Innovativeness as a determinant of entrepreneurial orientation: analysis of the hotel sector

Felipe Hernández-Perlines, Manuel Alejandro Ibarra Cisneros, Domingo Ribeiro-Soriano & Helena Mogorrón-Guerrero

To cite this article: Felipe Hernández-Perlines, Manuel Alejandro Ibarra Cisneros, Domingo Ribeiro-Soriano & Helena Mogorrón-Guerrero (2020) Innovativeness as a determinant of entrepreneurial orientation: analysis of the hotel sector, Economic Research-Ekonomska Istraživanja, 33:1, 2305-2321, DOI: 10.1080/1331677X.2019.1696696

To link to this article: https://doi.org/10.1080/1331677X.2019.1696696
Innovativeness as a determinant of entrepreneurial orientation: analysis of the hotel sector

Felipe Hernández-Perlines\textsuperscript{a}, Manuel Alejandro Ibarra Cisneros\textsuperscript{b}, Domingo Ribeiro-Soriano\textsuperscript{c} and Helena Mogorrón-Guerrero\textsuperscript{d}

\textsuperscript{a}Department of Business Administration, University of Castilla-La Mancha, Toledo, Spain; \textsuperscript{b}Autonomous University of Baja California, Mexicali, México; \textsuperscript{c}Department of Business Administration, University of Valencia, Valencia, Spain; \textsuperscript{d}Faculty of Economics, University of Valencia, Valencia, Spain

ABSTRACT
This paper analyses entrepreneurial orientation as a composite formed of innovation, proactiveness and risk-taking. The empirical data for this study were gathered from a survey sent to hotel managers. The fieldwork was carried out between January and June 2018. The process provided 102 valid questionnaires. Two methods were used: structural equation modelling (PLS-SEM) and fuzzy-set qualitative comparative analysis (fsQCA). This study makes six key contributions and findings. First, the use of these two methods provides robust and reliable results. Second, reliability and validity values for innovativeness, proactiveness and risk-taking are satisfactory. Third, the operationalisation of entrepreneurial orientation using the latent variables of innovativeness, proactiveness and risk-taking is satisfactory in terms of reliability and validity. Fourth, these three dimensions have a positive and significant influence on entrepreneurial orientation. Fifth, innovativeness is the most important dimension of entrepreneurial orientation. Sixth, innovativeness is a necessary and sufficient condition for entrepreneurial orientation.

ARTICLE HISTORY
Received 2 August 2019
Accepted 10 November 2019

KEYWORDS
entrepreneurial orientation; innovativeness; hotel sector; PLS-SEM; fsQCA

JEL CLASSIFICATION
L26; L83; M10

1. Introduction

Growing competition is forcing companies to seek new ways to be more aggressive (Anjani & Yasa, 2019). Entrepreneurship can offer a way to compete in an increasingly fierce market through innovativeness, proactiveness and risk-taking (Ryiadi & Yasa, 2016).

The link between entrepreneurial orientation and company performance has led to an increase in the number of studies that explore how they relate to one another (Basso, Fayolle, & Bouchard, 2009; Hernández-Perlines, 2018; Rauch, Wiklund, Lumpkin, & Frese, 2009). Most studies have focused on the industrial sector, a few on services and only a handful on the hotel sector (Tajeddini, 2010). This study fills this gap by examining the dimensions of entrepreneurial orientation in the hotel sector.
sector (Hernández-Perlines, 2016), particularly innovativeness (Gomezelj Omerzel & Smolčič Jurdana, 2016; Hernández-Perlines, Ariza-Montes, Han, & Law, 2019). This study focuses on the hotel sector, which is one of the most important sectors in the world. In 2018, the hotel sector generated 10.4% of global GDP and 20% of new jobs, or approximately 320 million jobs worldwide (World Travel & Tourism Council, 2018).

Regardless of which of the multiple ways of conceptualising entrepreneurial orientation is used (see Lomberg, Urbig, Stöckmann, Marino, & Dickson, 2017; Rauch et al., 2009), the consensus is that it influences company performance (Irwin et al., 2018; Peake, Barber, McMillan, Bolton, & Coder, 2019), reflecting its ability (Anjani & Yasa, 2019) to improve competitiveness (Monteiro, Soares, & Rua, 2019). This study follows the view that entrepreneurial orientation means the permanent search for innovative capacity, proactiveness and the willingness to take moderate risks (Miller, 1983).

This paper tackles the research question of whether innovativeness is the most important dimension of entrepreneurial orientation. Although entrepreneurial orientation is a multidimensional concept formed of innovativeness, proactiveness and risk-taking, some experts argue that each of these dimensions has a multiple role (Dai, Maksimov, Gilbert, & Fernhaber, 2014; Lechiner & Gudmundsson, 2014; McCarthy, Puffer, & Lamin, 2018).

The hotel sector was chosen as the research context for this study because tourism has become an essential source of wealth in many countries. This prominent role of tourism has led to considerable research on the behaviour of companies and their stakeholders (Gomezelj Omerzel & Smolčič Jurdana, 2016). Spain is no exception. According to data from the Spanish National Statistics Institute (INE), in 2018, there were 14,687 hotels with a total of 1,495,000 hotel beds.

Data were gathered from the answers to a questionnaire that was sent via email to hotel managers of 2- to 5-star hotels throughout Spain. These hotels were listed in the official hotel directory published by Turespàña. Respondents received the questionnaire between January and June 2018. Two methods were used: partial least squares structural equation modelling (PLS-SEM) and fuzzy-set qualitative comparative analysis (fsQCA). The use of two these methods enhanced the hypothesis testing and provided the proposed model with robustness and rigor (Hernández-Perlines, 2016).

