




Managerial perspectives on human resource practice interaction effects and organizational performance in SMEs

Izaskun Agirre-Aramburu* , Fred Freundlich , Trinidad Blázquez-Díaz 

Business Faculty, Mondragon Unibertsitatea (Spain)

*Corresponding author: iagirrea@mondragon.edu
ffreundlich@mondragon.edu, tblazquez@mondragon.edu

Received July, 2023

Accepted February, 2024

Abstract

Purpose: The aim of this paper is to clarify the human resource management (HRM) literature in small-to-medium-sized enterprises (SMEs) by empirically identifying possible combinations of HRM practices from the perspective of managers, and analyzing the relationships among them and with organizational performance in order to identify which combinations are most effective.

Design/Methodology/Approach: Using the AMO (Ability- Motivation-Opportunity) framework, we ask whether there are significant interactions between AMO-based HRM bundles and, if so, to what degree and by what means they influence organizational performance. To explore this question, we tested a theoretical model using Partial Least Squares-Structural Equation Modeling (PLS-SEM) techniques and compared the interaction and main effects. The research sample comprises SMEs operating in the Basque Region of Spain.

Findings: The study confirms the existence of hierarchies among bundles. The practices most strongly related to the SMEs' performance lie in the bundle of motivation-enhancing practices. The results indicate that motivation-enhancing practices have a positive effect on organizational performance and when they are combined with ability-enhancing practices this effect grows.

Research limitations/implications: The cross-sectional nature of the data means that it is not possible to establish clear causal relationships among the variables studied. It would therefore be beneficial in the future to use longitudinal designs and examine cause-effect over time, as well as use samples from other geographic locations.

Practical Implications: High-performance HRM practices in the three Ability-Motivation-Opportunity (AMO) dimensions should *not* automatically be assumed to be complementary in an SME context, as many managers believe. Our results suggest that managers would be well advised to adopt motivational practices, combining them with training, to improve SMEs' performance.

Originality/value: This is one of the few studies to focus on testing the interaction effects among dimensions of Ability-Motivation-Opportunity-enhancing-practices on SMEs' organizational performance, as observed by managers. It will encourage SME managers to consider more carefully the possible combinations of AMO dimensions and to focus on those combinations most likely to have positive effects.

Keywords: HR practices, Ability-motivation-opportunity model, PLS, Interaction effect, SME

Jel Codes: M50, M12

To cite this article:

Agirre-Aramburu, I., Freundlich, F., & Blázquez-Díaz, T. (2024). Managerial perspectives on human resource practice interaction effects and organizational performance in SMEs. *Intangible Capital*, 20(1), 215-235. <https://doi.org/10.3926/ic.2418>

1. Introduction

In recent decades, developments in global markets, technology and business practice have all highlighted the increasing importance of the human dimension for organizations' performance. The resource-based view (RBV) argues that a firm's pool of human capital constitutes a unique source of competitive advantage that cannot readily be replicated by competitors (Barney, 1991; Guest, 2017).

Human resource management (HRM) and its contribution to organizational commitment are viewed as crucial to strengthening and sustaining business outcomes (Sanders & Yang, 2016). In their pursuit of enhanced commitment and performance, firms have developed a wide variety of HR practices. Used in conjunction, these are often described as "high performance work systems" (HPWSs) (Jiang, Lepak, Hu & Baer, 2012; Wright & Kehoe, 2008). Scholars seeking to explain the relationship between HRM and performance have developed a number of theoretical frameworks (Anvari & Janjaria, 2023; Yang, 2004), though the Ability-Motivation-Opportunity (AMO) model is now widely viewed in the academic literature (Boselie, Dietz & Boon, 2005) as the dominant conceptual framework for categorizing high-performance HR practices (Paauwe, Wright & Guest, 2012).

However, there is still much confusion as to the HRM model of AMO-enhancing practices. One of the chief debates among researchers and managers concerns the nature of the relationship among the various dimensions of the AMO framework and, more specifically, whether that relationship is multiplicative, additive or combinatorial (Kellner, Cafferkey & Townsend, 2019). Research to date has provided only limited insight into the core theoretical assumptions behind what might be performance-boosting configurations of, and complementarities or synergies among, HR practices (Boon, Den Hartog & Lepak, 2019). Marin-Garcia and Martínez-Tomas (2016: page 1076) suggest regarding theoretical synergies that '*the effectiveness of the model's proposal appears to be beyond doubt*', yet they go on to observe that, although the theory is acknowledged by researchers, few if any have actually proved empirically that the model is multiplicative.

At the same time, there is little research examining the impact of human resource systems within the small-business sector – conventionally defined as comprising firms with fewer than 500 employees (Klaas, Semadeni, Klimchak & Ward, 2012). This is important because the small business context is likely to be quite distinctive both in terms of the HR challenges it faces and the way in which HR practices are actually implemented and used. Several explanations have been advanced for firms' failure to adopt the full range of practices that make up HPWS, including personal preferences of senior management, cultural issues, and resource constraints (Arthur, Herdman & Yang, 2016). However, such explanations do not determine which components of HPWS are emphasized by those companies that partially adopt high-performance practices. Basing their work on the AMO framework, Arthur, Herdman and Yang (2021) recently reconceptualized categories of factors that compose HPWS, defining them as containing either high-involvement, high-commitment or ability-enhancing practices. This provided a refined conceptual model of HPWS with which one can identify the implications of such practices for SMEs' performance, with an emphasis on investment in a subset of HPWS practices within a broader group of practices. Harney, Gilman, Mayson and Raby (2022) also suggest that unpacking HRM with respect to variances across the dimensions of the AMO framework (abilities, motivation and opportunity) would be a particularly interesting exercise in the context of SMEs.

Additionally, Kroon, Van De Voorde and Timmers (2013) showed that in small firms, the expertise and attitudes of the owner/manager inform the decision-making processes on implementation of HPWSs, over and above any restrictions resulting from limited financial resources and time constraints. Further, SME firms' decisions are

usually taken by the senior manager –often also the owner (Lattimore, Martyn, McCann & Pearson, 1997)– who needs to invest time in formulating the most suitable HR management system. He/she can therefore be very influential in the way HR practices are applied and plays a key role in the employment relationship. Recently, Boada-Cuerva, Trullen and Valverde (2019) recommended exploring the perspective of senior managers with regard to HR practices, since they are key gatekeepers of organizational resources.

Drawing on integration systems theory and complementarities theories, this article seeks to advance our understanding of the internal nature of the potential relationships among HR practices in SMEs by examining the perceptions of senior managers from a sample of SMEs in the Basque Country. More specifically, we address the following research questions: how can a small/medium-sized firm manage its HR practices in pursuit of improved organizational performance? Do all three of the families of HR-enhancing practices in the AMO framework need to be present? How do these families of practices operate together in SMEs? Is there, potentially, an optimal configuration of HRM in SMEs?

This research makes two main contributions to the existing body of HRM knowledge: First and foremost, moving beyond individual practices to focus on their combined effects within a holistic AMO framework, it adds new value to complementarity theory as regards the AMO model by empirically testing it in SMEs. Our research advances the understanding of if and how these three critical bundles (Ability, Motivation, and Opportunity) interact in smaller organizations to enhance performance, an important advance given the confusion in the literature and among managers themselves (Kehoe & Han, 2020). While the AMO model has been extensively theorized and discussed in the HRM literature (Boselie et al., 2005), expanded empirical evidence, especially in the context of SMEs, is essential to validate its applicability. Providing empirical information on the potential synergistic effects of the AMO model in SMEs adds to the credibility and practical relevance of this framework. In particular, it would provide empirical evidence on the validity of complementarity theory in the context of SMEs. Demonstrating that certain combinations of HRM practices have synergistic effects on organizational performance would support the idea that HRM practices should not be only considered in isolation, but in terms of their interaction and complementarity. Additionally, it helps firms, practitioners, and scholars understand how optimizing employee abilities, motivation, and opportunities can lead to improved performance and competitiveness in the specific context of smaller enterprises.

Secondly, our study contributes to HR management research in SMEs, an under studied population, by determining the roles of different HR-enhancing practices, and different combinations of practices, with respect to their effects (or lack thereof) on organizational performance. This aspect is crucial because SMEs often face unique challenges and resource constraints compared to larger organizations. Moreover, it allows firms to prioritize and tailor their HR strategies to maximize the benefits of limited resources and create a more efficient and effective HR framework. This contribution not only advances our understanding of HRM in SMEs but also offers practical guidance for HR managers in SMEs on how to design HRM systems that maximize the positive impact on organizational performance.

The remainder of this paper is structured as follows: firstly, we explain how we apply AMO theory to HRM effects on organizational performance. We then offer a series of hypotheses on the interaction among AMO elements and organizational performance. After presenting the research methods, we then move on to describe the results of our study, testing our hypotheses. Next, the results are discussed in light of the extant literature. The paper ends with the conclusions, limitations and future implications of this study.

2. Literature Review and Hypotheses

2.1. HPWS and Differential Effects of HR Practices

Despite the proliferation of HRM investigations, relatively little research has been carried out in the context of SMEs (Anvari & Janaria, 2023; Harney & Alkhalaf, 2021). By contrast, there has been a certain amount of research focusing on the relationship among HPWS and economic and social-psychological variables in SMEs. One leading study in this area is that of Lai, Saridakis and Johnstone (2017), which shows how HPWSs within a universalist framework are positively and significantly linked to financial performance. Overall, the results have been favorable; HPWS generally appear to have positive effects on both business and social outcomes (Pascual & Comeche, 2015; Ramos-González, Rubio-Andrés & Sastre-Castillo, 2022; Rauch & Hatak, 2016), although it

should be noted that, unsurprisingly, the data are not universally positive for all measures (Chadwick & Li, 2018; Chadwick, Way, Kerr & Thacker, 2013). Haar, O’Kane and Daellenbach (2022) find that while medium-sized firms had significantly higher HPWS overall, this strength was not uniform across the bundles of HR practices. Efforts to make sense of such contradictory evidence require researchers to move beyond universalistic stances and explore a more suitable, nuanced conceptual approach to HRM.

