

**Approach versus Avoidance Strategies in Job Crafting and their
relationship to Prosocial Service Behavior in University professors.**

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**APPROACH VERSUS AVOIDANCE STRATEGIES IN JOB CRAFTING AND THEIR
RELATIONSHIP TO PROSOCIAL SERVICE BEHAVIOR IN UNIVERSITY
PROFESSORS**

ABSTRACT

What work strategies must university professors adopt to guarantee the service of higher education and even go beyond the role universities have formally established for them? This article aims to analyze the strategy of job crafting—specifically, how it influences the job crafting strategies of approach vs. avoidance in prosocial service behavior, with engagement as a mediating variable. To achieve this goal, we analyze the behavior of 1068 university professors in Faculties of Economics and Business at Spanish public universities. The results suggest that university professors who expand their work role and who expand socially develop more prosocial behavior in the service they deliver. The job crafting strategy of avoidance, in contrast, influences prosocial behavior negatively. Further, engagement acts as a mediating variable in the relationship between professors' job crafting and their prosocial service behavior. These results are relevant to higher education institutions, which must work constantly to adopt workplace strategies and programs to improve service performance. The study results may help universities to achieve professors who are more committed to their job functions and responsibilities.

KEYWORDS: Universities professors, job crafting, engagement, prosocial behavior, higher education.

INTRODUCTION

Academic research has begun to broaden its view of individuals' relationship with their work. It is recognizing the importance of roles that permit workers individually to redesign the limits of their jobs (Kim et al., 2018). Having employees change or personalize their jobs on their own (Oldham and Hackman, 2010) fosters work motivation by improving the fit between person and work (Tims and Bakker, 2010).

We use the concept of job crafting here to indicate the phenomenon by which workers shape their work on their own. Job crafting has been broadly defined as changes that workers make in a job with the intention of improving the job for themselves (Bruning and Campion, 2022). Job crafting affects work outcomes, workers' individual attitudes and behavior, and workers' individual wellbeing, motivation, and commitment (Zhang and Parker, 2019, 2021; McNaughtan et al., 2022).

Higher education institutions are a suitable context for study of job crafting due to the uniqueness of university professors' (i.e., academic teaching staff's) work (McNaughtan et al., 2022). Because professors perform different roles with some flexibility, they can decide what to do, how to do it, and when to complete their tasks (Lawrence, Ott and Bell, 2012). The degree of autonomy permitted in the university and characteristic of university professors' work enables professors to adopt two perspectives on job crafting: approach and avoidance. Because professors' work also shapes the service of higher education delivered, how professors perform their work is a determining factor in performance of the services delivered. Further, service performance in organizations with frontline service workers (professors) can be measured by prosocial behavior (PSB) (Cheng and Chen, 2017). An aid behavior that workers enact with users of the services and colleagues at work in service encounters, PSB is indicative of the quality of the services delivered (Bettencourt and Brown, 1997). Universities should thus do all they can to improve professors' PSB.

Although analyses of how job crafting influences performance are needed to promote practices that organizations can implement (Demerouti, Bakker and Halbesleben, 2015), very few studies have explored these relationships in the context of higher education institutions (Castiello-Gutiérrez et al., 2021; McNaughtan et al., 2022; Zahoor, 2018). Our study thus seeks to advance understanding of how the various dimensions of job crafting condition PSB in university professors in Spain.

Our research has two goals. First, we analyze the influence of university professors' job crafting behavior on their service performance through their PSB. Second, we analyze the role of engagement as a variable mediating the relationship between approach vs. avoidance job crafting behaviors and PSB. We then assess the theoretical model proposed using structural equations modeling with Partial Least Squares (PLS-SEM).

Our study contributes first by analyzing the two positions that professors adopt in their job crafting actions to determine how these positions influence their service performance. Second, we deepen understanding of the role of engagement as a mediation mechanism. Third, we advance understanding of the factors that determine professors' willingness to commit (or not to commit) to such voluntary and discretionary PSB.

The section that follows provides a literature review of job crafting, PSB, and engagement, which facilitates development of the hypotheses. Next, a methodology section explains the sample used and measurements applied. We then present the results and discuss the main findings. Finally, we establish the study's main theoretical and practical contributions, as well as its limitations, finally proposing future lines of research.

THEORETICAL FRAMEWORK

Our study seeks to deepen understanding of the relationship between job crafting and service performance in higher education (represented by PSB), while also analyzing the role of university professors' engagement. To achieve this goal, it first explains how the literature has analyzed the concepts of job crafting, PSB, and engagement. The relationships tested are presented in the proposed research model (see Figure 1).