The paper is structured as follows. Following this introduction, Section 2 discusses the main theoretical aspects of entrepreneurial orientation and presents the proposed model. Section 3 explains the research method, emphasising the two methods used for the analysis. Section 4 presents the results of the hypothesis testing. Finally, Section 5 presents the main conclusions and implications for future research, together with the limitations of the study.

2. Theory and hypotheses

In recent years, entrepreneurial orientation has attracted considerable conceptual and empirical attention, leading to a rich body of knowledge (Arzubiaga, Iturralde, & Maseda, 2012; Basso et al., 2009; Covin & Miller, 2014; Hernández-Perlines, 2018;
Rauch et al., 2009; Rigtering, Eggers, Kraus, & Chang, 2017). This great interest partly stems from the fact that both entrepreneurial orientation and one of its dimensions – namely, innovativeness – are fundamental factors that determine the competitive behaviour of companies in an increasingly globalised market subject to fierce competition (Gomezelj Omerzel & Smolčić Jurdana, 2016).

After a review of the literature on entrepreneurship, Miller (1983) defined entrepreneurial orientation as company behaviour that is characterised by innovativeness, proactiveness and risk-taking. Entrepreneurial orientation reflects how a company works (Lumpkin & Dess, 1996) because it is an expression of the company’s willingness to adopt a certain behaviour (Wiklund, 1999). However, the definition of entrepreneurial orientation has undergone multiple reformulations. Some authors have extended the earlier definition, stressing that entrepreneurial orientation depends on the degree to which change, innovativeness, risk-taking and aggressive competition are promoted (Covin & Slevin, 1991; Wiklund & Shepherd, 2005). Entrepreneurial orientation can also be defined as companies’ ability to carry out activities related to innovativeness, risk-taking and pioneering new actions (Contreras & dos Santos, 2018; George & Marino, 2011). Therefore, entrepreneurial orientation refers to a decision-making process that affects companies’ willingness to innovate, be more proactive and aggressive than competitors, and take risks (Engelen, Gupta, Strenger, & Brettel, 2015; Hernández-Perlines, 2016).

Rauch et al. (2009) found that most studies use innovativeness, proactiveness and risk-taking to define entrepreneurial orientation. In this research, we embrace this definition by conceptualising entrepreneurial orientation as the continuous search for innovativeness, a sense of proactiveness and the willingness to take moderate risks (Caseiro & Coelho, 2019; Miller, 1983; Queirós, Braga, & Correia, 2019). Innovativeness refers to companies’ ability to support new ideas, experiment, introduce new products and use creative processes (Chandra, Styles, & Wilkinson, 2009; Kropp, Lindsay, & Shoham, 2006; Miller & Friesen, 1983). Proactiveness can be defined as companies’ ability to engage resources in introducing new products and services before competitors (Covin & Slevin, 1991; Rauch et al., 2009). Finally, risk-taking involves the creation of bold actions using substantial resources (Lumpkin & Dess, 1996) that are most appropriate (Madison, Runyan, & Swinney, 2014).

Studies of the hotel sector have measured entrepreneurial orientation in a range of ways. Some researchers have added autonomy, learning, achievements and competitive aggressiveness to the aforementioned dimensions (Krauss, Frese, Friedrich, & Unger, 2005). Others have added staff responsibilities (Peters, Furtscheller, Wong, & Kraus, 2010). Some authors have considered just two dimensions as forming entrepreneurial orientation: innovativeness and proactiveness (Tajeddini, 2010). Finally, others have argued that entrepreneurial orientation can be measured using proactiveness and risk-taking (Banalieva, Puffer, McCarthy, & Vaiman, 2018; Pradthana & Kaedsiri, 2013). However, the original conceptualisation has been the most popular way of measuring entrepreneurial orientation (Miller, 1983). This conceptualisation has been used in numerous studies (Boonchoo, Tsang, & Wadeson, 2011; Jogaratnam & Tse, 2004; Li, Liu, & Zhao, 2006). Therefore, in this study, entrepreneurial orientation is measured using the dimensions of innovativeness, proactiveness and risk-taking.
Entrepreneurial orientation can be measured at the individual level or the firm level (Peake et al., 2019; Rigtering et al., 2017). This study considers entrepreneurial orientation at the hotel level (i.e. the company level) as a reflection of the behaviour that affects the whole company (Irwin et al., 2018). This approach is consistent with that adopted in most studies of entrepreneurial orientation in the hotel sector (Hernández-Perlina, 2016). Based on these considerations, the following hypothesis (and proposition) is formulated:

Proposition 1; H1: Entrepreneurial orientation is defined by the dimensions of innovativeness, proactiveness and risk-taking.

Another consideration is whether entrepreneurial orientation is unidimensional or multidimensional (Rauch et al., 2009). In this study, entrepreneurial orientation is measured using the dimensions of innovativeness, proactiveness and risk-taking, which can be considered different dimensions of entrepreneurial orientation (Madison et al., 2014; Peake et al., 2019). Therefore, the first hypothesis (and proposition) can be divided into three sub-hypotheses (or sub-propositions):

Proposition 1a; H1a: Innovativeness is a dimension of entrepreneurial orientation.

Proposition 1b; H1b: Proactiveness is a dimension of entrepreneurial orientation.

Proposition 1c; H1c: Risk-taking is a dimension of entrepreneurial orientation.

As discussed earlier, entrepreneurial orientation can be conceived as a multidimensional construct with different perspectives (Covin & Lumpkin, 2011; Wang, Lo, & Weng, 2019, 2019). Accordingly, several studies have shown that for a company to have entrepreneurial orientation, these three dimensions must co-vary positively (Covin and Slevin, 1989; Covin & Wales, 2012; Miller, 1983). By contrast, other studies have shown that every dimension of entrepreneurial orientation plays a different role. This study follows the latter approach, so every dimension of entrepreneurial orientation is assumed to play a different role (Dai et al., 2014; Lumpkin & Dess, 1996).