The configurational perspective of HPWS is associated with the AMO (Ability, Motivation, Opportunity) framework (Meuer, 2017). It constitutes one of the main efforts by management scholars to understand the effects of human resource management (Shahzad, Arenius, Muller, Rasheed & Bajwa, 2019). This framework posits that the HRM-enhancing practices pursued in HPWS will influence company outcomes in a combination of three different areas. In one, the practices seek to enhance employees’ abilities; in another to enhance their motivation; and in the third to enhance employees’ opportunities to affect the business (Marin-Garcia & Martinez-Tomas, 2016). The AMO framework allows for the possibility of equifinality among individual HP work practices within the A, M, and O categories while at the same time specifying the three types of HR practices that are required to make up a high-performance system. Here, though, there is still substantial disagreement amongst researchers (Kellner et al., 2019). One source of discrepancy is that the configuration of these dimensions is often diffuse. Kellner, Townsend, Wilkinson, Lawrence and Greenfield (2016) note that theoretical propositions depend on the context. Hence, for example, when one is looking at job satisfaction, the variable “involvement in decision making” is likely to be a motivator for employees, but it can become an opportunity-enhancing practice when one examines safety.

The conceptual approach to the AMO model is supported by the literature, which suggests that a highly capable but unmotivated workforce (or vice versa) (Aryee, Walumbwa, Seidu & Otaye, 2016), or the mere existence of opportunities, may not help employees or the organization achieve their desired performance outcomes (Dundon, Wilkinson, Marchington & Ackers, 2004). In this regard, findings by Sánchez-Marín, Lozano-Reina and Beglaryan (2022) showed that SMEs’ performance improved when they oriented their HRM practices towards the AMO model. These results are particularly important for SMEs, where HRM practices have traditionally been characterized by a degree of informality and a lower level of management development than in larger companies (Mayson & Barrett, 2006).

The other source of discrepancy arises from the systems-based approach, in assuming that each of the HR practices or AMO domains unvaryingly influences the outcome measurements. While the RBV and AMO perspectives explain the relationship between HPWS and SMEs performance, general systems theory (GST) (Kast & Rosenzweig, 1972) has the potential to add explanations for the synergistic effect of individual HP practices / domains on firms’ performance. GST is based on the assumption that a system is an entity with interrelated and interdependent components, and that this interdependency produces greater efficacy than the simple sum of the parts. In this view, subsystems are synergistic in producing desirable outcomes.

2.2. The Interaction Model of HR Practices

Delery (1998) noted that there are two kinds of synergies or fit in HRM, horizontal and vertical. Horizontal fit concerns the relationship among individual practices or domains of practice (the focus of this paper), whereas vertical fit is related to the congruence between the HRM system and organizational context. Horizontal fit has also been related to synergistic (complementarity or incompatibility) or substitutive effects among HR practices / domains.

Additionally, Chadwick (2010) proposed that different approaches exist to create complementarities within HRM systems. These types of complementarities among elements of HPWS differ in the degree to which component interactions and component specialization (the independence effect) take place. The first type, called the ‘virtuous overlap’ approach, relies on the interaction of the components, whereby HR practices are mutually reinforcing. The second approach, ‘independent effect’, depends on component specialization, assuming that there are no significant interactions that could justify functional redundancy among HR practices. And finally, the ‘efficient complementarities’ approach assumes that HR practices are aligned with each other to capture desirable interactive effects, exploiting interdependence among system components. Therefore, it is essential to explore in the SEM context the empirically possible combinations of sets of

human resource-enhancing practices and discover whether they interact and to what degree the possible interactions influence SME performance.

This assumption is explained by the multiplicative AMO-enhancing-practices model that represents the traditional view that ability, motivation and opportunity operate principally, or even entirely, in an efficient complementary way with regard to performance, i.e. $OP=f(A \times M \times O)$ (Blumberg & Pringle, 1982; Siemsen, Roth & Balasubramanian, 2008), albeit in our case, “OP” is “SME performance” (Figure 1). The multiplicative model holds that, if implemented together, the different practices will strengthen each other and the final effect on performance will be greater than “the sum of the parts”. When, for example, a firm strengthens ability-enhancing practices (the “A” component of AMO) by providing training, it not only strengthens knowledge and commitment directly, but also makes employees more valuable to their co-workers, thus making it more likely that they will participate with others in solving problems and making decisions, fortifying the “opportunity” piece of the AMO framework and, in turn, its contribution to OP. At the same time, the presence of enhanced opportunities to collaborate with and learn from others is likely to be an additional motivating force for many employees – the “M” piece of AMO. Theorists contend, then, that enhancing ability probably increases opportunity which, in turn, is also likely to raise motivation, resulting in a virtuous cycle in which each component of the AMO trio enhances the others and this cycle of mutual reinforcement strengthens OP to a greater degree than each component would separately.

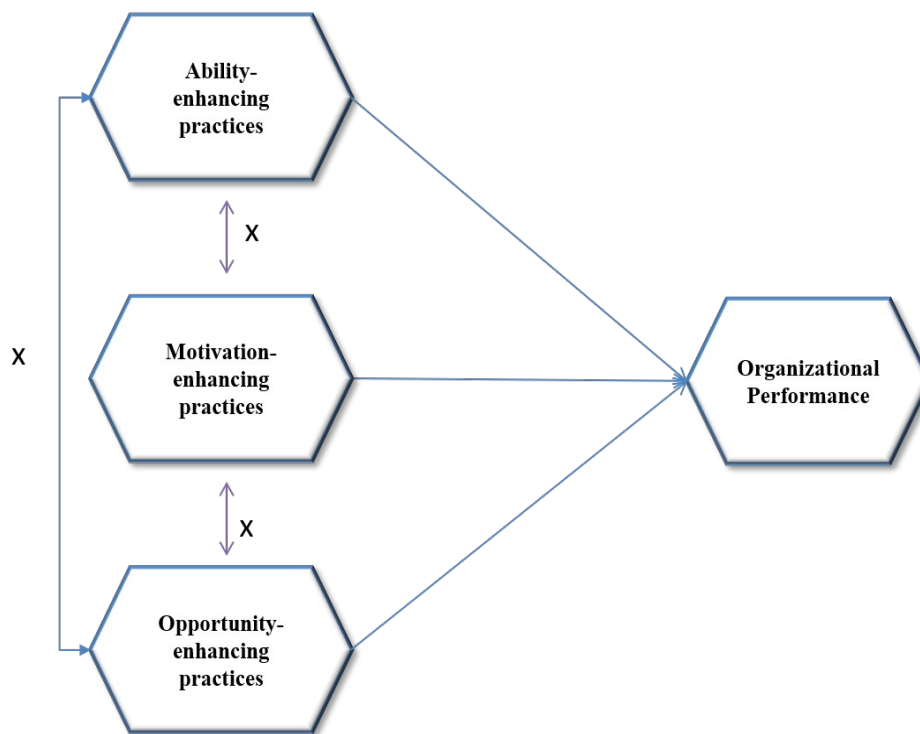


Figure 1. Conceptual model. AMO- Organizational Performance

Most empirical strategic HR studies, however, have failed to support the hypothesis of synergies among AMO domains (Subramony, 2009). Still, much recent HRM research in SMEs (e.g. Bello-Pintado, 2015; Bello-Pintado & Garcés-Galdeano, 2019) has assumed that AMO-enhancing practices are characterized by synergistic effects.

Given the current state of the debate in this arena, the hypothesis we seek to test is as follows:

Hypothesis 1 (+): The three-way interaction among AMO-enhancing HRM practices has a positive effect on the performance of small and medium-sized enterprises.

These arguments, *a priori*, might lead one to think that all AMO bundles might be expected to contribute together to enhance SMEs’ performance. However, the combined presence of the three bundles might not be necessary to achieve intended effects on performance. The research also suggests that specific HR

practices/domains have different degrees of significance in the SME context (Rauch & Hatak, 2016). Depending on the specific case, dual interactions between bundles might work well. In this sense, Bos-Nehles, Townsend, Cafferkey and Trullen's (2023) recent systematic literature review reveals A x O as the most common interaction, indicating that the relationship between ability-enhancing practices and performance depends at least in part on a context that also offers opportunity-enhancing HRM practices in an organization. Therefore, we argue that relationship between Ability-enhancing HR practices and organizational performance may be positively moderated by HR practices that empower employees. In other words, policies that empower employee involvement in decision making could be useless when employees do not possess sufficient competencies. Similarly, the effectiveness of skilled workers is limited if they not motivated to use their skills towards organization success (Ho & Kuvaas, 2020). In the SME context, Bello-Pintado (2015) found that ability and opportunity bundles only affect performance if both practices were implemented simultaneously in the firms.

Taking all these factors into consideration we propose the following hypothesis:

Hypothesis 2 (+): There is a synergistic relationship between the bundles of ability-enhancing and opportunity-enhancing practices that explain enhanced SME performance.

In the same vein, a firm implementing two bundles of practices (e.g., M and A) may encounter a positive interaction between bundles because workers with good skills may find sufficient motivation (job security and fair compensation) to do their job as well as possible. In other words, when complex environments exceed worker's aptitude, this may reduce feelings of competence, which can hamper motivation. Meurer's (2017) work reveals that performance appraisal and job security practices contribute to the ability to achieve higher performance. Therefore, our hypothesis is the following:

Hypothesis 3 (+): There is a synergistic relationship between the bundles of ability-enhancing and motivation-enhancing practices that explain enhanced SME performance.