INSERT FIGURE 1

Job crafting

To understand why workers undertake job crafting behavior in their professional work, we draw on self-determination theory (SDT). SDT argues that all individuals have three innate psychological needs—autonomy, competence, and relatedness (Huertas, Braojos and Llorens, 2019; Ryan and Deci, 2000). Workers' job crafting behaviors are governed by their attempts to satisfy the needs proposed by SDT.

Scholars have studied job crafting behaviors since the seminal studies by Wrzesniewski and Dutton (2001) and de Tims et al. (2012). Whereas Wrzesniewski and Dutton (2001) view job crafting as a way to improve the meaning and identity of work, Tims et al. (2012) consider it a way of balancing work resources and demands to achieve fit between a person and their work. Workers themselves can create or mobilize job resources, and one way to do so is through a bottom-up focus, as in job crafting (Demerouti, Bakker, and Gebbers, 2015).

Bruning and Campion (2018) use the following terms to describe these two theoretical perspectives on job crafting. Role-based crafting explains how workers improve fit between their intrinsic needs and what their work provides. Resource-based crafting explains how workers seek resources and manage work demands. We can infer role crafting from Wrzesniewski and Dutton's (2001) argument that workers use tasks and social interactions at work to construct, design, and personalize jobs, changing the meaning of the work and their identity as workers. Tims et al. (2012) apply job demands-resources theory (JD-R) to develop the idea of resource crafting. JD-R argues that workers craft their work to increase job challenges and resources, and to decrease job demands. To narrow this broad concept, our empirical study focuses on university professors' role crafting.

We ground our analysis of how workers orient their behavioral strategy in regulatory-focus theory, which argues that people are guided by two different self-regulation systems, promotion and prevention (Dewett and Denisi, 2007; Higgins, 1998; Lichtenthaler and

Fischbach, 2019). People who focus on prevention are guided primarily by the need for security and avoidance of negative results. People who focus on promotion stress growth, developmental needs, and positive results (Dewett and Denisi, 2007). Applying this distinction to job crafting behaviors (Lichtenthaler and Fischbach, 2019), we can say that promotion-oriented job crafting attempts to make things happen. Employees self-regulate to change the limits and perceptions of their job function to gain in motivation, health, and output. Prevention-oriented job crafting, in contrast, attempts to prevent things from happening. Employees self-regulate to change the limits and perceptions of their job function to avoid losses of health, motivation, and performance.

Prosocial service behavior

PSB is discretionary behavior that seeks to help. It is behavior in which employees address their external users to improve service quality and delivery, and address internal coworkers in the organization for which they work (Bettencourt and Brown, 1997). PSB implies that workers work willingly, both to help solve customers' or users' problems through the service they deliver and to help coworkers and the organization in which they work. In service organizations, where frontline employees deliver service directly, workers' willingness to help or solve problems shapes the service the organization delivers. In such organizations (e.g., higher education institutions), workers' attitudes and behavior during the service encounter significantly influence perception of service quality (Ackfeldt and Wong, 2006). More importantly, the management literature has solidly established that PSB in frontline employees profoundly influences customers' perceptions of quality and satisfaction with the service (Bettencourt, Brown and MacKenzie, 2005; Bettencourt and Brown, 1997; Malhotra and Ackfeldt, 2016) and thus organizational output.

Engagement

Engagement is a motivational concept defined as “a positive, fulfilling work-related state of mind characterized by vigor, dedication, and absorption” (Schaufeli et al., 2002: 74). Yet employees who are very involved in their work—whether physically (energy), emotionally (vigor), or cognitively (dedication)—are not necessarily committed. Commitment only occurs when all three dimensions occur simultaneously (Kahn, 1990). According to Borst et al. (2019), highly engaged employees are physically healthier, experience greater satisfaction of their psychological needs, and are more satisfied and involved than employees with low engagement. Given the importance of committed employees to increasing an organization’s efficiency (Weiss and Zacher, 2022), we need better understanding of why some employees are more intensely involved in their work than others (Shuck et al., 2013; Shuck, Reio and Rocco, 2011) and fuller knowledge of the strategies that stimulate commitment in university professors.

HYPOTHESIS DEVELOPMENT

Relationships of job crafting to prosocial service behavior

Extensive research has identified numerous benefits of job crafting. Results have demonstrated positive relationships of job crafting to employee satisfaction, engagement, performance, innovation, and commitment (Bruning and Campion, 2022; Castiello-Gutiérrez et al., 2021; McNaughtan et al., 2022; Tims, Derks and Bakker, 2016). The topic has not, however, been explored sufficiently in the context of higher education. Only recently has research begun to analyze how job crafting can be applied to university work and how such application affects service in higher education (Castiello-Gutiérrez et al., 2021; Sharma and Vashisht, 2018; Wang, Huang and Xie, 2022). Further research is needed to identify the results of job crafting in university service.

