Table 3 Results of interaction effect

<table>
<thead>
<tr>
<th>Model</th>
<th>β (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TaskWC*DistJust → Job satisfaction T2</td>
<td>.05 (.05)</td>
</tr>
<tr>
<td>KnowWC*DistJust → Job satisfaction T2</td>
<td>- .06 (.06)</td>
</tr>
<tr>
<td>SocialWC*DistJust → Job satisfaction T2</td>
<td>-.01 (.04)</td>
</tr>
<tr>
<td>ContextWC*DistJust → Job satisfaction T2</td>
<td>.04 (.04)</td>
</tr>
<tr>
<td>TaskWC*ProJust → Job satisfaction T2</td>
<td>.04 (.06)</td>
</tr>
<tr>
<td>KnowWC*ProJust → Job satisfaction T2</td>
<td>-.01 (.06)</td>
</tr>
<tr>
<td>SocialWC*ProJust → Job satisfaction T2</td>
<td>.01 (.05)</td>
</tr>
<tr>
<td>ContextWC*ProJust → Job satisfaction T2</td>
<td>.01 (.05)</td>
</tr>
<tr>
<td>TaskWC*InterJust → Job satisfaction T2</td>
<td><strong>.07 (.05)</strong></td>
</tr>
<tr>
<td>KnowWC*InterJust → Job satisfaction T2</td>
<td>-.02 (.05)</td>
</tr>
<tr>
<td>SocialWC*InterJust → Job satisfaction T2</td>
<td>.00 (.04)</td>
</tr>
<tr>
<td>ContextWC*InterJust → Job satisfaction T2</td>
<td>-.03 (.04)</td>
</tr>
</tbody>
</table>

Notes. *p < .05

Results of interactional justice as a moderator on the relationship between task work characteristics and job satisfaction is plotted in Figure 2. Simple slope analyses indicated that there is not a significant difference at low levels of task characteristics between low and high interactional justice (t = .23, p = ns) and there is not a significant difference at high levels of task characteristics between low and high interactional justice (t = .19, p = ns).

Discussion

The purposes of this study were three. First, to deeper understand the relationships between work characteristics, organizational justice, and job satisfaction. Second, to provide longitudinal results in this area. Third, to provide empirical evidence on the moderating role of organizational justice.

The first hypothesis of the present study suggested that interactional justice in T1 have a direct and positive effect on job satisfaction in T2. This hypothesis was confirmed. The results showed that task characteristics and social characteristics predict job satisfaction. In
general, employees are satisfied when they can enjoy autonomy in how or when to perform their tasks. It is also important to facilitate their perception of task significance, receiving feedback from the job. Thus, job design is really important because employees in jobs characterized by autonomy, significance, feedback and interest are more satisfied employees.

Our second hypothesis proposed that organizational justice in T1 has a direct and positive effect on job satisfaction in T2 and it was also partially confirmed by our results. Distributive justice predicts job satisfaction just as other authors predicted ( Folger & Konovsky, 1989; Goldman & Taylor, 2000; Kumar et al., 2009; McFarlin & Sweeney, 1992; Tremblay & Roussel, 2001).

The third hypothesis of the present study suggested that organizational justice moderates the relationship between job characteristics and job satisfaction. Interactional justice moderates the task characteristics – job satisfaction relationship.

Practical implications suggest that both job design and efforts to treat employees fairly have positive and complementary effects on job satisfaction. Organizations need to invest efforts to improve job designs concentrating on job characteristics; especially task characteristics and social characteristics. To the extent that sometimes the options for job design or re-design are limited, managers could also improve the selection process enhancing the job – employee fit as a strategy to facilitate higher levels of job satisfaction. Achieving job satisfaction among employees is not only important for wellbeing but it also affects employees’ performance, absenteeism, turnover and other relevant behaviors.

However, adequate job design and characteristics are not enough. A fair relationship between an employee and the organization contributes to job satisfaction beyond the effects of job characteristics. In particular, distributive justice is important in predicting job satisfaction. Additionally, interactional justice influences job satisfaction by modifying the task characteristics – job satisfaction relationship strengthening it.

We also found some non-significant paths. Although correlations among variables were positive and significant in the full model some of these variables lack significance, and others gain relevance.

Practical implications are that most efforts to achieve a satisﬁed workforce should be devoted to improving task characteristics, offering distributive justice, and creating the conditions for good social characteristics in the job design. Further, promoting interactional justice will enhance the influence of these characteristics on job satisfaction.

This study is relevant for the area of organizational psychology, especially because of the methodological design used and due to the moderating role of organizational justice, since the empirical evidence is scarce regarding this matter. Future research should focus on studying the impact of different job design interventions on job satisfaction, as well as the consequences of promoting initiatives to establish a fairer relationship between employees and organizations.

References
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