Finally, opportunity-enhancing HR practices (O) are often not directly related to performance outcomes, but provide a context that boosts the effects of Ability (A)- or Motivation (M)-related practices, and thus lead to higher levels of performance (Bos-Nehles et al., 2023). Mutual interdependence in the AMO model occurs when the effects of each dimension on system outcomes both moderate and are moderated by the effects of the other AMO dimensions in the system. Chung and Pak (2021) in their work found a negative interaction between M- and O- enhancing practices in South Korean firms, recognizing the potentially conflicting interconnections among HR practices in terms of the HPWS - performance link. In contrast, according to Deci, Olafsen and Ryan (2017), work contexts that promote empowerment can foster individual motivation. Indeed, studies have found that self-motivated employees have a psychological attachment to their responsibilities (Kahn, 1992) and their subsequent work performance (Rich, Lepine & Crawford, 2010). As a consequence, we present the following hypothesis:

Hypothesis 4 (+): There is a synergistic relationship between the bundles of motivation-enhancing and opportunity-enhancing practices that explain enhanced SME performance.

3. Methods

3.1. Data Collection

The study was conducted in the Basque Region of northern Spain during 2017. To create the sample group of firms for this study, we used the SABI database (Sistema de Análisis de Balances Ibéricos / Analysis System for Iberian Financial Statements). The database was filtered using three criteria: a) firms operating in the Basque region, b) minimum firm workforce of 50, to ensure that the firms were large enough to have a specific human resource management function (Peña, Sánchez de Pablo, Hernández & Villasalero, 2015) and a maximum of 250, and c) firms that were operational at the time of data collection. All firms meeting these criteria were included in the study.

A questionnaire was developed, to be completed by hand. Altogether, 110 firms from different industries returned valid questionnaires between January and June 2017, making up the sample for our study. The response

rate was 17.25% of the total population of Basque firms meeting the three criteria we defined previously, above the 10% threshold established in previous questionnaire-based studies for sample representativeness (González-Ramos, Donate-Manzanares, Guadamillas-Gómez & Alegre-Vidal, 2014).

In line with the guidelines established by Huber and Power (1985) for reducing possible problems associated with single-respondent research, we selected chief executives or human resources managers to be informants, since they were felt to have the most comprehensive knowledge of both human resource management practices and employees' organizational performance.

3.2. Measures

All the constructs included in the questionnaires were modeled as composites (Henseler, Dijkstra, Sarstedt, Ringle, Diamantopoulos, Straub et al., 2014) and measured using scales taken from the literature. The validity and reliability of the instruments used had been demonstrated in previous research, as detailed below.

To measure HR-enhancing practices, this study adapts the scale developed and validated by Camps and Luna-Arocas (2010), which is itself based on Pfeffer's (1998) original conceptual construction. We categorized these HR practices into three dimensions, as follows: (1) ability-enhancing practices, which included training; (2) motivation-enhancing practices, defined by job security and fair compensation; and (3) opportunity-enhancing practices, which consisted of information and communication, self-managing teams, participation and reduction in hierarchy / status differences. Finally, for organizational performance (OP), we used the scale proposed by Peña-García-Pardo (2009), which is itself based on Delaney and Huselid's (1996) scale. The managers were asked to rate the performance of their own firm in terms of sales and financial profitability, as compared with others from the same industry. Available evidence indicates that managerial assessments correspond closely to internal objective performance indicators (Wall, Michie, Patterson, Wood, Sheehan, Clegg et al., 2004) and external secondary data (Venkatraman & Ramanujam, 1987).

3.3. Data Analysis

We tested our model and hypothesis using partial least squares (PLSs), a structural equation modeling technique that uses a principal components-based estimation approach (Chin, 1998). PLS was chosen because our model was complex and used higher-order composite constructs. Theoretical argument (Rigdon, Sarstedt & Ringle, 2017) and empirical evidence (Sarstedt, Hair, Ringle, Thiele & Gudergan, 2016) support the use of PLS in models based on composite variables. The seven HPWS practices were modeled as composites in mode A at the dimension level and at higher order composites level (based on the AMO framework). Finally, OP was a composite exclusively in mode A. On the recommendation of Becker, Ringle and Sarstedt (2018), we used a two-stage approach to model the interaction effect. The structural model contained the three HR AMO-enhancing domains of practices, and organizational performance. To test the hypotheses, we used the bootstrapping procedure recommended by Chin (1998) with 10,000 resamples. Lastly, we applied a PLS predict procedure developed by Shmueli, Ray, Velasquez-Estrada and Chatla (2016) which represents a holdout sample-based approach to evaluate the predictive model. In this way, PLS allowed us to meet two research purposes: a) confirmatory, to confirm the causal relationship between variables, and b) predictive, to predict values for individual cases. This study applies Smart PLS 4.0.9 software (Ringle, Wende & Becker, 2022)

3.4. Common Method Bias (CMB)

Since all data on the latent variables were collected from a self-administered questionnaire, there was a possible problem with CMB. Bearing in mind that the information could not be obtained from other sources, we sought to expose any possible CMB and limit it, following Podsakoff, Mackenzie and Podsakoff (2012); and Podsakoff, Mackenzie, Lee and Podsakoff (2003). We psychologically separated the measurement of predictor and criterion variables and guaranteed response anonymity. The common method bias test proposed by Kock (2015) was applied. All the variance inflation factors (VIFs) resulting from a full collinearity test were below 3.3 and the model can therefore be considered to be free of CMB.

4. Results

4.1. Assessment of Global Model Fit

Benitez, Henseler, Castillo and Schubert (2020) suggested that the overall fit of models estimated by PLS can be evaluated by a bootstrap-based test for overall model fit. We used PLS-SEM to estimate several tests of model fit: standardized root mean squared residual (SRMR), the underweighted least squares discrepancy (d_{ULS}), and the geodesic discrepancy (d_G). The three tests of fit for the estimated model were below HI95 (Table 1) and therefore, in accordance with Henseler, Hubona and Ray (2016), the model cannot be rejected.

4.2. Measurement Model

Evaluation of the measurement model begins with a confirmatory composite analysis (Henseler et al., 2014) for the saturated model. This enables the nomological validity of the composite to be tested (Henseler et al., 2016). The SRMR (standardized root mean square residual) index (Hu & Bentler, 1998) is applied as it is considered the dominant approximate model fit criterion (Henseler et al., 2016). Our saturated model achieved an SRMR value of .075 in the second model, which is below the bootstrap-based 95th quantile (HI_{95}). We also carried out various tests of model fit (d_{ULS} , d_G) by means of inference statistics and bootstrapping (Henseler et al., 2016), which are also lower than HI_{95} (Table 1). This confirmatory composite analysis therefore appears to support the composite model, and thus, composites seem to act within a nomological net rather than as individual indicators (Henseler & Schubert, 2020).

Estimated model						
	First-order model			Second-order model		
	Value	HI95	HI99	Value	HI95	HI99
SRMR	.085	.142	.182	.075	.090	.127
d_{ULS}	1.665	4.691	7.615	.205	.292	.581
d_G	.595	.795	1.009	.064	.086	.115
Saturated model						
	Value	HI95	HI99	Value	HI95	HI99
	Value	HI95	HI99	Value	HI95	HI99
SRMR	.085	.142	.182	.075	.092	.137
d_{ULS}	1.665	4.691	7.615	.202	.307	.680
d_G	.595	.795	1.009	.064	.087	.118

Notes: SRMR: standardized root mean square residual; d_{ULS} : the unweighted least squares discrepancy; d_G : the geodesic discrepancy; HI95: bootstrap-based on 10000 subsamples 95th percentile; HI99: bootstrap-based on 10000 subsamples 99th percentile.

Table 1. Tests of model fit (first and second-order models)

Given that our constructs are artefacts, Henseler (2017) argues that indicators of the composites are probably correlated. Accordingly, we estimated these components in mode A using correlation weights (Rigdon, 2016). This means that traditional measures of internal consistency, reliability and validity can be applied (Henseler et al., 2016). Generally, all indicators/dimensions have loadings of over .7, except for Job Security & Employment Stability. We decided to maintain the dimension on the recommendation of Hair, Ringle and Sarstedt (2011). Consequently, the individual item reliability is considered satisfactory (Table 2). Internal consistency was assessed using composite reliability (CR). All constructs were reliable, as their CR is above .7. The average variance extracted (AVE) was used to evaluate convergent validity (Table 2), and since AVE values were greater than .5, all composites attained convergent validity.

Finally, discriminant validity was tested analyzing heterotrait/monotrait correlation ratio (HTMT) (Henseler, Ringle & Sarstedt, 2015) and the traditional Fornell and Larcker criterion (Hair, Hult, Ringle, Sarstedt, Castillo-Apráiz, Cepeda-Carrión et al., 2019). As shown in Table 3, the value of each HTMT was less than or equal to .90 (Gold, Malhotra & Segards, 2001), once the item FORM2 had been removed. The Fornell-Lacker criterion was also met. Accordingly, all variables can be asserted to have discriminant validity. In short, the measurement model provided satisfactory construct validity. Additionally, Table 2 shows the weight of the

indicators and dimensions providing information on the relative importance of each indicator and its dimension in the composition of each composite.

