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RESEARCH ARTICLE

HR flexibility and firm performance in professional service firms

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Abstract

Human resource (HR) flexibility emerges as the most critical source of flexibility for professional services firms (PSFs), given that the success of these companies depends on the knowledge, expertise and behaviors of their employees. Nonetheless, few empirical studies have analyzed the extent to which the characteristics of the workforce explain the results of this type of firm. This study attempts to advance in this line of research by analyzing the influence of HR resource flexibility dimensions (skill flexibility – SF and behavior flexibility – BF) on PSF performance. It also examines whether HR coordination flexibility (CF) strengthens the effect of SF and BF on performance. Matched data from 97 general managers and 291 professionals in a sample of Spanish PSFs is used to test the hypotheses through structural equation modeling methodology. The study demonstrates that employee BF has a significant effect on the development of new services in PSFs. The moderation model shows that HR CF increases the influence of BF on the development of new services. Contrary to what was expected, no significant relationship between SF and PSF performance was found.

Key words: Behavior flexibility; coordination flexibility; dynamic capabilities; Professional service firms; resource-based view; skill flexibility

Introduction

In current dynamic competitive environments, organizations rarely achieve sustainable competitive advantage for long periods, and while managers' traditional concerns about product/service quality or low costs allow firms to survive, they no longer guarantee competitive advantages (Ahmed, Hardaker, & Carpenter, 1996). This is especially true for professional services firms (PSFs) (accounting, consulting, law firms etc.), whose competitive environment is characterized by continuous new challenges, such as increasing demands from clients for more sophisticated, customized and integrated services (necessitating the introduction of continuous innovations to satisfy these demands), the increasingly exacting requirements of clients that have expanded their operations into international markets or challenges from larger multinational competitors operating in the same sector (Hitt, Bierman, Uhlenbruck, & Shimizu, 2006; Malhotra, Smets, & Morris, 2016; Stumpf, Doh, & Clark, 2002; Sweeney, Soutar, & McColl-Kennedy, 2011). The current changing environment facing PSFs raises the pressure on their managers to 'consider alternatives to how they have traditionally run their businesses' (Stumpf, Doh, & Clark, 2002: 259), and the attainment of organizational flexibility is becoming a critical priority in this sector (Lin, Joe, Chen, & Wang, 2015).

In general, organizational flexibility refers to the capacity of a firm to react in a suitable and opportune way to ambiguous and rapid external challenges that may have an impact on firm performance (Volberda, 1998). Organizations can achieve flexibility by altering the volume and combination of the activities they undertake. Distinctions can be made between information

systems flexibility (Boynton & Victor, 1991), supplier management flexibility (Volberda, 1998), marketing flexibility (Aaker & Mascarenhas, 1984) and human resource (HR) flexibility (Wright & Snell, 1998). Of these, HR flexibility emerges as the most critical source of flexibility for PSFs, given that their success is clearly dependent on the knowledge, expertise and behaviors of their employees (Hitt et al., 2006; Løwendahl, Revang, & Fosstenløkken, 2001). In fact, 'the quality of these resources and their effective use constitutes the basis for the competitive advantage of these firms' (Fu, Flood, Bosak, Rousseau, Morris, & O'Regan, 2017: 331).

In our study, we draw on the resource-based view (RBV) of the firm (RBV, Barney, 1991) and the notion of dynamic capabilities (DCs) stemming from it (Teece, 2018; Teece, Pisano, & Shuen, 1997) to define HR flexibility. RBV and DC have proved to be valid frameworks in the field of HR management (HRM) (Wright & Snell, 1998) and have been used extensively in the literature since they have an organization-centered orientation and provide a longer-term perspective of HR flexibility. Specifically, our study is based on Bhattacharya, Gibson, and Doty (2005: 623) definition of HR flexibility as the organizational capabilities focused on adapting employee attributes – such as knowledge, skills and behaviors – to changing environmental conditions. In this sense, several authors consider that HR flexibility is a multidimensional concept and differentiate between HR resource flexibility and HR coordination flexibility (CF) (Way et al., 2015; Wright & Snell, 1998). HR resource flexibility refers to the extent to which employees possess skills and behaviors that can offer firm several options to seek strategic alternatives (Wright & Snell, 1998: 761), leading to the distinction between skill flexibility (SF) and behavior flexibility (BF). HR CF represents a higher-level capability (Teece, 2018), as it denotes the ability of the firm to redeploy employees in a variety of work activities within the firm (Way et al., 2015). Several empirical studies have demonstrated that both HR resource flexibility and HR CF lead to higher firm performance (e.g., Bhattacharya, Gibson, & Doty, 2005; Ketkar & Sett, 2010; Pradhan & Kumari, 2017; Way, Wright, Tracey, & Isnard, 2018). However, more research is needed to understand the relevance of flexible human resources for firm competitiveness. The present study aims to advance in this line of research by analyzing first, the relationships between the different dimensions of HR resource flexibility (SF and BF) and PSF performance; and second, the extent to which HR CF strengthens the effect of SF and BF on performance.

This paper aims to contribute to the HRM literature in three ways. First, this study attempts to contribute to the understanding of what makes PSFs more competitive by examining the relationships between HR flexibility and PSF performance. Despite the high number of scholars that recognize the importance of human resources in determining the success or failure of PSFs, few empirical studies have analyzed the extent to which the characteristics of the workforce and in particular, their flexibility, explain the results of this type of firm (Fu et al., 2017; Suddaby, Greenwood, & Wilderom, 2008). Knowledge-intensive firms, such as PSFs, are particularly suited to a study about HR flexibility because PSF performance is highly dependent on human resources (Fu, Flood, Bosak, Morris, & O'Regan, 2015; Jensen, Poulfelt, & Kraus, 2010; Zhou, Kautonen, Wang, & Wang, 2017).

Second, although there is empirical evidence about the contribution of HR flexibility on firm performance (e.g., Bhattacharya et al., 2015; Ngo & Loi, 2008; Way et al., 2015), existing findings are still contradictory as regards the influence of the different dimensions of this concept on firm performance. Based on the dynamic capabilities literature (Laaksonen & Peltoniemi, 2018; Teece, 2018), our study hypothesizes that HR CF moderates the effect of SF and BF on PSF performance. This approach offers a more complete explanation of the reasons why the HR flexibility construct is relevant to determine firm performance since it assumes that heterogeneity in the level of HR CF implies differences in the benefits stemming from similar levels of SF and BF (Gardner, Gino, & Staats, 2012). This is also in line with the suggestion in some recent studies, which have highlighted the need to conduct empirical research that sheds light on the mechanisms through which dynamic capabilities influence firm performance (Galvin, Rice, & Liao, 2014; Zhou, Zhou, Feng, & Jiang, 2019). Our study aims to fill this gap by empirically testing the moderator role of HR CF.