Getting workers to adopt job crafting behavior to design their work affects workers' individual attitudes, behavior, and wellbeing, as well as work outcomes. We can expect such use of job crafting to affect (whether positively or negatively) how university professors deliver higher education service to their users. Professors may choose to follow their prescribed role (in-role behavior), go beyond it (extra-role behavior), and/or cooperate with their coworkers. All of these outcomes affect service performance.

Regulatory theory argues that workers craft their work through orientation to either approach or avoidance (Lichtenthaler and Fischbach, 2019). The approach orientation involves behavior and effort activated, exerted, motivated, and directed toward goals that focus on problems and improvements (Bruning and Campion, 2018). Related behavior and effort include seeking resources, tackling obstructive demands, and increasing challenging demands (e.g., how to acquire new skills and improve work processes) (Bruning and Campion, 2018; Zhang and Parker, 2019; Lu et al., 2022). In avoidance job crafting, in contrast, employees seek to avoid or eliminate the negative aspects of their work, engaging in avoidance behavior to prevent negative outcomes (Lu et al., 2022; Renkema et al., 2022).

In the university context, we believe that the approach orientation to job crafting helps professors to develop PSB toward both users of higher education service and coworkers, while avoidance job crafting does not. In seeking to avoid negative states by eliminating tasks, professors distance themselves from unpleasant job demands (Bruning and Campion, 2018; Tims, Bakker, and Derks, 2012, 2015), with negative results for job performance (Lu et al., 2022). They may choose not to comply with the demands of their work role (Fong et al., 2021) but rather to distance themselves from expected good performance of the assigned task (Petrou, Demerouti and Schaufeli, 2012), negatively affecting development of PSB.

We have analyzed the actions of approach vs. avoidance job crafting from the perspective of role crafting with a regulatory focus: role expansion, social expansion, and work role

reduction (Bruning and Campion, 2018, 2019, 2022). Work role expansion (WRE) involves “the expansion on one’s own initiative of the job holder’s work role to include elements of work and related activities that were not originally in the formal description of the job” (Bruning and Campion, 2018: 507). Social expansion (SE) “occurs within the social sphere of work and involves the proactive use of social resources or resource contributions to other members of the organization or other groups” (Bruning and Campion, 2018: 507). Finally, work role reduction (WRR) involves “conscious, proactive, systematic reduction of the work role, work requirements, effort, or task responsibility” (Bruning and Campion, 2018: 507). Based on the foregoing arguments, we propose the following hypotheses:

H1: Job crafting influences PSB.

H1a: WRE is positively related to PSB.

H1b: SE is positively related to PSB.

H1c: WRR is negatively related to PSB.

Job crafting and engagement

Higher education institutions have a strong interest in keeping faculty committed to advance the goal of delivering the service of higher education (Lawrence et al., 2012; McNaughtan et al., 2022). This interest is especially strong due to the perception that professors are more loyal to their field and career than to their institutions (Lawrence et al., 2012). Although job crafting is a strategy that can stimulate employees’ engagement (Bruning and Campion, 2018; Mäkikangas and Schaufeli, 2021), prior studies on the relationship between job crafting and engagement show inconsistent results (e.g., Chen, 2019; Petrou et al., 2012; Tims et al., 2012). We need more research on the dimensions of job crafting (Lee and Lee, 2018) and intervening mediation mechanisms to provide a coherent explanation of these contradictory results (Lim, 2022).

Employees who achieve better fit of their personal needs, skills, and passions to their work through job crafting (Tims and Bakker, 2010) can improve their engagement level (Bakker, Oerlemans and Brummelhuis, 2013). Empirical evidence has generally shown the benefits of job crafting that extends the scope of work (approach focus) (Bruning and Campion, 2018; Demerouti et al., 2015b; Lichtenthaler and Fischbach, 2019). Approach crafting makes work more important and meaningful for employees, who in turn design more interesting tasks and engage in social relationships for themselves—issues positively related to engagement (Lichtenthaler and Fischbach, 2016).

Crafting that reduces job scope (avoidance crafting) is quite harmful. Although it may seek to prevent burnout and protect health, it does not motivate employees (Lee and Lee, 2018; Harju, Kaltainen and Hakanen., 2021). Demerouti et al. (2015b) find mixed results in the research relating avoidance job crafting and engagement. Some studies show that decrease in obstructive work demands has no relation to engagement (Tims et al., 2012; Tims, Bakker, and Derks, 2015), while others identify a negative relationship (Petrou et al., 2012). Since professors may practice prevention-oriented job crafting to avoid loss of motivation, health, and output (Lichtenthaler and Fischbach, 2019), they may design their work to avoid tasks or relationships that demotivate them so as not to lose engagement with their organization. Professors may also attempt to avoid getting involved in specific projects or work challenges that might decrease their engagement level. Avoidance behavior thus will not necessarily have either a positive or a negative influence on engagement. Based on the foregoing, we propose the following hypotheses:

H2: Job crafting influences engagement level.