Construct/Dimension/ Indicator	Loading	Weight	CR	AVE
Motivation enhancing-practices (Higher Order Composite Mode A)			.733	.594
Job security & employment stability (Composite, Mode A)	.553	.352	.876	.707
SEG1-One of our values is job stability.	.658	.016		
SEG2-We go to great lengths to ensure maximum job stability amongst our workers.	.924	.554		
SEG3-Retaining staff is a priority even in times of recession.	.913	.523		
Fair Compensation (Composite, Mode A)	.940	.857	.816	.602
RETR1-We know exactly which are the most important positions in the Company and the staff who hold these positions are paid accordingly.	.622	.186		
RETR2-There is a fair, equitable balance in this Company between a worker's performance and the salary he/she receives.	.919	.643		
RETR3-We make use of non-monetary rewards for our workers (promotions, career development, quality of working life).	.757	.388		
Abilities enhancing practices			1.000	1.000
Training (Composite, Mode A)	1.000	1.000	.906	.830
FORM1-Training is one of the company's key values.	.829	.243		
FORM2-Our training programs anticipate future needs.	Eliminated			
FORM3-To ensure the quality of our training programs (and modify them if necessary), we analyze their contribution to improving the organization.	.986	.810		
Opportunity enhance-practices (Higher Order Composite Mode A)			.918	.737
Participation Team work (Composite, Mode A)	.790	.125	1.000	1.000
DES1-We have worker participation programs.	1.000	1.000		
Self-managed teams	.902	.286	.918	.848
DES2-We regularly organize task forces / improvement teams / quality teams to solve organizational problems.	.902	.478		
DES3-We purposefully encourage team work.	.940	.605		
Reduction in status differences (Composite, Mode A)	.886	.442	.850	.657
REDIF1-We ask our workers about general company issues and take their opinion into account.	.829	.421		
REDIF2-Relations among co-workers are spontaneous and informal.	.897	.549		
REDIF3-Workers know they can approach managers directly about any issue.	.691	.229		
Information and Communication (Composite, Mode A)	.852	.295	.902	.
COMUN1-We are highly transparent in the information we provide workers on important issues such as salaries, promotions and performance appraisals.	.857	.431		
COMUN2-Permanent, accessible communication channels exist for all our workers.	.904	.513		
COMUN3-We are highly transparent in the information we provide our workers on issues such as the company's market position and expectations with the exception of information that may involve a strategic risk.	.842	.188		
Organizational Performance (Composite, Mode A)			.934	.781
RTDO1-Growth in profits.	.855	.291		
RTDO2-Growth in market share.	.875	.293		
RTDO3-Sales growth.	.903	.286		
RTDO4-Profitability.	.901	.263		

Table 2. Measurement Model: Reliability and Convergent Validity (First and second order composite)

	1	2	3	4
1.-ABILITY-enhancing practices	1.000	.751	.478	.054
2.-MOTIVATION-enhancing practices	.409	.771	.867	.617
3.- OPPORTUNITY-enhancing practices	.426	.484	.884	.202
4.- Organizational Performance	-.052	.405	.209	.859

Notes: the bold numbers on the diagonal are the square root of the average variance extracted; correlations are given in the lower triangle of the matrix, while the upper triangle shows HTMT.

Table 3. Measurement model: Discriminant Validity Second order level

4.3. Structural Model

Once the psychometric properties of the measurements were checked, the next step was to evaluate the hypothesized relationship presented above in the text. We used three models to test the hypothesis: Model 1, which examines the main effects, adding the three HR enhancing-practices (Ability, Motivation, Opportunity); Model 2, which shows the effect on OP of the interaction between each of the possible pairs of the three HR enhancing-practice domains (MxA; MxO; AxO) and, finally Model 3, which adds the triple interaction of the three domains of human-resource practice (MxAxO). The PLS results for these models are summarized in Table 4.

Predictor	Dependent variable: Organizational performance						
	To	Model 1 (Main effect)		Model 2 Interaction Model Double and triple effect			
		Path coef.	CI	Path coef.	CI	Path coef.	CI
Independent variables	OP						
(A)		-.290**	[-.441; -.109]	-.224*	[-.398; -.026]	-.181 ^{ns}	[-.387;.020]
(M)		.473***	[.308; .632]	.474***	[.274; .637]	.498***	[.278; .687]
(O)		.105 ^{ns}	[-.080; .312]	.067 ^{ns}	[-.121; .303]	.112 ^{ns}	[-.095;.314]
H ₃ (+): AxM				.254*	[.049; .430]	.287*	[.059; .459]
H ₄ (+): OxM				-.103 ^{ns}	[-.236; .126]	-.088 ^{ns}	[-.263;.152]
H ₂ (+): OxA				-.006 ^{ns}	[-.171; .155]	-.038 ^{ns}	[-.224; .152]
H ₁ (+): OxAxM						-.128 ^{ns}	[-.308; .087]
R ² (OP)		228***	[.133; .416]	266***	[.178; .461]	277***	[.192; .491]

Notes: OP: Organizational Performance. Hypothesized effects are assessed applying one side test. Effects from R² is assessed applying a two-tailed test. Bootstrapping based on n = 10,000 samples.

^{ns}non-significant; *** p<.001; ** p<.01; * p<.05

Table 4. Summary of results from Partial Least Squares Analysis

Let us consider the results of these models one at a time. Model 1, showing the main effects, suggests the importance for OP of motivation practice domains ($\beta = .473$; $p = .000$) and, in a negative sense, the “ability domain” ($\beta = -.290$; $p = .002$). Interestingly, the “opportunity domain” of AMO is non-significant ($\beta = .105$; $p = .196$). Model 2 begins by testing the interactions, showing the magnitude and direction of the two-way interactions in their relationships with OP from managers’ perspective. Although the interaction between the motivation domain and the opportunity domain, and ability practices and opportunity practices are non-significant, we can see a positive effect between motivational practices and ability practices (MxA) ($\beta = .254$; $p = .015$). In Model 3, we do not find a significant link between the triple interaction construct (AxMxO) and OP ($\beta = -.128$; $p = .143$).

The data, then, do not support the first hypothesis (H₁). Only the path of the double interaction MxA to SMEs performance is significant, thus supporting Hypothesis 3 (H₃). While these results do not support the impact of the triple interaction, they do suggest that managers perceive that certain human-resource-enhancing practices

act as a booster to SMEs' performance. In this particular case, the results show that the slope of the line representing the relationship between motivation-enhancing practices and SME performance becomes steeper and more positive the greater the value of the ability-enhancing practices (Figure 2). The accentuating effect essentially means that training practices that strengthen ability (A) serve as a catalyst for augmenting the relationship between motivation enhancing practices (M) and managers' perception of the SME's performance.

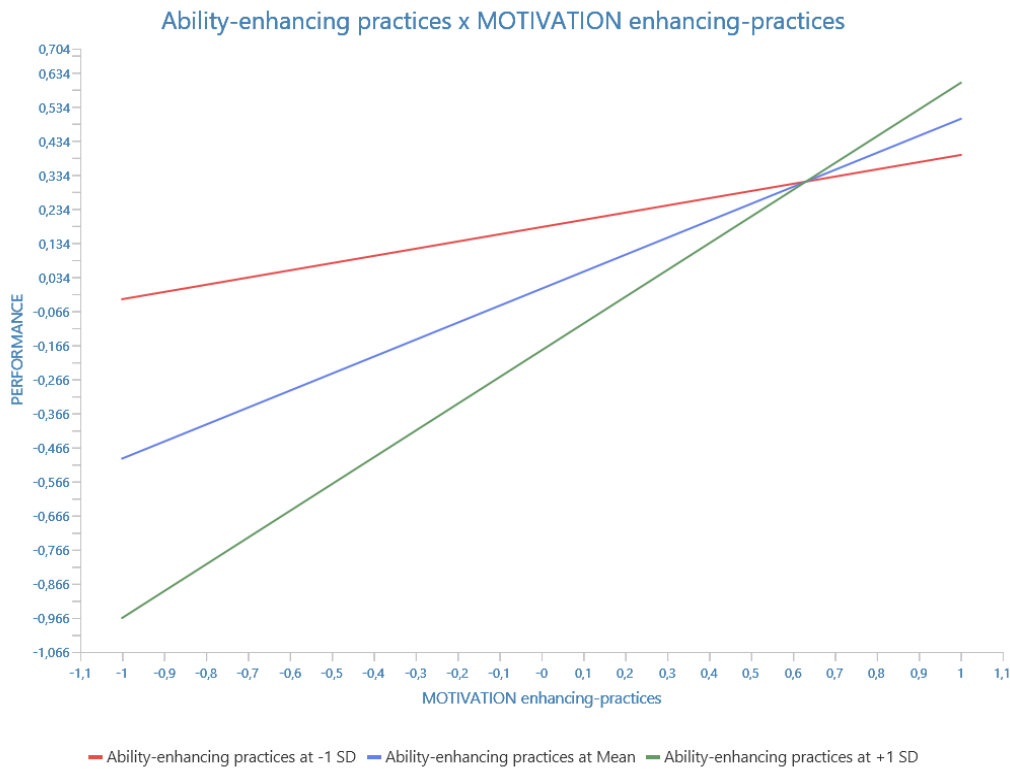


Figure 2. Interaction effect ability-enhancing practices and motivation-enhancing practices

With regard to the models' explanatory power, we find that the three-interaction model accounts for 27.7% of the variation in organizational performance, whilst the direct and second model explain slightly less, 22.8% and 26.6%, respectively. We therefore conclude that the 3.8% difference in the variance explanation can be attributed almost exclusively to the simultaneous double interactions among Motivation, Opportunity and Ability practices. The triple interaction is non-significant and explains practically none of the variance in OP (1%).