Third, from a methodological point of view, another relevant contribution of the study refers to the measurement of HR resource flexibility. To our knowledge, this is the first study that measures HR resource flexibility at the individual level (i.e., based on employees' assessments) and then aggregates their responses at the firm level of analysis. Previous studies define HR resource flexibility as 'a firm-level capacity arising out of individual skills and behaviors' (Bhattacharya, Gibson, & Doty, 2005: 623), but surprisingly, data on HR resource flexibility have mainly been collected through (senior or HR) managers' opinions about the whole workforce's flexibility. Thus, prior scales are based on the assumption that these are global constructs of the firm (Kozlowski & Klein, 2000) therefore showing inconsistencies with the very definition of these two concepts. Our approach is consistent with the emergence-enabling processes according to which there is an amplifying process whereby individual-level phenomena are aggregated to form higher-level (e.g., firm-level) phenomena (Li, Wang, Van Jaarsveld, Lee, & Ma, 2018).

Research model

Consistent with the need to adapt organizational strategies to external challenges, HR scholars have proposed that HR flexibility is a crucial factor to guarantee firms' timely responses to dynamic environments and therefore, it may be relevant to explain organizational performance (Beltrán-Martín, Roca-Puig, Escrig-Tena, & Bou-Llusar, 2008; Way et al., 2015) as demonstrated by several empirical studies (see Table 1 for a summary). The present study proposes a research model (Figure 1) based on the premises of the RBV of the firm (RBV, Barney, 1991) and the DCs approach (Teece, 2018; Teece, Pisano, & Shuen, 1997) linking the HR flexibility dimensions to the PSF performance. These two theoretical approaches have been widely adopted in the analysis of PSF competitiveness (Agarwal & Selen, 2013; Hitt, Bierman, Shimizu, & Kochhar, 2001; Sweeney, Soutar, & McColl-Kennedy, 2011) and in the literature about HR flexibility. They provide the theoretical basis for advancing our understanding of HR flexibility in two directions. First, the RBV is an organization-centered approach, as it considers that the sources of competitive advantage come from the internal resources of the firm (Peteraf, 1993). This leads us to focus on internal HR flexibility, rather than on other forms of external HR flexibility, such as the use of contingent workers. Second, by focusing on internal HR flexibility, we adopt a long-term perspective in analyzing the influence of HR flexibility on organizational competitiveness. As Murphy (1999) states, organizations that rely too heavily on external forms of HR flexibility (e.g., hiring or firing contingent workers to adapt to demand cycles), risk depleting their pool of available high-quality workers, and are likely to fail to develop the core workforce they need. Although short-term gains might be achieved by replacing permanent employees with contingent workers, the long-run implication of an over-reliance on contingent workers can be fatal to organizations.

Wright and Snell (1998) developed the most comprehensive definition of HR flexibility from the RBV and the DC perspectives and proposed two general types of HR flexibility: HR resource flexibility and HR CF. The first type of flexibility is HR resource flexibility, which refers to the extent to which employee characteristics can be applied to a larger range of alternative uses (Wright & Snell, 1998: 761). In particular, a distinction can be made between SF and BF (Beltrán-Martín et al., 2008; Way et al., 2015)[1]. The second type of flexibility is HR CF, which concerns the speed with which the firm can redeploy individuals in a timely manner in the firm (Ketkar & Sett, 2010; Way et al., 2015). HR resource flexibility and HR CF form the basis of different modes of competence (Sanchez, 2004), that is, different activities and processes

[1]Prior studies have also considered HR practice flexibility, defined as the versatility of the organization's current HR practices (Bhattacharya, Gibson, & Doty, 2005). However, the present study focuses on workforce flexibility that is, on the role that employees' characteristics can play in enhancing firm performance rather than on managerial decisions concerning the design of the HR strategy of the firm. Studies such as Beltrán-Martín (2006, Beltrán-Martín et al., 2008) have adopted a similar approach to conceptualize HR flexibility.

Table 1. Summary of empirical studies about the relationship between HR flexibility and firm performance

			HR flexibility dimensions				Performance				
Reference	Operationalization of HR flexibility	Interrelation-ships	SF	BF	HR practices flexibility	HR CF	Operational performance	Financial performance	Measurement of HR flexibility	Sample	Theoretical framework
Beltrán-Martín et al. (2008)	Aggregated	1	x	x			Customer service effectiveness		Commercial managers assess the HR flexibility of the salesforce	226 commercial managers in Spanish firms operating in different sectors	Resource-based view
Bhattacharya et al. (2015)	Dimensions	1	x	x	x			Accounting-based performance indicators (operating profit per employee, sales per employee, return on sales, cost of sales over sales)	HR executives and CEOs assess the global HR flexibility of the firm	97 HR executives and 26 CEOs of 123 firms operating in the Industrial Machinery and Equipment industry and in the Food and Grocery Stores industry	Dynamic capabilities
Do, Yeh, and Madsen (2016)	Aggregated	1	x	x	x		Adaptability culture Organizational innovation		Employees assess the global HR flexibility of the firm	293 employees of Taiwanese companies in high-tech industries	Resource-based view
Ketkar and Sett (2009)	Dimensions	2	x	x	x		Subjective employee performance (e.g., customer orientation, quality consciousness etc.) and operating performance (customer satisfaction level, efficiency of operations etc.)	Subjective firm performance (growth of sales revenue, profitability, operating cost efficiency, growth of market share, overall firm performance)	Middle/senior managers assess the global HR flexibility of the firm	201 middle and senior managers of Indian companies in manufacturing and service industries	Resource-based view and dynamic capabilities

Ketkar and Sett (2010)	Dimensions	2	x	x	x		Subjective employee performance (e.g., customer orientation, quality consciousness etc.) and operating performance (customer satisfaction level, efficiency of operations etc.)	Subjective firm performance (growth of sales revenue, profitability, operating cost efficiency, growth of market share, overall firm performance)	Middle/senior managers assess global HR flexibility of the firm	201 middle and senior managers of Indian companies in manufacturing and service industries	Resource-based view and dynamic capabilities
Lepak, Takeuchi, and Snell (2003)	Dimensions	3	x			x		Accounting-based performance indicator (ROE) and market-based performance indicator (market-to-book)	Senior executives, HR managers and middle managers assess global HR flexibility of the firm	84 senior executives, 102 senior managers and 48 managers in 148 firms operating in different industries	Human resource architecture
Ngo and Loi (2008)	Aggregated and dimensions	1	x	x	x		Adaptability culture Human resource-related performance (morale of employees, retention, employment relations, employee grievances)	Subjective firm performance assessed by HR managers (sales/ turnover, net profit, new product development)	HR managers assess global HR flexibility of the firm	181 HR managers of MNCs operating in Hong Kong	Resource-based view
Sekhar, Patwardhan, and Vyas (2016)	Dimensions	1	x	x	x		Subjective employee performance (e.g., customer orientation, quality consciousness, etc.) and operating performance (customer satisfaction level, efficiency of operations, etc.)	Subjective firm performance (growth of sales revenue, profitability, operating cost efficiency, growth of market share, overall firm performance)	Key representatives of the firms assess global HR flexibility of the firm	66 key representatives (chief executive officers, general managers, HR managers, senior managers, consultants) of Indian IT firms	Resource-based view and dynamic capabilities