Innovation has a special place in the literature and is usually present in all business processes (Alshanty & Emeagwali, 2019; Sharma & Chrisman, 1999). Innovation is an important research topic when analysing the sustainable competitive advantage of firms (McDowell, Peake, Coder, & Harris, 2018). Nevertheless, the role of innovation as a key factor in business performance has changed in recent years as a result of globalisation and greater international competition (Leal-Rodríguez & Albort-Morant, 2016; Pustovrh, Jaklič, Martin, & Rašković, 2017). Innovativeness is the firm’s ability to exploit knowledge to generate new products, services and processes (McDowell et al., 2018). Innovation always entails a certain degree of risk, and satisfactory results are not always guaranteed, although it is widely accepted that companies that innovate perform better and are more likely to survive (Leal-Rodríguez & Albort-Morant, 2016). In all conceptualisations of entrepreneurial orientation, innovativeness is a common dimension (Covin & Miller, 2014; Sozuer, Altuntas, & Semercioz, 2017). In addition, entrepreneurial orientation and innovativeness are highly correlated because both are positively related to the success of the business (Peake et al., 2019).

Innovativeness is the tendency of firms to participate in and support new ideas that may lead to new technological products, services or processes (Anjani & Yasa, 2019; Lumpkin & Dess, 1996). This trend allows companies to create a broad set of skills, which
are valuable tools for competitiveness (Gomezelj Omerzel & Smolčić Jurdana, 2016) in an ever-changing business environment (Ahimbisibwe & Abaho, 2013; Teixeira & Ferreira, 2019). Innovative capacity is linked to the success of the company as a result of the adoption and implementation of new ideas, processes and/or products (Prifti & Alimehmeti, 2017).

Innovation requires the deployment of resources to offset the initial investment to make it profitable (Kreiser, Marino, Kuratko, & Weaver, 2013). In other words, the higher the level of innovativeness, the better the expected outcome of the company should be (Mirjana, Aleksic, & Merkac-Skok, 2018) because innovation positively affects firm performance (Anjani & Yasa, 2019). Innovativeness describes a process that involves the development and exploitation of new knowledge (O’Raghallaigh, Sammon, & C. Murphy, 2011). Innovation and innovative capacity have been the focus of the work of many scholars of the hotel sector (Gomezelj Omerzel & Smolčić Jurdana, 2016; Hernández-Perlines et al., 2019). Innovativeness in the service sector, which includes the hotel sector, cannot be conceived in the same way as innovativeness in the industrial sector. Innovativeness in the hotel sector is based on a set of skills that can be combined in different ways to enhance competitiveness (Mattson, Sundbo, & Fussing-Jensen, 2005; Otterbacher & Gnoth, 2005). In the tourism sector, the response to customer needs is a key source of innovativeness, which is a key factor to be competitive (Gomezelj Omerzel & Smolčić Jurdana, 2016). Currently, competition in the hotel sector requires firms to adapt to changes in the environment through innovation (Martínez-Ros & Orfila-Sintes, 2009), particularly technological innovation (Buhalis, 1998; Camisón-Haba, Clemente-Almendros, & Gonzalez-Cruz, 2019). These considerations lead to the formulation of the following hypothesis (or proposition):

Proposition 2; H2: Innovativeness is the dimension of entrepreneurial orientation with the greatest positive impact on entrepreneurial orientation in the hotel sector.

The proposed conceptual model appears in Figure 1.

3. Method

3.1. Sample and data collection

Given the nature of this research and the lack of secondary data, a questionnaire was designed for data collection. The research targeted 2- to 5-star Spanish hotels listed in the Turespaña Official Hotel Guide. First, the questionnaire was validated using a pre-test, in which experts in entrepreneurial orientation and four hotel managers participated. The contents of the questionnaire were thus validated. The questionnaire was then distributed via the LimeSurvey v2.5 online survey tool. This open-code online application for survey management was used to send participants (hotel managers) an e-mail together with a cover letter introducing the study. The fieldwork was conducted between January and June 2018. The fieldwork provided 124 valid surveys (Tables 1 and 2).

According to the G* Power 3.1.9.2 program (Faul, Erdfelder, Lang, & Buchner, 2007), the statistical power of the sample is 0.966 (greater than the minimum of 0.8). Therefore, the statistical power of the sample of 124 cases is acceptable, assuming a
standard error of 0.05 and an effect size of 0.3, using the weighting as per Cohen (1988, 1992) (Figure 2).

**3.2. Data analysis: combination of methods**

Two data analysis methods were used to test the hypotheses: partial least squares structural equation modelling (SEM-PLS) and fuzzy-set qualitative comparative
analysis (fsQCA). PLS-SEM was the most suitable method for this research for three reasons. First, PLS-SEM has a predictive nature (Hair, Risher, Sarstedt, & Ringle, 2019; Sarstedt, Ringle, Smith, Reams, & Hair, 2014). Second, PLS-SEM can be used to identify different causal relationships (Astrachan, Patel, & Wanzenried, 2014; Jöreskog & Wold, 1982). Third, PLS-SEM is less demanding than other methods in terms of minimum sample size (Henseler, Ringle, & Sinkovics, 2009). FsQCA is a variant of qualitative comparative analysis (QCA), which reveals the necessary or sufficient conditions to produce an outcome of interest (Huarng, Yu, & Rodriguez-Garcia, 2019). This qualitative method is useful for analysing social phenomena using small data sets, enabling good management of uncertainty (Ragin, 2000; 2008). FsQCA has been applied to solve various types of problems (Huarng et al., 2019). SmartPLS v.3.2.8 (Ringle, Wende, & Becker, 2015) was to perform the PLS-SEM, and fsQCA v.3.1 (Ragin & Sean, 2016) was used for the fsQCA.