4.4. Assessment of Predictive Model

The predictive power of a model reflects its ability to generate accurate predictions of new interpretable observations, whether temporal or cross-sectional (Shmueli & Koppius, 2011). A PLS predict analysis was conducted, completing the following steps (Shmueli, Sarstedt, Hair, Cheah, Ting, Vaithilingam et al., 2019):

- a) First, indicators of the endogenous construct show values of $Q^2_{\text{predict}} > 0$, which means that all the manifest variables meet the first requirement.
- b) Second, the summarized statistical values of the prediction errors were compared to naïve values obtained by a linear regression (LR) model in order to evaluate the prediction error of the PLS-SEM analyses (Table 5). In particular, all the values of skewness for prediction errors of results indicators were below $|1|$ (Hair et al. 2019). For this reason, RMSE was selected as the basis for assessing the predictive power (Table 6). Table 5 shows that PLS-SEM analyses generated lower RMSE prediction errors (also for MAE), for all the indicators, than LM estimates. The model can therefore be asserted to have high predictive power (Shmueli et al., 2019).

Indicator	Q ² predict	PLS		LM	
		RMSE	MAE	RMSE	MAE
RTDS1	.132	1.166	.963	1.190	.978
RTDS2	.075	1.067	.857	1.068	.861
RTDS3	.093	1.121	.869	1.142	.901
RTDS4	.017	1.306	1.007	1.324	1.023

Note (s): RMSE: Root mean squared error, MAE: Mean absolute error. PLS: Partial Least Squared Model. LM: Linear Regression Model, k = 5 subgroups, number of repetitions = 10

Table 5. PLSpredict assessment of indicators

	RTDS1	RTDS2	RTDS3	RTDS4
PLS-SEM	.044	-.081	-.251	-.592
LM	.041	-.092	-.210	-.607

Note: PLS: Partial Least Squared Model. LM: Linear Regression Model.

Table 6. Skewness of prediction errors

5. Discussion

Our analysis sought to determine *how* HR-enhancing practices are related to SME performance and *whether* interactions among some practices show stronger performance relationships than others. Our research sheds light on these questions by offering the following contributions. First, we address the debate on whether the relationships among the AMO predictor variables are additive and/or multiplicative and, ultimately, their explanatory power as regards SME performance. Although assumptions about the nature of the relationships are widespread in the literature (especially in the sphere of large enterprises), there has been relatively little empirical work testing multiplicative effects in SMEs and comparing them with additive effects. Consequently, the nature of AMO interactions and their relationships with organizational performance variables has been a topic of ongoing debate.

We found firstly that, according to managers, interaction among predictor variables is not the only or even the main story in SME firms. They believe that variables such as motivation-enhancing practices and ability-enhancing practices have significant, primary effects on the performance of Basque SMEs. Our results are in partial agreement with those reported in earlier research regarding the additive model of HR practices in an SME context. In particular, Rauch and Hatak (2016) in their meta-analysis results showed that skill-, motivation-, and empowerment-enhancing HR practices were positively and independently related to SME performance. In general, their results suggested that different HR-enhancing practices, by themselves, tended to be related to the firms' performance. Recently, Arthur, Herdman and Yang (2021) showed that SME in the hotel industry emphasizing investment in high-commitment HR practices achieved high performance even in the absence of other HPWS practices. Bello-Pintado (2015) also showed that only the motivation-enhancing bundle had a significant main effect on manufacturing outcomes. In this vein, in the empirical analysis, we found the Motivation bundle to be key for the effectiveness of HR practices in the Basque SME context (Figure 2). This is in line with the work of Bello-Pintado and Gárce-Galdeano (2019), who found that the motivation bundle of HR practices is more effective in non-family firms than in family ones. The system of HR practices, therefore, is designed to align employees' behavior and performance with the firm's objectives through such things as rewards and performance appraisals (Lee, Pak, Kim & Li, 2019). Equally importantly, however, the overall results regarding motivation-enhancing practices showed that improved performance was achieved at the cost of exhausting or exploiting employees (Nadeem & Rahat, 2021; Oppenauer & Van De Voorde, 2018). Indeed, our findings suggest that these two HR practices (Fair Compensation and Job Security) may be complements or substitutes in achieving better performance in an SME context.

Moreover, one unexpected result from this study was the negative relationship found between ability-enhancing practices and performance in SMEs. Likewise, Arthur et al. (2021) obtained similar results in their work focused on comparing the performance effects of HPWS components in small to medium sized enterprises. In

particular, their study provided a nonsignificant, negative relationship between ability-enhancing programs and performance. Training enables employees to gain skills but there is no guarantee that training results in improved performance (Abd-Rahman, Imm Ng, Sambasivan & Wong, 2013). Hitt, Bierman, Shimizu and Kochhar (2001) found that investment in training initially has a negative effect on results and the organization will not enjoy positive effects until the knowledge is transferred. In interpreting this result, we consider that management assumes that investment in training has some negative effects, especially if the employer does not have a reciprocal commitment from the employee. Managers might perceive that in investing in training, there will be a risk arising from the possibility that the employee may decide to leave the organization (Tzafir, 2005).

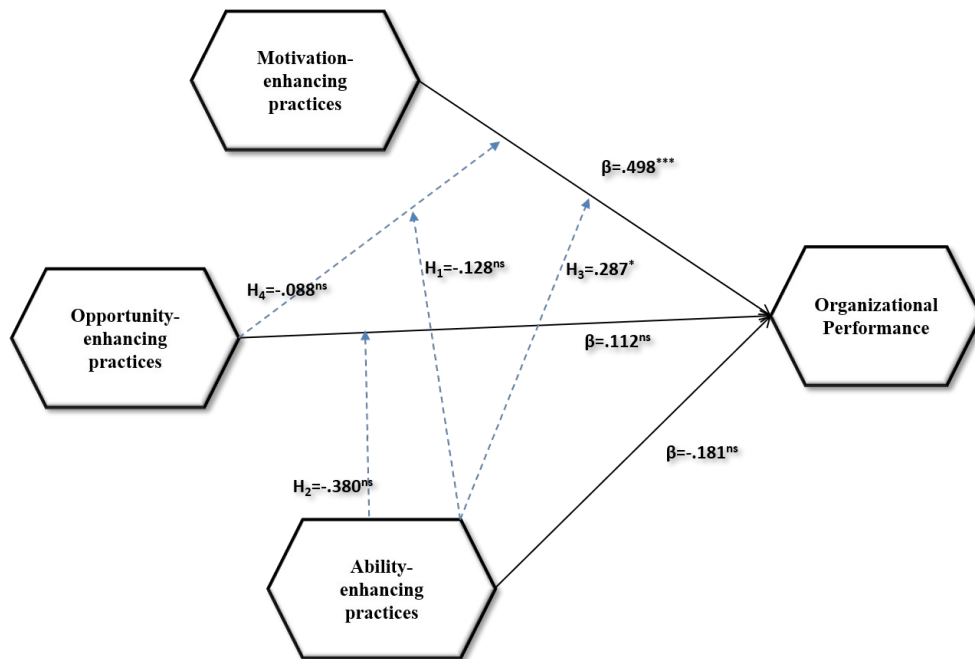


Figure 2. Results for double and triple interaction effects

Opportunity-enhancing practices implemented by SME firms in our study did not show any effect on the achievement of organizational performance. In general, though, the results are quite mixed. Sánchez-Marin et al. (2022) confirm that Spanish SMEs, despite their informality and lack of political regulation, are able to develop adequate HR practices according to the AMO model, all of which have a positive impact on firm performance. Rauch and Hatak (2016), in their meta-analysis, established that HR practices that enhance employees' autonomy, decision-making involvement, and responsibility levels were generally more important in the SME context. Similarly, a recent work by Arthur et al. (2021) confirmed the impact of involvement-oriented High-Performance-Work-System Practices on performance, especially when limited to jobs that required greater employee skills and direct customer contact, such as front-desk positions. Chadwick et al. (2013) study, using a seven-variable HR index, contradicts these findings; they found a significant *negative* relationship between high-investment HR and labor productivity in SMEs. By contrast, yet again, though, Sels, De Winne, Maes, Delmotte, Faems and Forrier (2006) using six variables from the HPWS index in Belgian SMEs, found a positive effect of this construct on labor productivity. These contrasting findings might be attributable to the different relative emphasis given to each HPWS component in these measures (Arthur et al., 2021).

Secondly, we found some evidence of synergic interaction among different groups of HPWS practices in this context. Most existing HR research studies adopted an AMO performance model, assuming performance to be the sum of synergistic functions of groups of ability-, motivation-, and opportunity-enhancing practices (Becker & Huselid, 1998). Empirical support for this synergistic performance model, however, is scarce. Our results suggest that the best configuration across AMO domains in SMEs is composed of practices that enhance Ability and Motivation. Managers propose that training (A) and job security and fair compensation (M) complement each other, creating a configuration of HR practices that have both interactive and direct effects on

organizational performance (Figure 2). Specifically, the bundle of practices enhancing employee motivation has a principal effect of its own and this effect on performance is also increased by the bundle of skill-enhancing practices (MxA). In other words, HR practice designed to strengthen motivation through fair compensation and job security may reinforce SMEs' performance in the presence of training practices. Training has probably been examined most as a driver of productivity, both in human capital and economic theory (Acemoglu & Pischke, 1998). However, our study suggests that motivation is one of the forces leading to organizational performance, and it is heightened by providing training programs to achieve the skills and knowledge workers require to perform their jobs. Training and Development is a very important HRM practice accompanying employees throughout their life cycle in the organization (Korauš, Kaščáková & Felcan, 2020). This is not just a question of HRM practice; development and education should be a strategic focus of HRM, if organizations want to create a competitive edge. This unique advantage can only be achieved with qualified and motivated employees. SMEs should bear this in mind and maintain HRM as a part of their strategic management and focus.