(*Continued*)

Table 1. (*Continued.*)

Reference	Operationalization of HR flexibility	Interrelationships	HR flexibility dimensions				Performance		Measurement of HR flexibility	Sample	Theoretical framework
			SF	BF	HR practices flexibility	HR CF	Operational performance	Financial performance			
Úbeda-García, Claver-Cortés, Marco-Lajara, Zaragoza-Sáez, and García-Lillo (2018)	Aggregated	1	x	x	x		Organizational ambidexterity Hotel sector performance (customer satisfaction level, employee satisfaction) General performance (brand recognition, firm market image)	Subjective general performance (market share growth, sales growth) and hotel sector performance (revenues per room, average occupancy)	HR managers or a reasonable substitute (e.g., CEO) assess global HR flexibility of the firm	100 HR managers or a reasonable substitute of Spanish hotels	Resource-based view
Way et al. (2018)	Aggregated	1	x	x	x	x		Subjective firm performance assessed by non-HR managers (sales growth, ability to fund business growth from profits, ROI, gross profit margin) assessed by non-HR managers	HR managers assess the global HR flexibility of the firm	273 senior managers and 217 presidents, directors and general managers from for-profit U.S. firms with 100 or more employees	Resource-based view

Interactions: 1: Dimensions of HR flexibility are not related to each other, 2: Causal relationships between the dimensions of HR flexibility are analyzed, 3: Interaction effects between the dimensions of HR flexibility are tested.

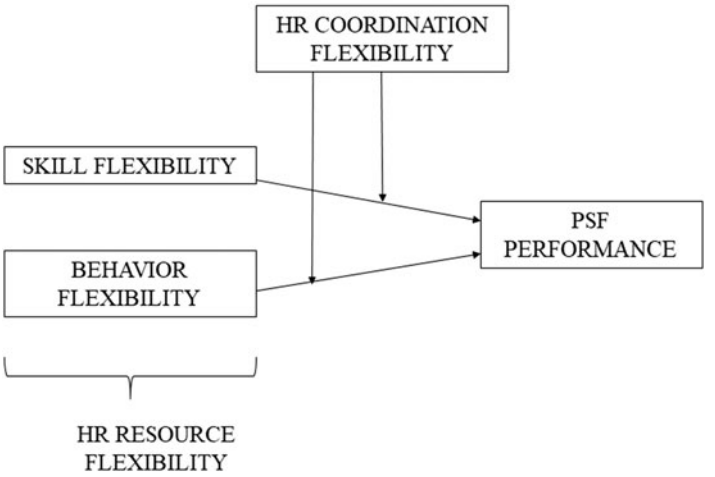


Figure 1. Research model.

developed by the firms to respond to changing environmental factors and each of them can represent a 'bottleneck' that constraints the overall competence of the firm, so the potential interdependencies among them should be studied in order to understand differences in firm performance. In particular, in the model proposed in this study (Figure 1), HR resource flexibility (SF and BF) has a positive impact on PSF performance, and these effects are hypothetically moderated by a firm's HR CF. It can be argued that without an analysis of the simultaneous influence of HR resource flexibility and CF on firm performance in a cohesive model (Galvin, Rice, & Liao, 2014), understanding of the benefits of HR flexibility for survival and success of PSF will be limited. The next section provides justifications for the relationships proposed in the theoretical model.

The impact of HR resource flexibility on PSF performance

Similar to the role that value, rareness, durability and inimitability play in the generation of sustainable competitive advantages (Barney, 1991), the RBV suggests a set of criteria that define flexible resources. According to the RBV, organizational resources are flexible when they can be used in several ways (i.e., versatility) or can be easily transformed (i.e., malleability) and as such, supply the firm with novel services adapted to a large range of changing circumstances (Galunic & Rodan, 1998; Penrose, 1959; Sanchez, 2004). In the context of HR flexibility, the RBV focuses on the skills, attitudes and behaviors of employees and assumes that individual members are the organization's most important resource for generating flexibility. Drawing from these premises, Wright and Snell (1998) proposed the notion of HR resource flexibility (the first type of HR flexibility in their model), differentiating between SF and BF. Thus, HR resource flexibility is a shared organizational property 'arising out of individual skills and behaviors' (Bhattacharya, Gibson, & Doty, 2005: 623). That is, at the firm level, HR resource flexibility refers to the common characteristics of individual skills and behaviors shared by the employees of the firm.

SF refers to the number of potential alternative uses to which employee skills can be applied (Wright & Snell, 1998: 764). BF refers to the ability of employees to exhibit a range of behavioral repertoires in different situations or contexts; that is, it implies high tolerance for non-routine behaviors (Beltrán-Martín et al., 2008). The relevance of HR resource flexibility derives from the fact that the organization can apply these resources to a variety of situations, according to organizational needs, and at the right moment (e.g., Sanchez, 1995, 1997). Various empirical studies have provided evidence that HR resource flexibility, in terms of both employee skills and behaviors, has a significant impact on firm results (e.g., Beltrán-Martín et al., 2008;

Bhattacharya, Gibson, & Doty, 2005; Pradhan & Kumari, 2017), based on the idea that the intrinsic flexibility of a resource denotes its applicability in multiple situations.

In light of the above, we expect that SF may contribute to enhance PSF performance for several reasons. First, a firm whose employees possess flexible skills can draw on a broader knowledge base to perform its activities, which helps them to implement more efficient ways of fulfilling task requirements (Wright, McMahan, & McWilliams, 1994). This is a key factor for the success of PSFs given the 'ambiguous, variable and ever-evolving nature of this kind of work' (Carvalho & Cabral-Cardoso, 2008: 335). Second, SF also implies that employees in PSFs will more easily accrue knowledge about customers' businesses, sectors and practices, so the firm will be in a better position to customize its services to its customers' demands (Malhotra, Smets, & Morris, 2016; Pradhan & Kumari, 2017). For instance, Swart and Kinnie (2013) observed that versatile employees allowed law firms to identify and offer new services to their clients, such as assistance in cases of medical negligence. Third, several scholars argue that SF increases employees' motivation and satisfaction (Vela-Jiménez, Martínez-Sánchez, Pérez-Pérez, & Abella-Garcés, 2014), which in turn leads to greater employee effort (Cordery, Sevastos, Mueller, & Parker, 1993). In a PSF context, the employee effort affects clients' perceptions of the service owing to the dyadic relationship between the employee and the client. In the service encounter, clients' satisfaction is partly explained by their perceptions of the employee's effort, which they interpret as reflecting the employee's commitment to providing a high-quality service (McClean & Collins, 2011). Fourth, employees with SF can improve understanding of customers, which contributes to building trust in the firm (Vela-Jiménez et al., 2014) and helps to develop shared meanings between the customer and the firm. For PSFs, customers' trust in the service providers is one of the most important resources in explaining firm success (Hitt et al., 2006). Trust between the client and the PSF contributes to high-quality long-term relationships, and associated benefits such as repeat assignments or word-of-mouth recommendations (Sieg, Fischer, Wallin, & von Krogh, 2012). Drawing from this reasoning, we expect that:

Hypothesis 1: SF has a positive effect on PSF performance.