H2a: WRE is positively related to engagement level.

H2b: SE is positively related to engagement level.

H2c: WRR is not (either positively or negatively) related to engagement level.

Engagement and its relationship to prosocial service behavior

Committed employees tend to be proactive and open to new information. They are motivated to do their work well (Bakker et al., 2013; Harju, Hakanen and Schaufeli, 2016). Committed employees also invest greater effort and show higher levels of energy and enthusiasm at work, achieving better performance and delivering excellent service (Lee et al., 2006; Christian, Garza and Slaughter, 2011). Engagement is thus positively related to employees' cooperation or help behaviors, both in-role and extra-role (Cheng and Chen, 2017; Giancraspo, Callea and Manuti, 2022).

In the field of education, Bakker and Bal (2010) and Zahoor (2018) showed that professors' engagement is positively related to their job performance because it enhances motivation. Committed professors are more attentive, focused, and energetic and can thus better understand users' expectations during service encounters (Zahoor, 2018). Similarly, Hajdarpasic, Breu and Popenici (2015) argue that academics' engagement in research deepens students' understanding of the content, increases enthusiasm for learning and teaching, and encourages postgraduate study. Based on these arguments, we propose the following hypothesis:

H3: Engagement level is positively related to PSB.

Engagement as mediation mechanism between job crafting and prosocial service behavior

Little is known about the process by which job crafting influences performance outcomes (Kwon and Kim, 2020). We need better understanding of the mechanisms by which job crafting improves performance to advance knowledge of this process and establish more effective management practices (Demerouti et al., 2015a). Engagement, which is influenced by organizational factors such as work characteristics, is a fundamental element in achieving positive organizational consequences (Schneider et al., 2018). Recently, Lim (2022) argued that employees are intrinsically more motivated by what they do at work and show greater

persistence, energy, concentration, and enjoyment when they craft their work and feel satisfied that they have achieved good worker-job fit.

Job crafting actions to shape the nature of one's work produce a series of effects (Demerouti et al., 2015b) that can be explained by variables related to psychological states (e.g., commitment). Employees who expand their work role and are more committed to their work engage in more extra-role behavior (Demerouti et al., 2015a). That is, they dedicate more time and effort to activities not required by their work role. Employees who are more absorbed in and dedicated to their work are also more likely to adopt altruistic, conscious, and virtuous behavior (Giancraspo et al., 2022). Because professors who craft their work through promotion- or approach-oriented job crafting end up performing tasks that motivate them more based on their needs and skills, they come to perceive their work as more meaningful and experience more positive emotions. Greater engagement thus makes it easier for them to perform better (Lichtenthaler and Fischbach, 2019).

Professors who shape their work based on avoidance aim to reduce the factors that trigger negative states or situations. Avoiding demanding aspects of their work that make them perceive their work as less meaningful and experience more negative emotions (Lichtenthaler and Fischbach, 2019) enables them to conserve their resources (Demerouti et al., 2015a). The variable engagement, in contrast, focuses directly on work completed, representing the will to dedicate physical, cognitive, and emotional resources to work (Christian et al., 2011). Engaged workers who are committed to the organization will channel this energy into more important tasks even if they redefine their work based on avoidance (Demerouti et al., 2015b). Committed professors thus engage in more PSB even when they orient their job crafting to avoidance. They focus on the tasks that are crucial to the service because PSB spans the dimensions of in-role (prescribed) service, extra-role service, and cooperation with coworkers. Based on the foregoing, we propose the following hypothesis:

H4: Engagement mediates the relationship between job crafting and PSB.

H4a: Engagement mediates the relationship between WRE and PSB.

H4b: Engagement mediates the relationship between SE and PSB.

H4c: Engagement mediates the relationship between WRR and PSB.

Methodology

Our research goal is to study the relationship between job crafting strategies and PSB. We do so by contrasting the relationships hypothesized using structural equations analysis (Smart PLS) with data from 1068 professors in the context of higher education in Spain.

Sample and procedure

The population of university professors is very large, and professors may work in a variety of fields of knowledge. Our population was defined as professors who teach in Faculties of Economics and Business in Spain. Due to the multidisciplinary nature of the undergraduate and graduate degree programs delivered in these faculties, the professors they employ are from different knowledge fields.

We took multiple steps to maximize accuracy of the results. The questionnaire was designed with clearly and simply written items. The informants were contacted via email and the data collection strategy designed to avoid common method bias (Podsakoff, MacKenzie and Podsakoff, 2012). All professors completed our surveys during their work hours. Participation was voluntary, and professors were assured that their responses would be kept confidential. The study variables were not identified, and separate sections were created with independent instructions to avoid tiring respondents.