Other interactions, however, are found to be unimportant when it comes to OP. Neither the path to OP of the two-way interaction between the ability-enhancing policy domain and the opportunity-enhancing policy domain (AxO) nor the path between the motivational and opportunity domains (MxO) act as boosters for one another. The three-way interaction between ability, motivation and opportunity practices (MxAxO) and OP is also not significant. According to our findings, according to managers, the benefits of motivational practices on organizational performance, such as job security or fair compensation for work done, will not be reinforced by policies of empowerment, participation, and information and communication. Similarly, regarding the three-way relationship, SME managers do not believe that enhanced participation and communication practices (O), together with fair compensation and employment stability (M) and strengthened training and hiring (A), jointly boost workers' organizational performance. Similarly, Arthur et al. (2021) found no evidence of interactive synergy between different groups of HPWSs in the hotel context. However, some scholars argue that motivated employees who possess the abilities to perform will not foster performance unless organizations provide them with appropriate opportunities to apply their skills (Jiang et al., 2012; Lepak, Liao, Chung & Harden, 2006). This is not the case of SMEs in the Basque Country.

6. Conclusion and Practical Implications

For organizations and their managers, High Performance Work Systems (HPWSs) have become enormously important as a source of competitive advantage in today's high-pressure business environment (Navío-Marco, Solórzano-García & Palencia-González, 2019). HPWS enhance what Patel (2013) called "organizational ambidexterity", a company's ability to efficiently take advantage of existing market opportunities whilst creating and innovating to meet the challenges of future markets. This, in turn, leads to better HPWS utilization and improved company performance. From this perspective, since this research is seen as predictive, by examining the interactions among AMO dimensions, their relationships with organizational outcomes can provide valuable insights from both theoretical and practical perspectives.

Firstly, the motivation bundle of practices, which includes practices such as fair compensation and job security/employment stability, is often seen by managers as being of prime importance for SMEs and our research bears this out. Secondly, we observe that hierarchies *do* exist among bundles, given that different bundles affect the performance of small and medium-sized enterprises differently. In general, the bundle of motivation-enhancing practices *is* the most important in explaining the organization's performance. This is in line with previous research (Bello-Pintado, 2015; Bello-Pintado & Garcés-Galdeano, 2019). Ability-enhancing practices (Training) alone do not appear to guarantee improved performance in the SME. The adoption of a bundle of HRM practices aimed at motivating people typically helps firms to reduce the agency problem and improve performance.

Finally, focusing on how HR practices work to support and reinforce each other is particularly appropriate for the SME context, as employers tend to view people management as an interrelated set of HR activities. In this sense, the paper contributes to the ongoing debate about the configurational approach of HRM practices in an SME context and will help managers select the most effective combination(s) of these practices. Our findings support the notion that SMEs can experience improved performance by adopting a complementary bundle of M and A practices, since a positive interaction has been established between the two. In essence, A- and M enhancing

practices work together in SMEs to generate “synergy” effects, amplifying their impact on performance. To illustrate this kind of “synergy” effect, better job security and fair compensation can increase training effectiveness, and vice versa from managers’ perspective. This concept of “efficient complementarities” (Chadwick, 2010) creates bundled systems where each bundle contributes individually and jointly to SME performance. Further, HRM practices directed towards promoting motivation act as a central practice in the HRM function. The presence of this bundle makes it worth investing in training, in order to improve firms’ performance.

Our study also provides key suggestions for SME managers on how to design HR bundles that maximize performance impact. Job security and fair compensation create a positive environment where employees are motivated to learn and contribute. Effective training empowers them to excel, enhancing their value and justifying better compensation and further investment in their development. It is vital for managers to adopt motivation-enhancing practices in order to influence the degree to which employees’ skills are turned into action and vice versa, whereas opportunity-enhancing practices for SME are less important. This reciprocal interdependence fuels organizational success, but it also presents a significant challenge for SMEs. Achieving this positive outcome requires meticulous coordination on several fronts: 1) maximizing the beneficial interactions among practices enhanced by A and M, 2) ensuring seamless integration within each bundle of practices, and 3) minimizing overlap and redundancy between different bundles. Arguably, organizations need to adopt tailored approaches when creating HRM policy and practice and managing their consequences.

7. Limitations and Future Research

It is important to acknowledge the limitations of this research. First, this study is based exclusively on Basque companies, a factor that might limit the generalizability of the results. We would therefore encourage future research in other national contexts. In this regard, we believe that greater consistency in the studies would be desirable, replicating the same analysis in different contexts (sectors, types of companies, countries) in order to draw more precise conclusions that contribute to scientific knowledge. Second, because the data are cross-sectional, it is not possible clearly to establish the causal relations among the variables studied. It would therefore be beneficial in the future to use longitudinal designs and explore cause-and-effect over time. Another limitation of the study is that is based on a survey, with perceptual scales completed by a single respondent (generally CEOs or Human Resource managers). Employees’ perceptions of the HR practices implemented might differ from those of managers. This highlights the need to capture employee experiences in SMEs including with respect to equality, well-being. Also, in-depth qualitative research could help illuminate in detail how managers view different combinations of AMO policy and practice, and why they sometimes generate synergies and sometimes do not. To end, consideration of the role of the impact of technology on HPWS practices in SMEs is another area of interest for future research.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Specifically: we have no personal or professional relationships with any individuals involved in the research, including participants, or organizations involved in data collection or analysis.

We are not affiliated with any of the small and medium enterprises (SMEs) that were included in the research sample.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

References

- Abd-Rahman, A., Imm Ng, S., Sambasivan, M., & Wong, F. (2013). Training and organizational effectiveness: moderating role of knowledge management process. *European Journal of Training and Development*, 37(5), 472-488. <https://doi.org/10.1108/03090591311327295>

- Acemoglu, D., & Pischke, J.S. (1998). Why Do Firms Train? Theory and Evidence. *The Quarterly Journal of Economics*, 113(1), 79-119. <https://doi.org/10.1162/003355398555531>
- Anvari, R., & Janjaria, M. (2023). Contributing Management Factors to Performance Management Effectiveness. *Journal of Business & Management*, 1(1), 57-68. <https://doi.org/10.47747/jbm.v1i1.950>
- Arthur, J.B., Herdman, A.O., & Yang, J. (2016). How Top Management HR Beliefs and Values Affect High-Performance Work System Adoption and Implementation Effectiveness. *Human Resource Management*, 55(3), 413-435. <https://doi.org/10.1002/hrm.21672>
- Arthur, J.B., Herdman, A.O., & Yang, J. (2021). Which Way to High Performance? Comparing Performance Effects of High-Performance Work System Components in Small- to Medium-Sized Establishments. *ILR Review*, 74(2), 352-387. <https://doi.org/10.1177/0019793919893668>
- Aryee, S., Walumbwa, F.O., Seidu, E.Y.M., & Otaye, L.E. (2016). Developing and Leveraging Human Capital Resource to Promote Service Quality. *Journal of Management*, 42(2), 480-499. <https://doi.org/10.1177/0149206312471394>
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99-120. <https://doi.org/10.1177/014920639101700108>
- Becker, B.E., & Huselid, M.A. (1998). High performance work systems and firm performance: a synthesis of research and managerial implications. *Research in Personnel and Human Resource Management*, 16, 53-101.
- Becker, J.M., Ringle, C.M., & Sarstedt, M. (2018). Estimating Moderating Effects in PLS-SEM and PLSc-SEM: Interaction Term Generation*Data Treatment. *Journal of Applied Structural Equation Modeling*, 2(2), 1-21. [https://doi.org/10.47263/JASEM.2\(2\)01](https://doi.org/10.47263/JASEM.2(2)01)
- Bello-Pintado, A. (2015). Bundles of HRM practices and performance: Empirical evidence from a Latin American context. *Human Resource Management Journal*, 25(3), 311-330. <https://doi.org/10.1111/1748-8583.12067>
- Bello-Pintado, A., & Garcés-Galdeano, L. (2019). Bundles of HRM practices in family and non-family firms: The impact on enhancing performance. *The International Journal of Human Resource Management*, 30(21), 2971-2992. <https://doi.org/10.1080/09585192.2017.1391311>
- Benitez, J., Henseler, J., Castillo, A., & Schuberth, F. (2020). How to perform and report an impactful analysis using partial least squares: Guidelines for confirmatory and explanatory IS research. *Information & Management*, 57(2), 103168. North-Holland. <https://doi.org/10.1016/j.im.2019.05.003>
- Blumberg, M., & Pringle, C.D. (1982). The Missing Opportunity in Organizational Research: Some Implications for a Theory of Work Performance. *Academy of Management Review*, 7(4), 560-569. <https://doi.org/10.2307/257222>
- Boada-Cuerva, M., Trullen, J., & Valverde, M. (2019). Top management: the missing stakeholder in the HRM literature. *The International Journal of Human Resource Management*, 30(1), 63-95. <https://doi.org/10.1080/09585192.2018.1479878>
- Boon, C., Den Hartog, D.N., & Lepak, D.P. (2019). A Systematic Review of Human Resource Management Systems and Their Measurement. *Journal of Management*, 45(6), 2498-2537. <https://doi.org/10.1177/0149206318818718>
- Boselie, P., Dietz, G., & Boon, C. (2005). Commonalities and contradictions in HRM and performance research. *Human Resource Management Journal*, 15(3), 67-94. <https://doi.org/10.1111/j.1748-8583.2005.tb00154.x>
- Bos-Nehles, A., Townsend, K., Cafferkey, K., & Trullen, J. (2023). Examining the Ability, Motivation and Opportunity (AMO) framework in HRM research: Conceptualization, measurement and interactions. *International Journal of Management Reviews*, 25(4), 725-739. <https://doi.org/10.1111/ijmr.12332>
- Camps, J., & Luna-Arocas, R. (2010). A Matter of Learning: How Human Resources Affect Organizational Performance. *British Journal of Management*, 23(1). <https://doi.org/10.1111/j.1467-8551.2010.00714.x>