BF enables individuals to cope with a range of situations (Pradhan & Kumari, 2017) and to improvise and think up novel ideas (Beltrán-Martín et al., 2008), thus creating value by facilitating change implementation in the firm (Bhattacharya, Gibson, & Doty, 2005). BF allows the organization to address environmental challenges with its current workforce, therefore reducing losses related to lack of change, and encourages firm members to develop innovations in service delivery (Martínez-Sánchez, Vela-Jiménez, Pérez-Pérez, & de-Luis-Carnicer, 2011; Pradhan & Kumari, 2017; Youndt & Snell, 2004). In PSFs, innovation in the daily work of professionals is a critical factor to increase firm performance because PSF clients value the firm's ability to provide either exploration-based (e.g., innovation in professional solutions) or exploitation-based innovations (e.g., enhanced efficiencies in delivering existing services) (Malhotra, Smets, & Morris, 2016). In a sample of Irish PSFs, Fu et al. (2015) demonstrated empirically that those employees with higher BF, willing to generate new ideas and look for new solutions in the firms, contribute to generate new knowledge that fosters firm innovation. In addition, employees with BF are more likely to develop collaborative abilities. Transactions between PSFs and their clients have an important collaborative component since PSFs provide technical or applicative knowledge-based resources for their clients (Zhou et al., 2017). In addition, collaboration helps to build higher relational capital in the firm, since employees with higher BF cultivate more satisfactory relationships with colleagues, superiors and customers (Pradhan & Kumari, 2017). Given the project-based nature of work in PSFs, professionals usually need to work together in groups (Fu, Flood, Bosak, Morris, & O'Regan, 2013; Olsen, Sverdrup, Nesheim, & Kalleberg, 2016), so these satisfactory relationships among professionals contribute to the success of PSFs (Fu, 2013). Thus:

Hypothesis 2: BF has a positive effect on PSF performance.

The moderator role of HR CF

The second type of HR flexibility suggested by Wright and Snell (1998) is HR CF, which refers to the firm's ability to quickly redeploy the flexible skills and behaviors possessed by its workforce (Sanchez, 2004; Wright & Snell, 1998). Therefore, HR CF is closely linked to the notion of dynamic capabilities, understood as the organizational processes that allow a firm to adapt to changing environments by building, integrating and reconfiguring its resource base (Teece, Pisano, & Shuen, 1997). DCs denote the firm's ability to use resources (e.g., to integrate or reconfigure resources), leading to new resource configurations that allow it to match or generate market change (Eisenhardt & Martin, 2000; Zahra, Sapienza, & Davidsson, 2006). DCs comprise four main processes (Ambrosini, Bowman, & Collier, 2009), namely reconfiguration, leveraging, learning and integration of organizational resources. In particular, HR CF, as defined by Wright and Snell (1998), emphasizes the role of managers in leveraging the firm's human resources as it refers to the organizational abilities to extend the potential of those human resources by deploying employees' skills and behaviors in new domains (Barreto, 2010; Eisenhardt & Martin, 2000; Zahra, Sapienza, & Davidsson, 2006). HR CF emphasizes the role of the firm's managers when allocating flexible human resources throughout the firm. Consequently, HR CF refers to a global property of the firm as a whole (i.e., it originates and manifests at the firm level) (Jensen, Poulfelt, & Kraus, 2010; Laaksonen & Peltoniemi, 2018). HR CF is particularly relevant for PSFs where, on receiving an assignment from a client, managers organize a group of professionals to undertake the project and assign tasks and responsibilities to its members. The way in which the managers select qualified professionals for each project, form the team, and assign responsibilities among the professionals is a crucial factor for PSF success (Fu et al., 2013).

Since HR CF allows the firm to structure and coordinate human resources, we expect that it may enhance the value of existing human resource skills and behaviors and, in turn, PSF performance. Similar to prior empirical studies addressing the influence of DC on firm competitiveness (e.g., Han & Li, 2015; Zhou & Wu, 2010), we expect that HR CF can help the firm to achieve the full potential of its human resources. Accordingly, we propose that HR CF may be relevant to explain firm results by strengthening the effects of HR resource flexibility on performance (Jensen, Poulfelt, & Kraus, 2010; Laaksonen & Peltoniemi, 2018; Zott, 2003). Firms with high levels of HR CF can more easily perceive the need for change and carry out adjustments in the allocation of employees throughout the firm, which helps employees flexible skills and behaviors to play a more important role. For instance, through HR CF, the firm might be able to shift a polyvalent employee from one project to another within the firm or to move the employee from one client to another in a different business sector in order to provide a quick customized solution to their demands (Swart & Kinnie, 2013). Therefore, the value to a PSF's success of an employee with flexible skills also depends on its managers' ability to assign that particular employee when and where he or she is required. Similarly, HR CF may enhance the firm's ability to maximize the potential value of employees with high BF that can adapt to different circumstances (Wright & Snell, 1998). For instance, Way et al. (2015) pointed out that the value of IT consultants who are willing to adapt to a variety of geographical locations and cultures depends on the firm's ability to identify those employees in the workforce and assign them to the appropriate project. For all these reasons, we expect that:

Hypothesis 3: HR CF moderates the effect of SF on PSF performance, so that the higher the HR coordination flexibility, the stronger the effect of SF on PSF performance.

Hypothesis 4: HR CF moderates the effect of BF on PSF performance, so that the higher the HR CF, the stronger the effect of BF on PSF performance.

Method

Sample

A sample of Spanish PSFs was selected for the empirical study. PSFs are one of the most dynamic sectors in the Spanish economy (Soriano, 2003), and in recent decades, they have contributed to developing specialized services that help companies to build efficient decision-making processes. PSFs do not offer physical products; rather they work closely with their clients to transform their professional knowledge pool into services through intensive interactions with the clients (Swart & Kinnie, 2013). Thus, PSF performance depends on the extent to which highly qualified and specialized professionals offer services that result from their creative and intellectual work (Carvalho & Cabral-Cardoso, 2008). Following Malhotra and Morris (2009) study, which establishes differences in the nature of knowledge, type of client relationships, and jurisdictional control in different sub-sectors of PSFs, the sample comprised law, accounting, and engineering consulting firms using the NACE-Rev.1 2009 industrial classification. Specifically, companies with the following codes were selected: 6,910 (legal activities), 6,920 (accounting, bookkeeping and auditing activities; tax consultancy) and 7,112 (engineering activities and related technical consultancy). Based on a random selection of firms within the total population ($N = 10{,}290$; the population of PSFs was based on information from the SABI database), 300 companies (randomly chosen) were invited to participate in the research.