As to procedure, the survey was administered in three steps. First, we contacted the academic teaching staff from each department by e-mail to invite them to participate in the survey. Second, we took measures to avoid social desirability bias. Social desirability is individuals'

tendency to respond in a socially desirable way (Ried, Eckerd and Kaufmann, 2022). Respondents may conceal their true opinions, feelings, or experiences and give biased responses to attempt to look good to others when answering questions (Podsakoff et al., 2012). Social desirability response bias in survey data can moderate, attenuate, or inflate the relationship between the variables (Peltier and Walsh, 1990). To avoid potential social desirability concerns among the respondents, we explained the goal of the survey clearly to the professors and stressed the anonymity and confidentiality of their responses. The questions were formulated neutrally, using Likert-type scales.

Third, we took steps to avoid common method variance—systematic error variance that arises from using a common method to measure the study constructs (Podsakoff et al., 2012). The questionnaires were administered at different times, with an interval of two weeks between Time 1 and Time 2, because dividing data collection from the same source into separate time periods helps to increase accuracy of the responses (Podsakoff et al., 2012). We also collected data from two types of informants (university professors and university professors with an administrative position) since common method bias can occur when both independent and dependent variables are measured in a single survey with the same response method. Podsakoff et al. (2012) determined that the correlations between well-established constructs in organizational research are weaker when the sources of the variables are different.

Survey respondents' individual characteristics are a second-order source of common method bias. For example, similar cognitive capability can induce participants to respond in similar ways, and lack of experience with the topic studied can affect respondents' ability to retrieve the information needed to answer the questions posed. Further, some personality traits, such as being extroverted or reserved, can lead to stylized response (Baumgartner and Steenkamp, 2001). Individual differences between respondents can thus negatively affect their motivation to answer questions precisely (MacKenzie and Podsakoff, 2012).

We obtained 1256 questionnaires but discarded 188 because they were incomplete. The final sample thus contained 1068 valid responses. The sample is aligned with the demographic of professors in the field, as we used random sampling to ensure that each participant would have the same probability of being chosen. This method also eliminated systematic bias. Finally, choosing a sample of firms located in a relatively homogeneous geographic, cultural, legal, and political area minimizes the impact of variables that cannot be controlled in the empirical research. Table 1 presents the demographic description of the sample.

INSERT TABLE 1

Measurement of variables

The constructs were measured using 5- and 7-point Likert type scales adapted to the study's context. To measure the variable job crafting, we adapted the scale developed by Bruning and Campion (2018), using the three dimensions that focused on work role and adapting 13 items corresponding to WRE, SE, and WRR. Engagement was measured by adapting 15 items from the multidimensional scale proposed by Schaufeli et al. (2002). Finally, PSB was measured with the multidimensional 21-item scale composed of extra-role service, in-role service, and cooperation with coworkers developed by Bettencourt and Brown (1997). The control variables (CVs) were gender, age, respondent's university, academic rank, years of work experience, and academic position. Appendix 1 presents the scales used to measure the variables.

Analytical strategy

The analytical strategy was structural equation modeling with partial least squares (PLS-SEM, v3.3.3). The proposed model includes one mediating variable and two second-level constructs. As second-order reflective constructs, engagement and PSB give rise to a

reflective-reflective model. The measurement model was analyzed in two stages (Sarstedt et al., 2019). First, we evaluated the elements of the lower-order composites and second the second-order measurement model, including engagement and PSB as a higher-order construct representing its first-order components (Sarstedt et al., 2019).

Common method variance tests

Given the possibility of common method bias, we performed two additional tests. The first was Harman's one-tailed test, as recommended in the literature (Podsakoff et al., 2012). To perform this test, we entered all variables into an exploratory factor analysis, limiting the number of factors to 1. Since the first component accounted for less than 50% of the variance (7.362%), common method variance is not a serious problem in our sample.

Second, we conducted exploratory factor analysis for the first-order constructs and obtained first-order factors with eigenvalues >1.0 , accounting for 67.640% of the variance. Because no factor emerged and the first factor failed to explain most of the variance, we also dismissed the risk of serious common method variance. Since neither test indicated problems of common method variance, we assume it is not a problem in the sample and can thus move on to discussing our results.

Results

All scales used may be considered reliable and valid, as they fulfilled all necessary requirements. First, all scales were unidimensional; each indicator measured a single construct. Second, the confirmatory factor analysis showed that all indicators fulfilled the three necessary requirements: (1) All factor loadings were significant ($t > 1.96$; $p < 0.05$) and greater than 0.4, (2) the value for individual reliability (R^2) was above 50%, and (3) all Alpha Cronbachs were greater than 0.7. Third, the measurements for variance extracted were greater than 0.5 (Nunnally, 1978). Finally, we eliminated only one item in the analysis, thus preserving all scales' content validity.