3.3. Variable measurement

To measure each of the dimensions of entrepreneurial orientation, this study used the scale proposed by Miller (1983) and Covin and Slevin (1989), which was later reformulated by Covin and Miller (2014). The three dimensions of entrepreneurial
orientation (i.e. innovativeness, proactiveness and risk-taking) were measured using three items each. A 7-point Likert scale was used to record managers’ responses.

Size, age, chain and location were used as control variables. These variables enabled analysis of the common variance between predictors and helped avoid over-estimated parameters. However, a comparison of the results of three statistical analyses (one including all control variables, one including only control variables significantly related to the dependent variable and one excluding control variables) revealed almost identical parameters, with no change in significance levels or confidence intervals. Therefore, following the recommendations of Bernerth and Aguinis (2016), we did not include any control variables in our analysis.

4. Results

The results are presented in two sections, one for each analysis technique. First, the results of the PLS-SEM are presented, followed by the results of the fsQCA.

4.1. Results for PLS

A two-stage process was used to operationalise entrepreneurial orientation using PLS-SEM. In the first stage, entrepreneurial orientation was constructed by repeating the items of the three dimensions. To avoid problems of collinearity, the values of the latent variables were considered in the second stage.

First, we ensured that the variables were reliable and had adequate levels of convergent and discriminant validity. Barclay, Higgins, and Thompson (1995), Roldán and Sánchez-Franco (2012) and Hair et al. (2019) propose evaluation of the measurement model using five indicators. The first is composite reliability. Fornell and Larcker (1981) recommend values higher than 0.7 for composite reliability. The values in this study can be described as ‘good’ according to Hair et al. (2019) because they lie between 0.7 and 0.9. The values do not present redundancy problems because no value is greater than 0.95 (Drolet & Morrison, 2001, Diamantopoulos, Sarstedt, Fuchs, Wilczynski, & Kaiser, 2012). The variables have acceptable composite reliability values (Table 3).

The second indicator is Cronbach’s alpha. Fornell and Larcker (1981) recommend Cronbach’s alpha values to be greater than 0.7. As Table 3 shows, the Cronbach’s alpha values exceed this threshold.

The third indicator is rho A, which enables calculation of a reliability value that lies between the two previous extreme values (composite reliability and Cronbach’s alpha). The rho A, which was proposed by Dijkstra and Henseler (2015), should be greater than 0.7 (Dijkstra & Henseler, 2015) and should lie between the composite reliability values and the Cronbach’s alpha values (Hair et al., 2019). These conditions hold for our data (Table 3).

The fourth indicator is the average variance extracted (AVE). The AVE enables evaluation of the convergent validity of the composites. Fornell and Larcker (1981) recommend a value greater than 0.5 for the AVE. This criterion holds in our study (Table 3).
The fifth indicator is the discriminant validity, which is evaluated by confirming that the correlations between each pair of constructs does not exceed the value of the square root of the AVE of each construct. The heterotrait-monotrait ratio (HTMT) is also used. For discriminant validity to hold, the values of the HTMT must be less than 0.85 (Henseler, Ringle, & Sarstedt, 2015). As Table 3 shows, discriminant validity holds because these criteria are met.

The structural analysis model confirms that innovativeness, proactiveness and risk-taking are dimensions that positively and significantly influence entrepreneurial orientation. As Table 4 shows, the three dimensions have a positive path (> 0.1), which is the limit established for determining the effect of one variable on another (Hair et al., 2019). Furthermore, by applying the bootstrapping method on 5,000 one-tailed subsamples, the t-values are significant at 0.001. In addition, the three selected dimensions already explain 99.6% of the variance, so no further dimension of entrepreneurial orientation needs to be included. Therefore, the first hypothesis is confirmed. In addition, the three dimensions have a positive influence on entrepreneurial orientation, which confirms the three sub-hypotheses of H1.

Comparing the path coefficients of the three dimensions shows that the innovativeness coefficient is the highest. Therefore, the second hypothesis is supported (see Figure 3).

We also calculated the goodness of fit for the structural model using the standardised root mean square residual (SRMR). A model can be considered to have a good fit if the SRMR is less than 0.08 (Hair, Sarstedt, Hopkins, & Kuppelwierser, 2014). In this study, the SRMR was 0.07, which indicates that the model has a good fit.
4.2. Results for fsQCA

For the fsQCA, the 7-point Likert scale responses were transformed into fuzzy-set responses. First, the data set was checked to eliminate missing values. There were no missing values for our sample. Second, all composites were calculated by multiplying the scores of their constituent items. Subsequently, the answers were recalibrated using three thresholds (Woodside, 2013): the 10th percentile (low agreement or fully outside the set), 50th percentile (moderate agreement or neither inside nor outside the set) and 90th percentile (high agreement or fully inside the set). Finally, necessity and sufficiency analyses were performed to evaluate the effect of the different composites. This procedure has been used in previous studies (e.g. Ruiz-Palomino, Hernández-Perlines, Jiménez-Estévez, & Gutiérrez-Broncano, 2019). FsQCA models yield three possible solutions: complex, parsimonious and intermediate. This paper focuses on the intermediate solution, as per Ragin’s (2008) recommendations.

The results (Table 5) reveal two necessary conditions for hotels to have entrepreneurial orientation. The first is innovativeness, which has a consistency score of 0.94. This value is higher than 0.90 (Ragin, 2008), which is the threshold used to indicate necessity. The second necessary condition is for innovativeness, proactiveness and risk-taking to be present at the same time. This combination has a consistency score of 0.95.