Data were collected through the on-site administration of two separate questionnaires. The core employee questionnaire asked about HR resource flexibility (SF and BF), whereas the general manager questionnaire focused on issues referring to the HR CF, PSF performance and high-performance work practices (HPWPs) (control variable). PSFs general managers (also labeled 'minders' by Fu et al., 2013) are responsible for managing the employees working on the professional services offered, and for guaranteeing that the firm operates as a coherent whole. PSFs core employees are defined as partners in the PSFs (labeled 'finders' by Fu et al., 2013); that is, professionals (lawyers, accountants, engineers etc.) that analyze and design the projects, and establish and maintain the required client–firm interactions necessary to provide clients with the services they require. Limited resources precluded interviews with all the core employees in each firm, so a minimum of three professionals per PSF was established. The average number of employees per firm was 12.28, which suggests that three interviews per firm area representative sample of the core employees.

Responses from one general manager were received from 102 PSFs out of the 300 firms invited to participate. In all of these companies, we obtained responses from three core employees that were randomly selected by the research team from all the core employees in the firm. Information about objective performance measures was also obtained from the SABI database for 97 of the participant firms that provided answers from both the general manager and the three core employees. The final sample used in the statistical analyses was made up of 97 firms, with complete answers from 97 general managers and 291 core employees. Nearly 11% of the sample comprised law firms, 40% was accounting firms and nearly 49% belonged to the engineering sub-sector. As regards the core employees of these PSFs, their mean organizational tenure was 8 years and their average age was 37 years old; female professionals comprised 52% of the sample. To detect any possible non-respondent bias in the sample, we used the archival analysis procedure (Rogelberg & Stanton, 2007), examining whether group means for size significantly differed between respondent and non-respondent firms. The results of this analysis ($t = .054$, sig. = .59) reveal no significant differences between the two groups of firms.

Measurement

The Appendix provides a detailed description of the measures used in our research.

HR resource flexibility

Regarding the operationalization of the HR flexibility dimensions, both HR resource flexibility and HR CF have been defined in the literature as firm-level constructs (i.e., collective properties of the organizations) (Bhattacharya, Gibson, & Doty, 2005; Morgeson & Hofmann, 1999; Way et al., 2015). However, and following Kozlowski and Klein (2000) framework, HR resource flexibility and HR CF differ in terms of their theoretical properties, as previously explained in the theoretical sections of this paper.

Consistent with the notion of HR resource flexibility as a shared unit property (Bhattacharya, Gibson, & Doty, 2005), and following Kozlowski and Klein (2000) recommendations to measure shared properties, when these properties emerge from individual characteristics, data to assess these constructs should come from the individual. Consequently, we included questions about SF and BF in the core employee questionnaire.

Ngo and Loi (2008) SF scale and Beltrán-Martín et al. (2008) BF scale were included in the employee questionnaire. The original scales of SF (Ngo & Loi, 2008) and BF (Beltrán-Martín et al., 2008) were reworded in order to adapt the questions to be answered by the core employees in PSFs. SF was measured with three items referring to the employee perceptions regarding the number of alternative uses for their skills (Ngo & Loi, 2008). Some examples from this scale are: 'I believe that I could be switched to different tasks when needed' or 'I can put new skills to use within a short time'. A four-item scale was used to measure BF (Beltrán-Martín et al., 2008); examples include 'When I detect problems in performing my tasks, I voluntarily try to identify the causes of these problems' and 'I can act efficiently when a problem emerges, even in cases in which I do not have full information about the problem.' A confirmatory factor analysis (CFA) was performed to analyze the dimensionality of these scales. The analyses supported the unidimensionality of the SF scale, with a composite reliability of .64. As regards the BF scale, the CFA with the four items showed appropriate goodness-of-fit indices. However, the second scale item had a factor loading of only .27, and was therefore eliminated in order to increase the reliability of the scale. The modified CFA with the remaining three items showed a good fit, with a composite reliability of .63. Finally, two statistics (intraclass correlation coefficient; ICC(1) and r_{wg}) were estimated to demonstrate reliability to aggregate the individual HR resource flexibility dimensions to the firm level of analysis. ICC(1) was .17 for SF and the median r_{wg} was .82 (mean = .62). For BF, ICC(1) was .11 and the median r_{wg} was .74 (mean = .65). We also conducted an ANOVA with the employee data using firm affiliation as the fixed effect. The results of these analyses show significant between-firm variance ($F = 1.61$; $p = .00$ for SF and $F = 1.37$; $p = .03$ for BF). These results justify aggregating employee HR resource flexibility to the firm level. Finally, given that SF and BF were measured by the same source (i.e., the employee), we also conducted a pairwise test (Bagozzi & Phillips, 1982) to examine the discriminant validity between these two scales. We observe that a CFA with two freely correlated factors (correlation = .48) fits the data significantly better ($\chi^2 = 10.05$; $df = 8$) than a nested model in which the correlation is fixed to one that is, a model equivalent to a single-factor model ($\chi^2 = 61.75$; $df = 9$). The Chi-square difference value ($\Delta\chi^2 = 51.7$) found to be statistically significant at the 5% level, suggesting the existence of discriminant validity between SF and BF.

HR coordination flexibility

HR CF, conceptualized as a global property of the firm as a whole, was measured by responses from the general manager. Kozlowski and Klein (2000: 33) suggested that for global properties, 'a single expert individual may serve as an informant'. In addition, the use of managers' evaluations has been defended in various studies as a suitable approach to assess firms' ability to redeploy their resources (Laaksonen & Peltoniemi, 2018; Way et al., 2015; Zhou & Wu, 2010). Following Wright and Snell (1998) study, two items were used to measure HR CF: 'Your firm can quickly assign new work activities to employees who possess the skills necessary to perform these activities' and 'your firm can effectively reassign employees with different points of views

and perspectives to different tasks.' These items are similar to those employed in previous empirical studies to measure HR CF (e.g., Way et al., 2015).

PSF performance

Two measures of PSF performance were used, namely, comparative organizational performance and ROE (return on equity). First, general managers assessed their firm's performance compared to competitors in terms of the development of new services (NEWSERVICES), on a single-item 7-point Likert scale (1 = much worse, 7 = much better). Fu et al. (2017) also considered the development of new services in comparison to competitors as a key performance variable of PSFs. Second, information about the ROE of the sample firms was obtained from the SABI database. ROE is a suitable accounting-based measure of firm performance in service firms in general (Skaggs & Youndt, 2004) and in PSFs in particular (Channon, 1978; Nayyar, 1992).