Measurement model

Figure 2 presents the measurement model.

INSERT FIGURE 2

Table 2 presents the results from analysis of the second-order measurement model. We analyzed the first order in the same way. All Alpha Cronbach values were above 0.7 (Cohen, 1992), and composite reliability values were above 0.7 (Hair et al., 2014).

INSERT TABLE 2

To ensure content validity of the scales used, we performed exhaustive analysis of the literature to obtain in-depth knowledge of what was to be measured (Hair et al., 2004). Convergent validity was guaranteed by confirming that individual reliability for each indicator was above 0.7 (Hair et al., 2014). Item WRE 2 was eliminated because it did not fulfill the requirements established. Convergent validity at construct level was guaranteed by the factor loadings and variance extracted (AVE) above the threshold of 0.5 (Gefen, Straub, and Boudreau, 2000). Finally, the HTMT evaluated discriminant validity through indicator-level analysis—a test more sensitive to potential problems of discriminant validity (Henseler, Ringle and Sarstedt, 2015). The values obtained were below 0.90 and significantly different from 1 (Franke and Sarstedt, 2019), indicating no problems of discriminant validity.

Structural Model

Table 3 presents the results of the structural model. We see that the VIF values were below 3 (Hair et al., 2019), demonstrating absence of bias and of problems of collinearity in the model. One-tailed bootstrapping with 10,000 subsamples was performed to determine the structural

relationships. None of the relationships obtained the value 0 except the confidence interval for H2c, confirming the statistical significance of all relationships. Analysis of the structural model also supported our hypotheses. First, WRE was positively related to the PSB component for university professors, confirming H1a ($\beta = 0.187$; $p = 0.000$). The results also supported our expectations for H1b ($\beta = 0.282$; $p = 0.000$), demonstrating a positive and significant relationship between SE and PSB and a negative relationship for H1c ($\beta = -0.165$; $p = 0.000$). Second, both WRE (H2a, $\beta = 0.257$; $p = 0.000$) and SE (H2b, $\beta = 0.258$; $p = 0.000$) were positively and significantly related to engagement. This was not the case, however, for WRR. For H2c ($\beta = 0.000$; $p = 0.497$), the statistical results confirmed our hypothesis and expectations—the absence of a relationship between WRR and engagement. Third, the results ($\beta = 0.239$; $p = 0.000$) supported H3, that engagement level is positively related to PSB. Finally, we proposed three mediation hypotheses. Behavior mediated the relationship of WRE (H4a; $\beta = 0.061$; $p = 0.000$) and SE (H4B; $\beta = 0.062$; $p = 0.000$) to PSB but not that of WRR (H4c; $\beta = 0.000$; $p = 0.497$) to PSB.

In sum, our results identify complementary mediation of an approach strategy to role crafting, as both direct and indirect effects were significant and acted in the same direction. Work commitment did not mediate this relationship for the avoidance strategy, however. Given the absence of mediation and only a direct effect in avoidance strategy role crafting, we cannot affirm that commitment is important in this relationship. The control variables used (age, respondent's university, job experience, academic rank, and professional category) did not show a significant relationship to PSB, although gender was significant. These results indicate that professors' behavior does not change with changes in age, rank, seniority, or university with which they are affiliated. Gender did, however, show significant differences. Women demonstrated greater PSB in higher education service.

The coefficient of determination R^2 showed appropriate effect sizes of 0.300 (H1) and 0.183 (H3); values close to or greater than 0.2 are considered high in studies that analyze behaviors or attitudes (e.g., PSB and engagement) (Hair et al., 2019). Lastly, our evaluation of fit of the empirical data to the theoretical model showed good fit from a conservative perspective (Hu and Bentler, 1998), with SRMR values of 0.041 for both the saturated and the estimated model (see Table 3).

INSERT TABLE 3

Post-hoc analyses

We performed two post-hoc analyses to clarify the non-mediating role of engagement in the relationship between avoidance job crafting and PSB (H2c). To do so, we analyzed engagement as a moderating variable in an initial post-hoc analysis, using orthogonalization (Hair et al., 2017). Values higher than 0.025 indicate a strong effect (Hair et al., 2017). Our results were $\beta=0.068$, $p=0.042$, demonstrating that engagement behaves as a moderating variable between WRR and PSB.

Figure 3 represents visually the slope plot of the analysis. Following Hair et al. (2017), the red line represents the relationship between WRR and PSB when engagement levels are low (means with -1 standard deviation). The blue line represents this relationship for medium engagement levels (-1 standard deviation), and the green line represents it for high engagement levels (+1 standard deviation). High engagement levels thus moderate the relationship between WRR and PSB, counteracting nearly all negative effects. To summarize the foregoing, we propose two scenarios.