According to Eng and Woodside (2012), when consistency is greater than 0.75, the fsQCA model is informative. Our analysis reveals two paths that lead to entrepreneurial orientation (Table 6). The first is innovativeness, which is capable of explaining 92.15% of cases for which entrepreneurial orientation is present. The second is the combination of innovativeness, proactiveness and risk-taking, which is capable of explaining 95.75% of cases for which entrepreneurial orientation is present. Innovativeness is present in both paths, which implies that innovativeness must be present for hotels to have entrepreneurial orientation.

![Figure 3. Structural model. Source: own research.](image-url)
5. Conclusions

This study explored the dimensions of entrepreneurial orientation in the hotel industry. To test our hypotheses (or propositions), two data analysis methods were used. The use of these two methods provides robust and rigorous conclusions (Hernández-Perlines, Moreno-García, & Yáñez-Araque, 2016; Ruiz-Palomino et al., 2019).

The composites in this study (innovativeness, proactiveness and risk-taking) have adequate reliability and validity values (Henseler et al., 2015). In addition, the construction of entrepreneurial orientation in two stages using latent values is a suitable approach because this composite has adequate reliability and validity values based on the thresholds given by Henseler et al. (2015). The proposed model also has adequate goodness-of-fit values (Hair et al., 2019), indicating that this model is suitable for the hotel sector.

The findings of this study show that, like in other sectors, entrepreneurial orientation in the hotel sector results from the combination of innovativeness, proactiveness and risk-taking (Caseiro & Coelho, 2019; Miller, 1983). This finding supports previous studies (Boonchoo et al., 2011; Hernández-Perlines, 2016; Tajeddini, 2010). The second conclusion is that these three dimensions influence entrepreneurship differentially. This result is also consistent with the findings of previous studies (Dai et al., 2014; Lumpkin & Dess, 1996). The third conclusion is that innovativeness is the most relevant of these three dimensions, with the results showing that hotels cannot have entrepreneurial orientation without innovativeness. This finding is consistent with those of previous studies (Peake et al., 2019). Moreover, innovativeness is the basic dimension of entrepreneurial orientation for competitiveness in the hotel sector. This finding concurs with the findings of previous studies that have shown that innovativeness is a key element of the competitiveness of companies in general (Leal-Rodríguez & Albort-Morant, 2016) and hotels in particular (Gomezelj Omerzel & Smolčić Jurdana, 2016; Hernández-Perlines et al., 2019).

### Table 5. Analysis of necessary conditions from fsQCA.

| Outcome: Entrepreneurial Orientation (fuzzy set) | Consistency | Coverage |
|------------------------------------------------|-------------|----------|
| Inn                                            | 0.94325     | 0.81034  |
| Proac                                          | 0.73289     | 0.87813  |
| Risk-T                                         | 0.64375     | 0.75829  |
| Inn * Proac                                    | 0.66578     | 0.69079  |
| Inn * Risk-T                                   | 0.57286     | 0.63528  |
| Inn * Proac * Risk-T                           | 0.95152     | 0.87693  |

Note: Inn = Innovativeness; Proac = Proactiveness; Risk-T = Risk-Taking.
Source: own research.

### Table 6. Intermediate solution for the analysis of sufficient conditions.

| Raw coverage | Unique coverage | Consistency |
|--------------|-----------------|-------------|
| Inn          | 0.94325         | 0.92158     |
| Proac        | 0.73289         | 0.69947     |
| Risk-T       | 0.64375         | 0.65371     |
| Inn * Proac  | 0.75334         | 0.71487     |
| Inn * Risk-T | 0.74801         | 0.70893     |
| Proac * Risk-T | 0.69483      | 0.68431     |
| Inn * Proac * Risk-T | 0.72892       | 0.95735     |

Note: Inn = Innovativeness; Proac = Proactiveness; Risk-T = Risk-Taking.
Source: own research.
This research has a series of limitations whose resolution may present opportunities for future research. The data were obtained from a questionnaire of Likert-type items, which was completed by one informant per hotel. To overcome this limitation, we followed the recommendations of Rong and Wilkinson (2011), Woodside (2013) and Woodside, Prentice, and Larsen (2015) to select the most suitable questionnaire recipient in the company (senior management, based on the recommendations of Dal Zotto & Van Kranenburg, 2008). In addition, questionnaires were sent via email, as per the recommendations of Torchiano, Tomassetti, Ricca, Tiso, and Reggio (2013). In this email, participation was requested, the research aims were explained, and a contact email address was provided to address any concerns by respondents. Participants later received emails reminding them to complete the questionnaire if they had not already done so. Another limitation relates to the type of research. This is a cross-sectional study, which prevents drawing definitive conclusions regarding causality. We thus recommend experiments or longitudinal studies to help reinforce the findings of causality. Another limitation is that the data refer only to Spain. Because results were based on a sample of respondents from Spain, additional studies should explore entrepreneurial orientation in the hotel sector in other countries. Finally, studies could be carried out to compare the results in different sectors such as the industrial sector and the hotel sector.

Disclosure statement
No potential conflict of interest was reported by the authors.