Control variables

We controlled for two firm characteristics. First, following a quasi-longitudinal approach, we obtained data on the firms' ROE for the preceding year (ROE $t-1$) from the SABI database, assuming that a PSF's performance at time 1 might affect its performance at time 2 (Guest, Michie, Conway, & Sheehan, 2003; Wall & Wood, 2005). Furthermore, we controlled for the effect of HPWPs on the dependent variables, since several empirical studies in the HRM field have demonstrated that these practices (e.g., extensive training, pay for performance etc.) increase firm performance (see Combs, Liu, Hall, and Ketchen, 2006 for a review). We used Bhattacharya, Gibson, and Doty (2005) 9-item scale to measure HPWPs. This scale was included in the questionnaire addressed to the general managers, who assessed the use of these practices in their firms using a Likert scale (agreement/disagreement). We used an index of these practices as the control variable.

Analytic procedures

Structural equation modeling methodology was applied to test the hypotheses, using the statistical package EQS 6.3 (Bentler, 2006) in the analyses. We used maximum likelihood (ML) as an estimation method in our analyses. To protect our inferences from possible deviations from the assumption of normality, we used robust standard errors and the (robust) scaled Chi-square goodness-of-fit test of Satorra and Bentler (Satorra & Bentler, 1994; 2001). For hypotheses 1 and 2, SF and BF were introduced as predictors of PSF performance (Model 1 in Table 1). To test hypotheses 3 and 4, HR CF was introduced into the model as a moderator in the relationship between the two HR resource flexibility dimensions (SF and BF) and PSF performance. First, a path model was estimated that included the three variables (SF, BF and CF) as independent variables (Model 2 in Table 1) and in the second step (Model 3 in Table 1), the two interaction terms SF*CF and BF*CF were also included.

Results

Model 1 in Table 2 (see also Figure 2) shows the effect of the two HR resource flexibility dimensions (SF and BF) on PSF performance. The model has a good fit to the data ($\chi^2_{SB} = .21$; $df = 2$; $p = .90$). The results show that SF has no effect on PSF performance, so hypothesis 1 is rejected. Concerning the relationship between BF and the dependent variables, the results indicate that BF has a positive and significant effect on the development of new services (.23, $p < .05$), but its effect on the firms' ROE is not significant, providing only partial support for hypothesis 2.

To test the moderating effect of CF on the relationship between the HR resource flexibility dimensions (SF and BF) and PSF performance, first Model 2 was estimated, which shows the (main) effects of the independent variables (SF and BF) and the moderator variable (CF) on the

dependent variables. This model presents acceptable goodness-of-fit values ($\chi^2_{SB} = .37$; $df = 2$; $p = .83$). As can be seen in the table, similar to Model 1, BF has a positive impact on the firms' development of new services (.23, $p < .05$).

Model 3 (Table 1, Figure 3) includes the interaction terms between CF and the HR resource flexibility dimensions (SF and BF). The goodness-of-fit values for this model are acceptable ($\chi^2_{SB} = .14$; $df = 1$; $p = .71$). Concerning the moderator role of CF in the effect of SF on PSF performance, the results indicate that the effect of the interaction term SF*CF on the two dependent variables is not significant, so hypothesis 3 is not supported. As regards hypothesis 4, results show that the interaction term BF*CF has a positive influence on the development of new services (.21, $p < .05$).

As shown in Figure 4, the positive coefficient of the interaction term suggests that the effect of BF on the development of new services becomes more positive at higher levels of CF. These results provide partial support for hypothesis 4.

Discussion

This paper analyzed the linkages between HR flexibility and PSF performance. After controlling for the influence of some contextual variables, the results indicate that BF has a positive effect on comparative organizational performance in PSFs in terms of the development of new services. The moderation model shows that HR CF increases the influence of BF on the development of new services. The main implications of the study for theory and research are summarized below.

Scholarly implications

The consideration of the two dimensions (SF and BF) in the present study in comparison to aggregate measures of HR flexibility contributes to a better understanding of the features of the workforce that are more relevant to firm competitiveness. One of the results of this study concerns the influence of BF on PSF performance. In particular, the study found that PSFs' comparative performance (development of new services) is positively influenced by employees' BF. In contrast, our data do not support the positive influence of BF on financial performance in terms of ROE. BF allows employees to question and reassess the relevance of existing work norms, performance standards and so on, and encourages them to improvise and think of new ideas, and to make sense of and generate new understanding from those actions (Beltrán-Martín, 2006). This may give the PSF greater capacity to develop new services adapted to its customers' demands, but the impact on the benefits of the firm in terms of ROE may take some time. Our results confirm some prior empirical evidence for the relevance of BF for firm competitiveness (e.g., Crant, 1995; Kirkman & Rosen, 1999; Seibert, Crant, & Kraimer, 1999). One of the most obvious benefits of addressing the study of HR flexibility from the RBV perspective is that HR flexibility is defined in terms of the variables that may be influenced by organizational human resource decisions and practices (Dyer & Shafer, 1999; Wright, McMahan, & McWilliams, 1994). That is, it is important to define the dimensions of HR flexibility in terms of employee characteristics in order to make advances in the activities that best promote them. Our results show that in PSFs, employee BF is a relevant variable to develop new services. This provides valuable information for PSF managers when defining, for instance, the kind of staffing practices that allow them to select this type of employee, or when developing training programs that foster BF in their workforce.

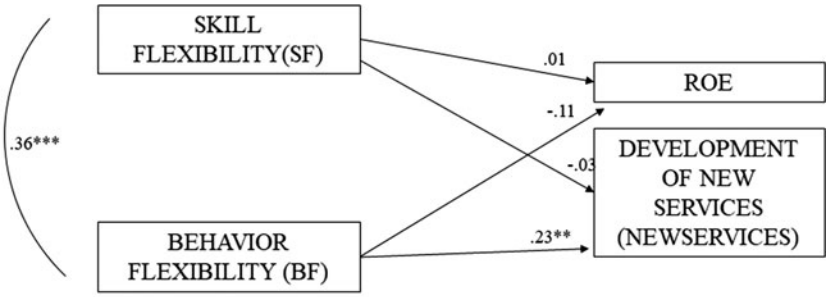
We did not find empirical evidence for the direct influence of SF on PSFs performance. Ngo and Loi (2008) drew similar conclusions in their empirical study on a sample of multinational companies in Hong Kong, which demonstrated that firms' higher adaptability depends on employee BF, but not on their SF. There are motives to believe that SF has a positive impact

Table 2. Parameter estimates of the models

	Model 1 Estimates	Model 2 Estimates	Model 3 Estimates
SF → ROE	.01	−.07	−.11
SF → new services	−.03	−.03	−.03
BF → ROE	−.11	−.18	−.12
BF → new services	.23**	.23**	.28***
CF → ROE		.30	.33
CF → new services		−.00	.01
SF*CF → ROE			−.18
SF*CF → new services			.00
BF*CF → ROE			.26
BF*CF → new services			.21**
ROA_{t-1} → ROE	−.11	−.17	−.14
HPWP → ROE	−.01	−.14	−.15
HPWP → new services	.28**	.28**	.26**

Notes: Standardized coefficient estimates. *$p < .10$. **$p < .05$. ***$p < .01$.