INSERT FIGURE 3

Scenario 1: University professors show a high level of engagement. As professors avoid their work role, PSB decreases. The slope is not as steep as in the other scenarios, however, indicating that PSB decreases less because professors are highly committed. This scenario shows that it is valuable to have committed professors, as their PSB will be less negatively affected if they adopt avoidance job crafting.

Scenario 2: University professors show a low level of engagement. When professors design their work based on avoidance (WRR) but have not developed sufficient engagement, WRR has a stronger negative influence on PSB. Low engagement thus leads to more negative PSB when professors craft their work based on avoidance. A scenario in which professors reject tasks and have low engagement levels greatly harms their delivery of extra-role and in-role services and cooperation with coworkers, placing the organization at a disadvantage. The results of our analysis (see Figure 3) support the conclusion that engagement attenuates the disadvantages of work avoidance in operational terms.

To develop these ideas in greater depth, we performed a second post-hoc analysis to help explain the absence of a relationship between avoidance (WRR) and engagement (H2c). Following the recommendations of Hair et al. (2017), we tested for the possibility that this relationship was nonlinear rather than linear by creating a quadratic term, using a two-stage approach (Hair et al., 2017) to identify the statistical significance of the nonlinear effect among the variables (Hair et al., 2017). The results of the model created (see Table 4) showed both a positive nonlinear effect ($\beta_{\text{quadratic effect}} = 0.085, p = 0.004$) and a negative nonlinear effect ($\beta_{\text{linear effect}} = -0.002, p = 0.997$).

INSERT TABLE 4

The results thus show no relationship between avoidance and engagement, as proposed in H2c and in prior studies. Rather, the relationship between the variables is nonlinear.

The empirical results of prior studies showed that work avoidance is either unrelated or negatively related to engagement (Bruning and Campion, 2018; Demerouti et al., 2015a; Lichtenthaler and Fischbach, 2019; Tims et al., 2015), even in the long term (Petrou, Demerouti and Schaufeli, 2018, 2015). These results do indicate a relationship among the variables, but it is nonlinear. Our study thus advances the literature and opens a new line of research to deepen understanding of this nonlinear effect. We now discuss the study findings.

DISCUSSION

We propose that job crafting strategies influence whether and how professors engage in PSB. Our findings show that WRE and SE positively influence PSB, whereas WRR negatively influences PSB. To determine the mechanisms underlying the relationships proposed, we analyzed the role of engagement as mediator in these relationships.

This analysis indicates that professors who expand their work role are more committed to it. It also shows that professors who avoid their work role in the attempt to reduce negative situations do not experience negative effects on their engagement. Further, we obtained a positive relationship of engagement to PSB, demonstrating the importance of engagement for PSB. Finally, we found that committed professors who expand their work role have greater PSB, confirming the role of mediation in this dimension. Engaged professors who reduce their work role, do not, however, improve their PSB, even though this strategy enables them to concentrate their energy on the services prescribed.

Based on the foregoing, it is crucial to analyze the dimension of avoidance in job crafting in greater depth, due to its importance in users' service experience. We must understand the mechanisms underlying its relationship to PSB. Our first post-hoc analysis showed the

moderating role of engagement in the relationship between avoidance and PSB in the university environment. Our second post-hoc analysis demonstrated the presence of a nonlinear relationship between university professors' avoidance and engagement.

Theoretical implications

Our study makes several theoretical contributions. First, by theorizing and testing the relationship between job crafting and PSB, it extends SDT by verifying that job crafting works from the bottom up, by satisfying workers' needs for autonomy, competence, and relatedness (Ryan and Deci, 2000). Our study also advances JD-R theory (Tims et al., 2013) by providing empirical evidence on higher education professors who adopt job crafting behavior. Analysis of this evidence enables us to determine the role of job crafting as antecedent and its consequences when professors craft their work. We find that the approach dimension of job crafting is an antecedent of engagement, but the avoidance dimension is not. We also confirm that professors self-regulate by using two different systems to adjust their behavior to achieve the fit they desire (Lichtenthaler and Fischbach, 2019). The first system aims to trigger greater PSB and the second, greater avoidance. Greater avoidance results in lower PSB—an undesirable outcome for universities, given the negative repercussions for quality of higher education services. We believe it is important to analyze how to avoid this negative result, which occurs because some professors seek to decrease work demands to avoid other negative results, such as tension, stress, or loss of engagement.