ORCID
Felipe Hernández-Perlines http://orcid.org/0000-0002-6409-5593

References
Ahimbisibwe, G. M., & Abaho, E. (2013). Export entrepreneurial orientation and export performance of SMEs in Uganda. Global Advanced Research Journal of Management and Business Studies, 2(1), 56–62.
Alshanty, A. M., & Emeagwali, O. L. (2019). Market-sensing capability, knowledge creation and innovation: The moderating role of entrepreneurial-orientation. Journal of Innovation & Knowledge, 4(3), 171–178. doi:10.1016/j.jik.2019.02.002
Anjani, A. M. D. P., & Yasa, N. N. K. (2019). The role of product innovation in mediating the influence of entrepreneurship orientation on marketing performance (A study on silver craft MSMEs in Celuk, Gianyar). Journal of Business Management and Economic Research, 3(3), 1–18. doi:10.29226/TR1001.2019.109
Arzubiaga, U., Iturralde, T., & Maseda, A. (2012). La medición de la Orientación Emprendedora en las empresas familiares: una revisión crítica de la literatura. Revista de Empresa Familiar, 2(2), 57–71.
Astrachan, C. B., Patel, V. K., & Wanzenried, G. (2014). A comparative study of CB-SEM and PLS-SEM for theory development in family firm research. Journal of Family Business Strategy, 5(1), 116–128. doi:10.1016/j.jfbs.2013.12.002
Banalieva, E. R., Puffer, S. M., McCarthy, D. J., & Vaiman, V. (2018). The impact of communist imprint prevalence on the risk-taking propensity of successful Russian entrepreneurs. European Journal of International Management, 12(1/2), 158–190. doi:10.1504/EJIM.2018.089032
Barclay, D., Higgins, C., & Thompson, R. (1995). The partial least squares (PLS) approach to causal modeling: Personal computer adoption and use as an illustration. *Technology Studies*, 2(2), 285–309.

Basso, O., Fayolle, A., & Bouchard, V. (2009). Entrepreneurial orientation: The making of a concept. *The International Journal of Entrepreneurship and Innovation*, 10(4), 313–321. doi: 10.5367/000000009790012327

Bernerth, J. B., & Aguinis, H. (2016). A critical review and best-practice recommendations for control variable usage. *Personnel Psychology*, 69(1), 229–285. doi:10.1111/peps.12103

Boonchoo, P., Tsang, D., & Wadeson, N. (2011). Entrepreneurial marketing typology: The exploratory study of Thai hotels. Paper presented at the Academy of Marketing Conference, Liverpool, UK.

Buhalis, D. (1998). Strategic use of information technologies in the tourism industry. *Tourism Management*, 19(5), 409–421. doi:10.1016/S0261-5177(98)00038-7

Camisón-Haba, S., Clemente-Almendros, J. A., & Gonzalez-Cruz, T. (2019). How technology-based firms become also highly innovative firms? The role of knowledge, technological and managerial capabilities, and entrepreneurs’ background. *Journal of Innovation & Knowledge*, 4(3), 162–170.

Caseiro, N., & Coelho, A. (2019). The influence of Business Intelligence capacity, network learning and innovativeness on startups performance. *Journal of Innovation & Knowledge*, 4(3), 139–145. doi:10.1016/j.jik.2018.03.009

Chandra, Y., Styles, C., & Wilkinson, I. (2009). The recognition of first time international entrepreneurial opportunities: Evidence from firms in knowledge-based industries. *International Marketing Review*, 26(1), 30–61. doi:10.1108/02651330910933195

Cohen, J. (1988). Statistical power. Analysis for the behavior sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159. doi:10.1037/0033-2909.112.1.155

Contreras, O. L., & dos Santos, M. A. (2018). Exploring the asymmetric influence of socioemotional wealth priorities on entrepreneurial behaviour in family businesses. *European Journal of International Management*, 12(5/6), 576–595.

Covin, J., & Miller, D. (2014). International entrepreneurial orientation: Conceptual considerations, research themes, measurement issues, and future research directions. *Entrepreneurship Theory and Practice*, 38(1), 11–44. doi:10.1111/etap.12027

Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75–87.

Covin, J., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship: Critical Perspectives on Business and Management*, 3, 5–28.

Covin, J. G., & Lumpkin, G. T. (2011). Entrepreneurial orientation theory and research: Reflections on a needed construct. *Entrepreneurship Theory and Practice*, 35(5), 855–872. doi:10.1111/j.1540-6520.2011.00482.x

Covin, J. G., & Wales, W. J. (2012). The measurement of entrepreneurial orientation. *Entrepreneurship Theory and Practice*, 36(4), 677–702. doi:10.1111/j.1540-6520.2010.00432.x

Dai, L., Maksimov, V., Gilbert, B. A., & Fernhaber, S. A. (2014). Entrepreneurial orientation and international scope: The differential roles of innovativeness, proactiveness, and risk-taking. *Journal of Business Venturing*, 29 (4), 511–524. doi:10.1016/j.jbusvent.2013.07.004

Dal Zotto, C., & Van Kranenburg, H. (2008). *Management and innovation in the media industry*. Cheltenham, UK: Edward Elgar Publishing.

Diamantopoulos, A., Sarstedt, M., Fuchs, C., Wilczynski, P., & Kaiser, S. (2012). Guidelines for choosing between multi-item and single-item scales for construct measurement: A predictive validity perspective. *Journal of the Academy of Marketing Science*, 40(3), 434–449. doi:10.1007/s11747-011-0300-3

Dijkstra, T. K., & Henseler, J. (2015). Consistent partial least squares path modeling. *MIS Quarterly*, 39(2), 297–316. doi:10.25300/MISQ/2015/39.2.02

Drolet, A. L., & Morrison, D. G. (2001). Do we really need multiple-item measures in service research? *Journal of Service Research*, 3(3), 196–204. doi:10.1177/109467050133001
Eng, S., & Woodside, A. G. (2012). Configural analysis of the drinking man: Fuzzy-set qualitative comparative analyses. *Addictive Behaviors, 37*(4), 541–543. doi:10.1016/j.addbeh.2011.11.034

Engelen, A., Gupta, V., Strenger, L., & Brettel, M. (2015). Entrepreneurial orientation, firm performance, and the moderating role of transformational leadership behaviors. *Journal of Management, 41*(4), 1069–1097.