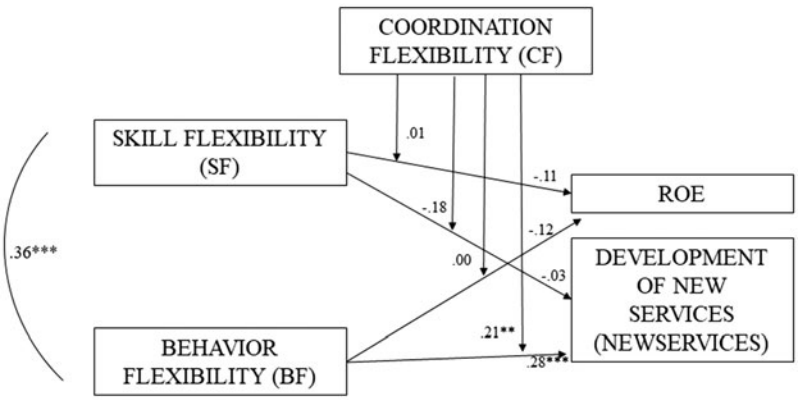
on firm performance, but we can also offer some explanations for the lack of an effect. First, SF is often associated with some organizational changes such as job enlargement or job rotation that can be perceived as threatening by the employees given the higher uncertainty and loss of personal control over the job that those changes entail (Cordery et al., 1993). The negative consequences of such job redesign decisions for the employee (e.g., higher stress) may hinder the potential benefits of the employees' SF for firm performance. Future studies should consider the employees' attitudes towards their own SF (e.g., whether it represents better promotion prospects, greater confusion about job responsibilities etc.) in order to gain a better understanding of their impact on firm performance. Second, some studies have demonstrated that the distribution of SF among the workforce is relevant to explain its impact on firm performance. For instance, Molleman and Slomp (1999) showed that a uniform distribution of SF among employees increases the success of teams in the firm. Studies stemming from the present one should also consider whether the flexible skills are equally distributed among employees or on the contrary, whether some employees master a larger number of tasks than others (Molleman & Slomp, 1999). Third, prior studies suggested that this dimension of HR flexibility may impact firm performance indirectly, through employee BF (e.g., Ketkar and Sett, 2009, 2010). Consequently, we tested a revised version of Model 1 considering that SF impacts PSF performance through BF. Although we found a significant influence of SF on BF (.36, $p < .001$), the indirect effect of SF on performance through BF is only statistically significant at 10% level (.08, $p < .1$), so this is not a plausible explanation for the non-significant effect of SF on firm performance in our sample of companies. Fourth, studies such as Way et al. (2015) suggested considering environmental dynamism as a moderator variable between HR flexibility dimensions and firm performance. According to these authors, HR flexibility may be more relevant to explain firm performance in contexts of high environmental dynamism. A further extension of this study should classify PSFs firms, according to the perceived environmental dynamism in order to check whether the impact of SF on firm performance is greater in those PSFs sub-sectors facing increasing external challenges.



Controls	ROE	NEWSERVICES
ROE $_{t-1}$	-.11	
HPWP	-.01	.28**

Standardized coefficient estimates. *p<.10. **p<.05. ***p<.01

Figure 2. Effect of HR resource flexibility on PSF performance.



Controls	ROE	NEWSERVICES
ROE $_{t-1}$	-.14	
HPWP	-.15	.26**

Standardized coefficient estimates. *p<.10. **p<.05. ***p<.01

Figure 3. Moderator role of HR CF.

The study also leads to some noteworthy conclusions about the moderator role of HR CF in the relationship between BF and PSF performance. In Laaksonen and Peltoniemi (2018: 194) words, 'owing to the tendency to expect dynamic capabilities to affect performance directly, we know little about how dynamic capabilities moderate the effects of ordinary capabilities on performance' (Laaksonen & Peltoniemi, 2018: 194). Our study contributes to filling this research

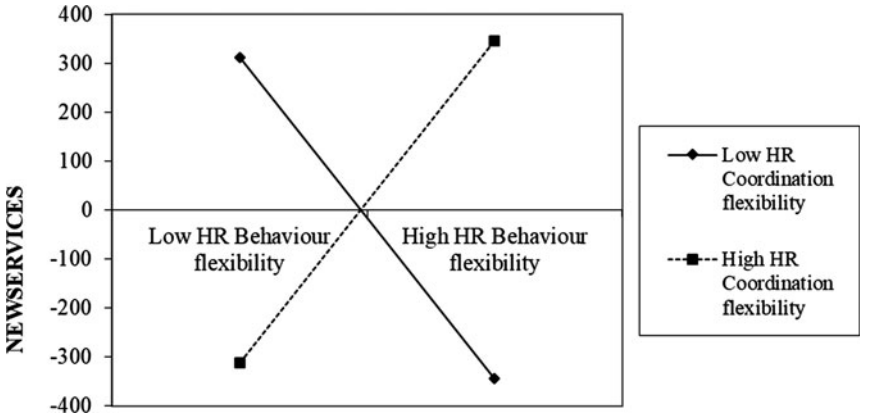


Figure 4. Interaction plot.

gap by providing empirical evidence for the moderation effect of dynamic capabilities (HR CF) in the relationship between an organizational resource (HR BF) and PSF performance. Similarly, Zhou and Wu (2010) demonstrated that strategic flexibility (a dynamic capability) moderates the effect of technological capability (an ordinary capability) on performance. Also, Han and Li (2015) argue that knowledge-based dynamic capability moderates the effect of intellectual capital (an organizational resource) on innovative performance. Our results show that HR CF has an enhancing effect on the BF–PSF performance relationship, so the influence of BF on the development of new services will be stronger with higher HR CF. To date, empirical studies have not examined the influence of the interactions between HR resource flexibility and HR CF on firm performance. This is a relevant question because such a distinction may provide evidence that firms have a wide array of options to manage dynamic competitive and environmental conditions (Way et al., 2015). In line with prior studies in other research fields (Han & Li, 2015; Zhou & Wu, 2010), this study demonstrates that the value of BF depends on the firm's ability to assign employees when and where required. In other words, without the managers' abilities to reassign professionals with flexible behaviors within the firm, the benefits inherent in those flexible behaviors will not be fully exploited. Although empirical evidence about the relationship between HR flexibility and firm performance is quite rich, the majority of studies adopt a static perspective. The consideration of the moderating role of HR CF introduces a more dynamic perspective by considering how and when firms obtain benefits from employees with flexible behaviors. These results also contribute to the recent debate on efficiency frameworks, such as Tian, Lo, and Zhai (2018) model. These authors suggest that firm performance depends on the productivity generated by efficiency, synthesis and innovation capabilities. Our results partially coincide with Tian, Lo, and Zhai (2018) conclusions in that we observe efficiency capabilities brought by the contribution of employees' BF to the efficient functioning of PSFs, and synthesis capabilities derived from the managers' abilities to mobilize human resources with flexible behaviors. Differences in PSF performance are not explained merely by having a workforce with flexible behaviors, but also by the ability to deploy these human resources effectively to transform them into valuable capabilities (Gardner, Gino, & Staats, 2012).