Second, our study contributes to the literature by analyzing the mechanisms that influence the relationship between job crafting and better higher education service performance, measured through PSB. More specifically, we focused on engagement as a mediating mechanism in the relationships between job crafting and PSB. Our data analysis in the context of higher education shows that job crafting is indeed an antecedent of engagement, although only in its approach dimensions since avoidance shows no significant relationship to engagement. To

deepen knowledge of the association between these variables (avoidance and engagement), we asked whether the avoidance – job crafting relationship might be nonlinearly related to engagement (second post-hoc analysis). This result reveals a new knowledge gap, requiring study of the nonlinear relationship among the variables. Given that our study also confirmed the need for highly committed professors, researchers could try to determine the level at which avoidance ceases to affect university professors' engagement negatively. Finally, professors' decision to avoid certain tasks hardly affects their PSB (first post-hoc analysis).

Practical implications

In identifying the mechanisms that improve higher education service performance, our research also has practical implications for professors, institutional leaders, and higher education institutions that are developing job crafting behaviors. Universities must learn methods and design actions to motivate professors and ensure that they are committed to their work so that they can develop the positive attitudes and behavior that enable excellent PSB. Our first practical implication is that higher education institutions foster actions to promote professors' development of PSB, because it is important for higher education institutions to improve higher education service quality beyond the roles formally established. Human resources practices can foster approach job crafting to improve higher education service performance. Rather than focusing on training and redesign of work, university administrators must encourage professors to design their own work to better satisfy their individual needs. University administrators must promote a bottom-up approach (Lichtenthaler and Fischbach, 2019) that facilitates professors' individual design of their work to achieve better education service performance. Given the challenge of maintaining job crafting over time, institutional leaders' role is to assist and support professors in better regulating their efforts at job crafting. Universities can, for example, offer mentoring programs to guide professors and enable them to develop job crafting.

Second, our analysis of the dimensions of job crafting advises institutional leaders to help professors develop expansion role crafting practices to achieve higher levels of PSB. Since professors may also design their work based on avoidance—negatively influencing PSB—institutional leaders must analyze what they can do to mitigate the negative consequences of avoidance. Our analysis confirms that such mitigation can be achieved with highly committed workers. When university professors design their work based on avoidance (not getting involved in roles or tasks that may affect their work negatively, such as requesting a project, administrative responsibility, etc.), only high engagement levels will mitigate the negative influence of avoidance on their PSB. We thus believe that university administrators must understand the extent to which professors can design their work to avoid certain tasks without harming their engagement level. University leadership must establish mechanisms to ensure that professors achieve optimal levels of engagement, while also giving them autonomy in designing their work. And leadership must ensure such optimal levels regardless of whether professors focus on approach or avoidance. Only so can universities guarantee sufficient PSB exert a positive influence on the higher education services delivered to society.

Our third practical implication is that institutional leaders must seek the best way to improve professors' engagement due to its positive consequences for higher education service. Higher education administrators must foster engagement as a mechanism to achieve greater PSB through strategies that use approach role crafting. At the same time, it is important to ensure that university professors who design their work based on avoidance achieve high levels of engagement. Although the data indicate that engagement does not mediate the relationship between avoidance and PSB, the post-hoc analysis identified a nonlinear relationship between the two concepts. This analysis enriches the results, enabling us to infer that we also need high levels of engagement for professors who design their work through avoidance in order to guarantee sufficient PSB. Higher education institutions must thus work constantly to adopt

workplace strategies and programs that keep professors committed to their job functions and responsibilities. Developing human resources practices and implementing them effectively will enable universities to improve employees' engagement level by fostering the relationship between job crafting and excellent higher education service performance. Further, engagement is not the only issue affected by the institution's practices. Our findings suggest that professors, as active creators of their work through job crafting, can actively mold their engagement with the institution through the capability to design their work functions over time. Such activity changes the direction of analysis, from how the employer's (the university's) characteristics impact professors' engagement to how professors' actions (JC) affect engagement.

Limitations and future research

Although this study takes important steps to determine how university professors' approach and avoidance perspectives enable more PSB in the service they deliver through engagement, this paper's focus has some limitations. First, we used transversal data, which evaluate professors' responses at a specific moment in time. Second, the field study was limited to Spanish institutions of higher education. Third, we surveyed only a single informant about their perception of the variables studied.

This paper also proposes ideas for future research. First, we recommend that future longitudinal study attempt to verify the results in organizations that foster job crafting gradually. Second, although this study was performed in Spanish higher education institutions, our results could apply to contexts beyond education. We thus recommend that future research apply the model developed here to other international universities and other sectors to increase generalizability of the results. Third, research could gather responses not only from university professors but also from various users of higher education services to analyze their perceptions and confirm both results. Fourth, it would be interesting to deepen

study of the various ways gender is related to university professors' PSB. Finally, a second post-hoc analysis confirmed that avoidance is nonlinearly related to engagement. This result suggests a need to advance future lines of research on the nature of this relationship so that we can manage it properly. All the foregoing studies would help to increase understanding of this topic.

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