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*(2), 175–191. doi:10.3758/BF03193146

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50. doi:10.2307/3151312

George, B. A., & Marino, L. (2011). The epistemology of entrepreneurial orientation: Conceptual formation, modeling, and operationalization. *Entrepreneurship Theory and Practice, 35*(5), 989–1024. doi:10.1111/j.1540-6520.2011.00455.x

Gomezelj Omerzel, D., & Smolčić Jurdana, D. (2016). The influence of intellectual capital on innovativeness and growth in tourism SMEs: Empirical evidence from Slovenia and Croatia. *Economic Research-Ekonomska Istraživanja, 29*(1), 1075–1090. doi:10.1080/1331677X.2016.1211946

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review, 31*(1), 2–24. doi:10.1108/EBR-11-2018-0203

Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review, 26*(2), 106–121. doi:10.1108/EBR-10-2013-0128

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. doi:10.1007/s11747-014-0403-8

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. *Advances in International Marketing, 20*, 277–320.

Hernández-Perlines, F. (2016). Entrepreneurial orientation in hotel industry: Multi-group analysis of quality certification. *Journal of Business Research, 69*(10), 4714–4724. doi:10.1016/j.jbusres.2016.04.019

Hernández-Perlines, F. (2018). Moderating effect of absorptive capacity on the entrepreneurial orientation of international performance of family businesses. *Journal of Family Business Management, 8*(1), 58–74. doi:10.1108/JFBM-10-2017-0035

Hernández-Perlines, F., Ariza-Montes, A., Han, H., & Law, R. (2019). Innovative capacity, quality certification and performance in the hotel sector. *International Journal of Hospitality Management, 82*, 220–230. doi:10.1016/j.ijhm.2019.04.027

Hernández-Perlines, F., Moreno-García, J., & Yáñez-Araque, B. (2016). Using fuzzy-set qualitative comparative analysis to develop an absorptive capacity-based view of training. *Journal of Business Research, 69*(4), 1510–1515. doi:10.1016/j.jbusres.2015.10.133

Huarng, K. H., Yu, T. H. K., & Rodríguez-Garcia, M. (2019). Qualitative analysis of housing demand using Google trends data. *Economic Research-Ekonomska Istraživanja, 409*. doi:10.1080/1331677X.2018.1547205

Irwin, K. C., Landay, K. M., Aaron, J. R., McDowell, W. C., Marino, L. D., & Geho, P. R. (2018). Entrepreneurial orientation (EO) and human resources outsourcing (HRO): A “HERO” combination for SME performance. *Journal of Business Research, 90*, 134–140. doi:10.1016/j.jbusres.2018.05.016

Jogaratnam, G., & Tse, E. C. (2004). The entrepreneurial approach to hotel operation: Evidence from the Asia-Pacific hotel industry. *Cornell Hotel and Restaurant Administration Quarterly, 45*(3), 248–259. doi:10.1177/00000000100000400266192

Jöreskog, K. G., & Wold, H. (1982). The ML and PLS techniques for modeling with latent variables: Historical and comparative aspects. In K. G. Jöreskog & H. Wold (Eds.), *System under indirect observation* (pp. 263–270, Vol. 1). Amsterdam: North-Holland.
Krauss, S. I., Frese, M., Friedrich, C., & Unger, J. M. (2005). Entrepreneurial orientation: A psychological model of success among Southern African small business owners. *European Journal of Work and Organizational Psychology, 4*(3), 315–344. doi:10.1080/13594320500170227

Kreiser, P. M., Marino, L. D., Kuratko, D. F., & Weaver, K. M. (2013). Disaggregating entrepreneurial orientation: The non-linear impact of innovativeness, proactiveness and risk-taking on SME performance. *Small Business Economics, 40*(2), 273–291. doi:10.1007/s11187-012-9460-x

Kropp, F., Lindsay, N. J., & Shoham, A. (2006). Entrepreneurial, market, and learning orientations and international entrepreneurial business venture performance in South African firms. *International Marketing Review, 23*(5), 504–523. doi:10.1108/02651330610703427

Leal-Rodríguez, A. L., & Albort-Morant, G. (2016). Linking market orientation, innovation and performance: An empirical study on small industrial enterprises in Spain. *Journal of Small Business Strategy, 26*(1), 37–50.

Lechiner, C., & Gudmundsson, S. V. (2014). Entrepreneurial orientation, firm strategy and small firm performance. *International Small Business Journal, 32*(1), 36–60.

Li, Y., Liu, Y., & Zhao, Y. (2006). The role of market and entrepreneurship orientation and internal control in the new product development activities of Chinese firms. *Industrial Marketing Management, 35*(3), 336–347. doi:10.1016/j.indmarman.2005.05.016

Monteiro, A. P., Soares, A. M., & Rua, O. L. (2019). Linking intangible resources and entrepreneurial orientation to export performance: The mediating effect of dynamic capabilities. *Economic Research-Ekonomska Istraživanja, 31*(1), 1453–1471. doi:10.1080/13662710500195967

O’Raghallaigh, P., D., Sammon, D., & C. Murphy, C. (2011). A re-conceptualisation of innovation models to support decision design. *Journal of Decision Systems, 20*(4), 361–382.
Otterbacher, M., & Gnoth, J. (2005). How to develop successful hospitality innovation. *Cornell Hotel and Restaurant Administration Quarterly, 46*(2), 205–222. doi:10.1177/0010880404271097

Peake, W. O., Barber, D., III, McMilan, A., Bolton, D. L., & Coder, L. (2019). Do management control systems stifle innovation in small firms? A mediation approach. *Journal of Small Business Strategy, 29*(2), 1–21.