- Chadwick, C. (2010). Theoretic insights on the nature of performance synergies in human resource systems: Toward greater precision. *Human Resource Management Review*, 20(2), 85-101. <https://doi.org/10.1016/j.hrmr.2009.06.001>
- Chadwick, C., & Li, P. (2018). HR systems, HR departments, and perceived establishment labor productivity. *Human Resource Management*, 57(6), 1415-1428. <https://doi.org/10.1002/hrm.21914>
- Chadwick, C., Way, S.A., Kerr, G., & Thacker, J.W. (2013). Boundary Conditions of the High-Investment Human Resource Systems-Small-Firm Labor Productivity Relationship. *Personnel Psychology*, 66(2), 311-343. <https://doi.org/10.1111/peps.12015>
- Chin, W.W. (1998). The partial least squares approach to structural equation modeling. In Marcoulides, G.A. (Ed.), *Modern Methods for business research* (295-336). Lawrence Erlbaum Associates.
- Chung, G.H., & Pak, J. (2021). Is there internal fit among ability-, motivation-, and opportunity-enhancing HR practices? Evidence from South Korea. *Review of Managerial Science*, 15(7), 2049-2074. <https://doi.org/10.1007/s11846-020-00415-y>
- Deci, E.L., Olafsen, A.H., & Ryan, R.M. (2017). Self-Determination Theory in Work Organizations: The State of a Science. *Annual Review of Organizational Psychology and Organizational Behavior*, 4(1), 19-43. Annual Reviews. <https://doi.org/10.1146/annurev-orgpsych-032516-113108>
- Delaney, J.T., & Huselid, M.A. (1996). Impact of Human Resource Management Practices on Perceptions of Organizational Performance of Organizational Performance. *Academy of Management Journal*, 39(4), 949-969. <https://doi.org/10.2307/256718>
- Delery, J.E. (1998). Issues of fit in strategic human resource management: Implications for research. *Human Resource Management Review*, 8(3), 289-309. [https://doi.org/10.1016/S1053-4822\(98\)90006-7](https://doi.org/10.1016/S1053-4822(98)90006-7)
- Dundon, T., Wilkinson, A., Marchington, M., & Ackers, P. (2004). The meanings and purpose of employee voice. *The International Journal of Human Resource Management*, 15(6), 1149-1170. <https://doi.org/10.1080/095851904100016773359>
- Gold, A.H., Malhotra, A., & Segards, A.H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems*, 18(1), 185-214. <https://doi.org/10.1080/07421222.2001.11045669>
- González-Ramos, M.I., Donate-Manzanares, M.J., Guadamillas-Gómez, F., & Alegre-Vidal, J. (2014). Relación entre el Dinamismo Percibido, la Postura Tecnológica y los Resultados de Innovación. *Journal of technology management & innovation*, 9(2), 131-144. <https://doi.org/10.4067/S0718-27242014000200010>
- Guest, D.E. (2017). Human resource management and employee well-being: towards a new analytic framework. *Human Resource Management Journal*, 27(1), 22-38. Wiley/Blackwell (10.1111). <https://doi.org/10.1111/1748-8583.12139>
- Haar, J., O’Kane, C., & Daellenbach, U. (2022). High performance work systems and innovation in New Zealand SMEs: testing firm size and competitive environment effects. *The International Journal of Human Resource Management*, 33(16), 3324-3352. <https://doi.org/10.1080/09585192.2021.1894213>
- Hair, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M., Castillo-Apráiz, J., Cepeda-Carrión, G.A. et al. (2019). *Manual de Partial Least Squares Structural Equation Modeling (PLS-SEM)* (2nd ed.). OmniaScience. <https://doi.org/10.3926/oss.37>
- Hair, J.F., Ringle, C.M., & Sarstedt, M. (2011). PLS-SEM: Indeed a Silver Bullet. *Journal of Marketing Theory and Practice*, 19(2), 139-152. <https://doi.org/10.2753/MTP1069-6679190202>
- Harney, B., & Alkhalaf, H. (2021). A quarter-century review of HRM in small and medium-sized enterprises: Capturing what we know, exploring where we need to go. *Human Resource Management*, 60(1), 5-29. <https://doi.org/10.1002/hrm.22010>

- Harney, B., Gilman, M., Mayson, S., & Raby, S. (2022). Advancing understanding of HRM in small and medium-sized enterprises (SMEs): Critical questions and future prospects. *The International Journal of Human Resource Management*, 33(16), 3175-3196. <https://doi.org/10.1080/09585192.2022.2109375>
- Henseler, J. (2017). Bridging Design and Behavioral Research With Variance-Based Structural Equation Modeling. *Journal of Advertising*, 46(1), 178-192. Routledge. <https://doi.org/10.1080/00913367.2017.1281780>
- Henseler, J., Dijkstra, T.K., Sarstedt, M., Ringle, C.M., Diamantopoulos, A., Straub, D.W. et al. (2014). Common Beliefs and Reality About PLS. *Organizational Research Methods*, 17(2), 182-209. <https://doi.org/10.1177/1094428114526928>
- Henseler, J., Hubona, G., & Ray, P.A. (2016). Using PLS path modeling in new technology research: updated guidelines. *Industrial Management & Data Systems*, 116(1), 2-20. <https://doi.org/10.1108/IMDS-09-2015-0382>
- Henseler, J., Ringle, C.M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Henseler, J., & Schubert, F. (2020). Using confirmatory composite analysis to assess emergent variables in business research. *Journal of Business Research*, 120, 147-156. <https://doi.org/10.1016/j.jbusres.2020.07.026>
- Hitt, M.A., Bierman, L., Shimizu, K., & Kochhar, R. (2001). Direct and Moderating Effects of Human Capital on Strategy and Performance in Professional Service Firms: A Resource-Based Perspective. *Academy of Management Journal*, 44(1), 13-28. <https://doi.org/10.2307/3069334>
- Ho, H., & Kuvaas, B. (2020). Human resource management systems, employee well-being, and firm performance from the mutual gains and critical perspectives: The well-being paradox. *Human Resource Management*, 59(3), 235-253. <https://doi.org/10.1002/hrm.21990>
- Huber, G.P., & Power, D.J. (1985). Retrospective reports of strategic-level managers: Guidelines for increasing their accuracy. *Strategic Management Journal*, 6(2), 171-180. <https://doi.org/10.1002/smj.4250060206>
- Hu, L., & Bentler, P.M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, 3(4), 424-453. <https://doi.org/10.1037/1082-989X.3.4.424>
- Jiang, K., Lepak, D.P., Hu, J., & Baer, J.C. (2012). How Does Human Resource Management Influence Organizational Outcomes? A Meta-analytic Investigation of Mediating Mechanisms. *Academy of Management Journal*, 55(6), 1264-1294. American Society of Nephrology. <https://doi.org/10.5465/amj.2011.0088>
- Kahn, W.A. (1992). To Be Fully There: Psychological Presence at Work. *Human Relations*, 45(4), 321-349. <https://doi.org/10.1177/001872679204500402>
- Kast, F.E., & Rosenzweig, J. E. (1972). General Systems Theory: Applications for Organization and Management. *Academy of Management Journal*, 15(4), 447-465. <https://doi.org/10.2307/255141>
- Kehoe, R.R., & Han, J.H. (2020). An expanded conceptualization of line managers' involvement in human resource management. *Journal of Applied Psychology*, 105(2), 111-129. <https://doi.org/10.1037/apl0000426>
- Kellner, A., Cafferkey, K., & Townsend, K. (2019). Ability, Motivation and Opportunity theory: a formula for employee performance? *Elgar Introduction to Theories of Human Resources and Employment Relations* (311-323). Edward Elgar Publishing. <https://doi.org/10.4337/9781786439017.00029>
- Kellner, A., Townsend, K., Wilkinson, A., Lawrence, S.A., & Greenfield, D. (2016). Learning to manage: development experiences of hospital frontline managers. *Human Resource Management Journal*, 26(4), 505-522. <https://doi.org/10.1111/1748-8583.12119>
- Klaas, B.S., Semadeni, M., Klimchak, M., & Ward, A.K. (2012). High-performance work system implementation in small and medium enterprises: A knowledge-creation perspective. *Human Resource Management*, 51(4), 487-510. <https://doi.org/10.1002/hrm.21485>
- Kock, N. (2015). Common Method Bias in PLS-SEM. *International Journal of e-Collaboration*, 11(4), 1-10. <https://doi.org/10.4018/ijec.2015100101>