Finally, our study also provides interesting conclusions regarding innovation in PSF firms. In particular, our analyses show that flexibility acts as a lever to foster innovation (in particular, actual service innovation adoption) in PSFs. Similar to the suggestions made by Farnese, Fida, and Livi (2016), we observe that what is relevant for promoting innovation is not only the amount of flexibility in human resources, but how the firm uses and allocates employees with flexible behaviors to provide innovative solutions for their clients. According to Farnese, Fida, and Livi

(2016), flexibility provides a firm with an exploration-oriented approach to innovation, which fosters an effective implementation of novelties. Our results support this idea and demonstrate the relevance of rapid reallocation of human resources to develop innovative services in PSFs. Jensen, Poulfelt, and Kraus (2010) argued that innovation is a critical factor when creating and maintaining a successful PSF, so our results provide important insights into the survival of PSFs.

Implications for practice

The study's findings suggest to PSF managers that investments in professionals with flexible behaviors are likely to pay off in terms of the development of new services. This may have implications for the design of HR practices in PSF firms. In this regard, we encourage managers to review the design of the human resource practices implemented in their firm, by targeting HR investments in those practices that influence BF. Such practices would include staffing procedures used to identify adaptable and proactive professionals, incentives that reward flexible behaviors or considering BF indicators as additional effectiveness criteria in the performance appraisal processes of PSF core employees.

On the other hand, managers should assume that employee flexible behaviors constitute a form of organizational slack, as employees willing to exhibit a range of different behaviors provide the firm with a buffer against external challenges, therefore allowing the firm to use these employees discretionarily to minimize threats and exploit opportunities (Guo, Zhou, Zhang, Hu, & Song, 2020). Organizational investments to identify and attract this type of employee are likely to pay off in the long term.

Another implication for managerial practice in PSFs is that the benefits deriving from professionals' flexible behaviors will increase when managers are capable of reassigning those employees to the right tasks. In other words, firm performance depends not only on the flexible characteristics of the workforce, but also on the abilities of the firms' managers to mobilize employees within the firm. In particular, these capabilities are relevant to discovering new solutions and therefore foster organizational innovation. Managers should be aware that their managerial routines are also important (beyond the characteristics of their workforce) to create innovations in PSFs (Jensen, Poulfelt, & Kraus, 2010).

Limitations and future research

Data for the present study were collected from partners in the PSFs of the sample, therefore excluding associates (i.e., junior professionals). According to Malhotra, Smets, and Morris (2016), junior professionals also play a key role in the development of innovations in PSFs, in particular by contributing to operational innovation (e.g., enhanced efficiencies in delivering existing services). Future studies should replicate the model presented in this study and test whether the conclusions drawn here may also be applicable across different types of professionals in PSFs. In addition, HR flexibility stemming from the use of contingent workers was not considered. Way et al. (2015) claim that the HR flexibility construct should also include the consideration of contingent employees and the extent to which they contribute to the overall flexibility of the firm. Future studies should also integrate firms' abilities to integrate and mobilize contingent employees within the organization. We also believe that this model should be replicated in different settings and in bigger firms to advance knowledge about the role of HR flexibility in determining firm performance. In doing so, future studies should take into account the environmental dynamism as a contextual variable affecting the proposed relationships. Finally, we measured comparative organizational performance with a single item. Although we believe that the description of this item is clear enough to assess PSFs' development of new services, future studies should consider the inclusion of validated scales of comparative firm performance, such as those used by Fu et al. (2017) in the PSF's context.

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APPENDIX

Questionnaire Measurement Scales

HR RESOURCE FLEXIBILITY
Skill flexibility (core employee questionnaire)
Indicate your level of agreement or disagreement with the following statements:

1	2	3	4	5	6	7
Completely disagree						Completely agree

- I believe that I could be switched to different tasks when needed.
- I can put new skills to use within a short time.
- I have a broad variety of skills that can be applied to a range of different tasks.

Behavior flexibility (core employee questionnaire)
Indicate your level of agreement or disagreement with the following statements:

1	2	3	4	5	6	7
Completely disagree						Completely agree

- When I detect problems in performing my tasks, I voluntarily try to identify the causes of these problems.
- During the last 2 years, I have proposed changes to the company regarding the procedures used in my job*.
- I can act efficiently when a problem emerges, even in cases in which I do not have full information about the problem.
- I can act efficiently under uncertain and ambiguous circumstances.

*Deleted after the CFA.

HR COORDINATION FLEXIBILITY (general manager questionnaire)
Indicate your level of agreement or disagreement with the following statements:

1	2	3	4	5	6	7
Completely disagree						Completely agree

- Your firm can quickly assign new work activities to employees who possess the skills necessary to perform these activities.
- Your firm can effectively reassign employees with different points of view and perspectives to different tasks.

PSF PERFORMANCE

Comparative organizational performance (general manager questionnaire)

Please rate your organization's performance compared to your competitors in relation to the development of new services, where

1	2	3	4	5	6	7
Much worse						Much better

ROE

Information about the participant firms in the SABI database

CONTROL VARIABLES

High-***performance work practices*** (general manager questionnaire)

Indicate your level of agreement or disagreement with the following statements:

1	2	3	4	5	6	7
Completely disagree						Completely agree

- We screen many applicants to fill job openings.
- We use many different recruiting sources.
- We spend more money per employee on training than our competitors.
- We offer many different types of training programs.
- Our employees spend more hours a year in training than our competitors.
- A large portion of our employees' compensation is contingent upon performance.
- The amount earned by our employees is determined primarily by an incentive plan rather than by a guaranteed-income plan.
- Our performance appraisal system uses multiple levels of evaluation criteria (individual-, group-, firm-level).
- Our performance appraisal system uses multiple inputs (peers, customers, subordinates etc.).

ROE for the preceding year

Information about the participant firms in the SABI database

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