Peters, M., Furtenscheller, A., Wong, K. K. F., & Kraus, S. (2010). The influence of entrepreneurial branding on entrepreneurial/growth orientations: An empirical study in the Austrian tourism industry. *International Journal of Business Research, 10*(2), 28–29.

Pradthana, L., & Kaedsiri, J. (2013). Organizational innovativeness: The empirical study of hotel business in Southern Thailand. *International Journal of Business and Social Science, 4*(3), 166–170.

Prifti, R., & Alimehmeti, G. (2017). Market orientation, innovation, and firm performance—An analysis of Albanian firms. *Journal of Innovation and Entrepreneurship, 6*(1), 1–19. doi:10.1186/s13731-017-0069-9

Ragin, C. C. (2000). *Fuzzy-set social science*. Chicago: University of Chicago Press.

Ragin, C. C. (2008). *Redesigning social inquiry: Fuzzy sets and beyond*. Chicago: University of Chicago Press.

Ragin, C. C., & Sean, D. (2016). *Fuzzy-set/qualitative comparative analysis 3.0*. Irvine: Department of Sociology, University of California.

Rigtering, J. P. C., Eggers, F., Kraus, S., & Chang, M. L. (2017). Entrepreneurial orientation, strategic planning and firm performance: The impact of national cultures. *European Journal of International Management, 11*(3), 301–324. doi:10.1504/EJIM.2017.083872

Rong, B., & Wilkinson, I. F. (2011). What do managers’ survey responses mean and what affects them? The case of market orientation and firm performance. *Australasian Marketing Journal, 19*(3), 137–147. doi:10.1016/j.ausmj.2011.04.001

Ruízi, N. A. K., & Yasa, N. N. K. (2016). Kemampuan Inovasi Memediasi Pengaruh Orientasi Kewirausahaan Terhadap Kinerja Produk Imk Sektor Industri Makanan Di Kota Denpasar. *E-Jurnal Manajemen, 5*(3), 1915–1941.

Ryidi, N. A. K., & Yasa, N. N. K. (2016). Kemampuan Inovasi Memediasi Pengaruh Orientasi Kewirausahaan Terhadap Kinerja Produk Imk Sektor Industri Makanan Di Kota Denpasar. *E-Jurnal Manajemen, 5*(3), 1915–1941.

Ryidi, N. A. K., & Yasa, N. N. K. (2016). Kemampuan Inovasi Memediasi Pengaruh Orientasi Kewirausahaan Terhadap Kinerja Produk Imk Sektor Industri Makanan Di Kota Denpasar. *E-Jurnal Manajemen, 5*(3), 1915–1941.

Sarstedt, M., Ringle, C. M., Smith, D., Reams, R., & Hair, J. F. (2014). Partial least squares structural equation modeling (PLS-SEM): A useful tool for family business researchers. *Journal of Family Business Strategy, 5*(1), 105–115. doi:10.1016/j.jfbs.2014.01.002
Sharma, P., & Chrisman, J. J. (1999). Toward a reconciliation of the definitional issues in the field of corporate entrepreneurship. *Entrepreneurship Theory and Practice, 23*(3), 11–28. doi: 10.1177/10422587990230302

Sozuer, A., Altuntas, G., & Semercioz, F. (2017). International entrepreneurship of small firms and their export market performance. *European Journal of International Management, 11*(3), 365–382. doi: 10.1504/EJIM.2017.10004234

Tajeddini, K. (2010). Effect of customer orientation and entrepreneurial orientation on innovativeness: Evidence from the hotel industry in Switzerland. *Tourism Management, 31*(2), 221–231. doi: 10.1016/j.tourman.2009.02.013

Teixeira, A. A., & Ferreira, C. (2019). Intellectual property rights and the competitiveness of academic spin-offs. *Journal of Innovation & Knowledge, 4*(3), 154–161. doi: 10.1016/j.jik.2018.12.002

Torchiano, M., Tomassetti, F., Ricca, F., Tiso, A., & Reggio, G. (2013). Relevance, benefits and problems of software modelling and model driven techniques: A survey in the Italian industry. *Journal of Systems and Software, 86*(8), 2110–2126. doi: 10.1016/j.jss.2013.03.084

Wang, Y. Z., Lo, F. Y., & Weng, S. M. (2019). Family businesses successors knowledge and willingness on sustainable innovation: The moderating role of leader’s approval. *Journal of Innovation & Knowledge, 4*(3), 188–195. doi: 10.1016/j.jik.2019.05.001

Wiklund, J. (1999). The sustainability of the entrepreneurial orientation—Performance relationship. *Entrepreneurship Theory and Practice, 24*(1), 37–48. doi: 10.1177/10422587990240103

Wiklund, J., & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: A configurational approach. *Journal of Business Venturing, 20*(1), 71–91. doi: 10.1016/j.jbusvent.2004.01.001

Woodside, A. G. (2013). Moving beyond multiple regression analysis to algorithms: Calling for adoption of a paradigm shift from symmetric to asymmetric thinking in data analysis and crafting theory. *Journal of Business Research, 66*(4), 463–472. doi: 10.1016/j.jbusres.2012.12.021

Woodside, A. G., Prentice, C., & Larsen, A. (2015). Revisiting problem gamblers’ harsh gaze on casino services: Applying complexity theory to identify exceptional customers. *Psychology & Marketing, 32*(1), 65–77. doi: 10.1002/mar.20763

World Travel and Tourism Council. (2018). Travel and tourism economic impact 2017 Spain. Retrieved from https://www.wttc.org/economic-impact/country-analysis/country-reports/