- Koraus, A., Kaščáková, Z., & Felcan, M. (2020). The impact of ability-enhancing HRM practices on perceived individual performance in it industry in Slovakia. *Central European Journal of Labour Law and Personnel Management*. <https://doi.org/10.33382/cejllpm.2020.04.03>
- Kroon, B., Van De Voorde, K., & Timmers, J. (2013). High performance work practices in small firms: a resource-poverty and strategic decision-making perspective. *Small Business Economics*, 41(1), 71-91. <https://doi.org/10.1007/s11187-012-9425-0>
- Lai, Y., Saridakis, G., & Johnstone, S. (2017). Human resource practices, employee attitudes and small firm performance. *International Small Business Journal: Researching Entrepreneurship*, 35(4), 470-494. <https://doi.org/10.1177/0266242616637415>
- Lattimore, R., Martyn, B., McCann, B., & Pearson, K. (1997). *A portrait of Australian Business: Results of the 1995 Business Longitudinal Survey*. (S. and T. Productivity Commission / Department of Industry, Ed.). Canberra: Australian Government Publishing Service.
- Lee, H.W., Pak, J., Kim, S., & Li, L.Z. (2019). Effects of Human Resource Management Systems on Employee Proactivity and Group Innovation. *Journal of Management*, 45(2), 819-846. <https://doi.org/10.1177/0149206316680029>
- Lepak, D.P., Liao, H., Chung, Y., & Harden, E.E. (2006). A Conceptual Review of Human Resource Management Systems in Strategic Human Resource Management Research. In Martocchio, J.J. (Ed.), *Research in Personnel and Human Resources Management* (25, 217-271). Bingley: Emerald Group Publishing Limited. [https://doi.org/10.1016/S0742-7301\(06\)25006-0](https://doi.org/10.1016/S0742-7301(06)25006-0)
- Marin-García, J.A., & Martínez-Tomas, J. (2016). Deconstructing AMO framework: A systematic review. *Intangible Capital*, 12(4), 1040-1087. <https://doi.org/10.3926/ic.838>
- Mayson, S., & Barrett, R. (2006). The ‘science’ and ‘practice’ of HRM in small firms. *Human Resource Management Review*, 16(4), 447-455. <https://doi.org/10.1016/j.hrmr.2006.08.002>
- Meuer, J. (2017). Exploring the Complementarities Within High-Performance Work Systems: A Set-Theoretic Analysis of UK Firms. *Human Resource Management*, 56(4), 651-672. John Wiley & Sons, Ltd. <https://doi.org/10.1002/hrm.21793>
- Nadeem, S., & Rahat, H. (2021). Examining the synergetic impact of ability-motivation-opportunity-enhancing high performance work practices. *Human Performance*, 34(3), 168-188. <https://doi.org/10.1080/08959285.2021.1920021>
- Navío-Marco, J., Solórzano-García, M., & Palencia-González, F.J. (2019). Human resource management as key pillar of company strategy: Analysis of the line managers’ perception. *Journal of Management & Organization*, 25(02), 175-188. <https://doi.org/10.1017/jmo.2018.49>
- Oppenauer, V., & Van De Voorde, K. (2018). Exploring the relationships between high involvement work system practices, work demands and emotional exhaustion: a multi-level study. *The International Journal of Human Resource Management*, 29(2), 311-337. <https://doi.org/10.1080/09585192.2016.1146321>
- Paauwe, J., Wright, P., & Guest, D. (2012). HRM and performance: What we know and where should we go? In Paauwe, J., Wright, P., & Guest, D. (Eds.), *HRM and Performance: Achievements and Challenges* (1-13). Chichester, UK: John Wiley & Son.
- Pascual, J.V., & Comeche, J.M. (2015). The effect of high performance work systems on small and medium size enterprises. *Journal of Business Research*, 68(7), 1463-1465. <https://doi.org/10.1016/j.jbusres.2015.01.034>
- Patel, P.C., Messersmith, J.G., & Lepak, D.P. (2013). Walking the Tightrope: An Assessment of the Relationship between High-Performance Work Systems and Organizational Ambidexterity. *Academy of Management Journal*, 56(5), 1420-1442. <https://doi.org/10.5465/amj.2011.0255>
- Peña-García-Pardo, I. (2009). *Dirección estratégica de recursos humanos: revisión teórica y aplicación empírica*. Universidad Castilla-La Mancha, Cuenca.

- Peña, I., Sánchez de Pablo, J.D., Hernández, F., & Villasalero, M. (2015). Linking high-performance work systems and business performance: the role of employees' attitudes and behaviours. *European J. of International Management*, 9(5), 648. <https://doi.org/10.1504/EJIM.2015.071549>
- Pfeffer, J. (1998). Seven Practices of Successful Organizations. *California Management Review*, 40(2), 96-124. <https://doi.org/10.2307/41165935>
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., & Podsakoff, N.P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Podsakoff, P.M., MacKenzie, S.B., & Podsakoff, N.P. (2012). Sources of Method Bias in Social Science Research and Recommendations on How to Control It. *Annual Review of Psychology*, 63(1), 539-569. <https://doi.org/10.1146/annurev-psych-120710-100452>
- Ramos-González, M.M., Rubio-Andrés, M., & Sastre-Castillo, M.Á. (2022). Effects of socially responsible human resource management (SR-HRM) on innovation and reputation in entrepreneurial SMEs. *International Entrepreneurship and Management Journal*, 18(3), 1205-1233. <https://doi.org/10.1007/s11365-020-00720-8>
- Rauch, A., & Hatak, I. (2016). A meta-analysis of different HR-enhancing practices and performance of small and medium sized firms. *Journal of Business Venturing*, 31(5), 485-504. Elsevier Inc. <https://doi.org/10.1016/j.jbusvent.2016.05.005>
- Rich, B.L., Lepine, J.A., & Crawford, E.R. (2010). Job Engagement: Antecedents and Effects on Job Performance. *Academy of Management Journal*, 53(3), 617-635. <https://doi.org/10.5465/amj.2010.51468988>
- Rigdon, E.E. (2016). Choosing PLS path modeling as analytical method in European management research: A realist perspective. *European Management Journal*, 34(6), 598-605. Pergamon. <https://doi.org/10.1016/j.emj.2016.05.006>
- Rigdon, E.E., Sarstedt, M., & Ringle, C.M. (2017). On Comparing Results from CB-SEM and PLS-SEM: Five Perspectives and Five Recommendations. *Marketing ZFP*, 39(3), 4-16. Verlag Franz Vahlen GmbH. <https://doi.org/10.15358/0344-1369-2017-3-4>
- Ringle, C.M., Wende, S., & Becker, J.M. (2022). *SmartPLS 4*. Oststeinbek: SmartPLS.
- Sánchez-Marín, G., Lozano-Reina, G., & Beglaryan, M. (2022). HRM Policies and SMEs Performance: The Moderating Role of CSR Orientation. *Central European Business Review*, 11(1), 85-110. <https://doi.org/10.18267/j.cebr.279>
- Sanders, K., & Yang, H. (2016). The HRM Process Approach: The Influence of Employees' Attribution to Explain the HRM-Performance Relationship. *Human Resource Management*, 55(2), 201-217. <https://doi.org/10.1002/hrm.21661>
- Sarstedt, M., Hair, J.F., Ringle, C.M., Thiele, K.O., & Gudergan, S.P. (2016). Estimation issues with PLS and CBSEM: Where the bias lies! *Journal of Business Research*, 69(10), 3998-4010. Elsevier. <https://doi.org/10.1016/j.jbusres.2016.06.007>
- Sels, L., De Winne, S., Maes, J., Delmotte, J., Faems, D., & Forrier, A. (2006). Unravelling the HRM-Performance Link: Value-Creating and Cost-Increasing Effects of Small Business HRM*. *Journal of Management Studies*, 43(2), 319-342. <https://doi.org/10.1111/j.1467-6486.2006.00592.x>
- Shahzad, K., Arenius, P., Muller, A., Rasheed, M.A., & Bajwa, S.U. (2019). Unpacking the relationship between high-performance work systems and innovation performance in SMEs. *Personnel Review*, 48(4), 977-1000. <https://doi.org/10.1108/PR-10-2016-0271>
- Shmueli, G., & Koppius, O. (2011). Predictive Analytics in Information Systems Research. *MIS Quarterly*, 35(3), 553-572. <https://doi.org/10.2307/23042796>
- Shmueli, G., Ray, S., Velasquez-Estrada, J.M., & Chatla, S.B. (2016). The elephant in the room: Predictive performance of PLS models. *Journal of Business Research*, 69(10), 4552-4564. <https://doi.org/10.1016/j.jbusres.2016.03.049>

- Shmueli, G., Sarstedt, M., Hair, J.F., Cheah, J.H., Ting, H., Vaithilingam, S. et al. (2019). Predictive model assesment in PLS-SEM: Guidelines for using PLSpredict. *European Journal of Marketing*, 53(11), 2322-2347. <https://doi.org/10.1108/EJM-02-2019-0189>
- Siemens, E., Roth, A.V., & Balasubramanian, S. (2008). How motivation, opportunity, and ability drive knowledge sharing: The constraining-factor model. *Journal of Operations Management*, 26(3), 426-445. <https://doi.org/10.1016/j.jom.2007.09.001>
- Subramony, M. (2009). A meta-analytic investigation of the relationship between HRM bundles and firm performance. *Human Resource Management*, 48(5), 745-768. <https://doi.org/10.1002/hrm.20315>
- Tzafirir, S.S. (2005). The relationship between trust, HRM practices and firm performance. *The International Journal of Human Resource Management*, 16(9), 1600-1622. <https://doi.org/10.1080/09585190500239135>
- Venkatraman, N., & Ramanujam, V. (1987). Measurement of Business Economic Performance: An Examination of Method Convergence. *Journal of Management*, 13(1), 109-122. <https://doi.org/10.1177/014920638701300109>
- Wall, T.D., Michie, J., Patterson, M., Wood, S.J., Sheehan, M., Clegg, C.W. et al. (2004). On the validity of subjective measures of company performance. *Personnel Psychology*, 57(1), 95-118. <https://doi.org/10.1111/j.1744-6570.2004.tb02485.x>
- Wright, P.M., & Kehoe, R.R. (2008). Human resource practices and organizational commitment: A deeper examination. *Asia Pacific Journal of Human Resources*, 46(1), 6-20. John Wiley & Sons, Ltd. <https://doi.org/10.1177/1038411107086540>
- Yang, J.L. (2004). *Management for SMEs In China*. Fundan University Publications.

Intangible Capital, 2024 (www.intangiblecapital.org)



Article's contents are provided on an Attribution-Non Commercial 4.0 Creative commons International License. Readers are allowed to copy, distribute and communicate article's contents, provided the author's and Intangible Capital's names are included. It must not be used for commercial purposes. To see the complete license contents, please visit <https://creativecommons.org/licenses/by-nc/4.0/>.