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Turning non-financial performance measurements into financial performance: The usefulness of front-office staff incentive systems in hotels

Nathalie Bénét^a, Aude Deville^{b,*}, Karine Raïes^c, Pierre Valette-Florence^d

^a *Toulouse School of Management (TSM)Toulouse 1 Capitole University TSM Research, UMR5303CNRS, France*

^b *Université Côte d'Azur, GRM (EA 4711), IAE Nice Graduate School of Management, 5 rue du 22e B.C.A, 06300 Nice, France*

^c *Emlyon Business School, QUANT Research Center, 23 Avenue Guy de Collongue, 69130 Écully, France*

^d *IAE Grenoble Graduate School of Management & CERAG, 525 Avenue Centrale, 38400 Saint-Martin-d'Hères, France*

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ABSTRACT

This paper investigates causal relationships between management control system (MCS) practices and performance in French Riviera hotels. The current literature presents mixed and contradictory findings regarding the relationships between delegation, performance measurements in incentive systems, and performance, both non-financial and financial. We argue that taking complexity into account when studying such relationships is hence of prime importance. In addition, our analytical method relies on the state of the art, relying on the tandem use of PLS-SEM and fsQCA. Moreover, to the best of our knowledge, it is one of the first to extend a prior PLS-SEM analysis by a partial least-squares prediction-oriented segmentation (POS). Our findings highlight some very different pathways to hotel financial performance and the influence of the hotel customer orientation in this context. Those findings contribute to the literature on performance and the hospitality industry and highlights managerial implications related to the design of effective MCS practices.

1. Introduction

Cause-and-effect relationships between management control system (MCS) practices and organizational performance have been studied extensively since Kaplan and Norton's (1992) seminal work on the balanced scorecard. One research stream has focused on the relationships and balance between management control system (MCS) practices of delegation, the use of performance measurements in incentive systems, and those systems' influences on organizational performance (Franco-Santos, Lucianetti, & Bourne, 2012; Gong & Ferreira, 2014). That research relies on the assumptions that those practices and performance are interdependent, and it specifically stresses complementary relationships. It also argues that the effectiveness of MCS practices is related to the consistency of MCS design choices regarding contextual factors such as strategy and the organizational structure (Bouwens & Van Lent, 2007; Guenther & Heinicke, 2019; Llach, Bagur, Perramon, & Marimon, 2017).

The literature highlights the importance of non-financial performance measures in those interdependent relationships, especially in the service sector. Indeed, in that context, non-financial performance

measurements are considered key indicators of staff efforts (and particularly front-office staff) as they measure performance dimensions related to quality, customer satisfaction, and productivity (Fatima & Elbanna, 2020; Ittner, Larcker, & Meyer, 2003). Nevertheless, little research has been conducted at lower hierarchical levels in organizations, such as middle managers (Baik, Evans III, Kim, & Yanadori, 2016; van Veen-Dirks, 2010) and non-managers (Ittner & Larcker, 2002), and the findings show that relationships between such constructs are complex, thus leading to mixed and contradictory results.

Recent research acknowledging those limitations and investigating the reasons for the mixed findings has identified two types of potential causes: conceptual and method causes. Gong and Ferreira (2014) note that the interconnectedness between MCS practices and performance is key, but few studies in the literature consider that aspect, thus leading to mixed or contradictory findings. In their recent study, Malmi et al. (2020) show that another weakness of the previous research arises from the influence of regional and cultural aspects not being considered when MCS design choices are made. Messner (2016) similarly argues that, when most studies rely on cross-sectional empirical settings, considering the specifics of the industry is critical.

* Corresponding author.

E-mail addresses: nathalie.benet@tsm-education.fr (N. Bénét), aude.deville@univ-cotedazur.fr (A. Deville), kraies@em-lyon.com (K. Raïes), pvalette@grenoble-iae.fr (P. Valette-Florence).

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The purpose of this study is to address those issues by arguing that it is critical to consider the complexity of the causal relationships leading to organizational performance. We consider here the service sector, specifically the hotel industry, and the importance of front-office staff MCS design choices. Therefore, this paper is aimed at investigating the complex interrelationships between delegation, performance measurements in incentive systems, customer orientation (as an important strategic feature of service organizations), and organizational performance (i.e., financial performance and customer satisfaction) (Bangchokdee & Mia, 2016; Banker, Potter, & Srinivasan, 2000; Endrikat, Guenther, & Titus, 2020; Karatepe, 2013; Mattimoe & Tivnan, 2018).

This empirical study builds on data collected from the French Riviera hotel industry through a questionnaire survey of hotels with three to five stars ($n = 64$)¹. To analyze the data, we rely on the combination of two methods: a partial least squares prediction-oriented segmentation (PLS-POS) approach and a fuzzy-set qualitative comparative analysis (fsQCA) investigation (Ben Jabeur, Belhaj Hassine, & Mefteh-Wali, 2021; Isaksson & Woodside, 2016; Mourad & Valette-Florence, 2016; Woodside, 2013). The complementarity of those two methods allows us to go beyond the method limitations of previous studies to make sense of the complexity of the relationships under study and present how MCS practices interact in a specific context to achieve higher performance.

Our findings highlight several causal relationships that vary depending on contextual factors, such as the number of stars, the location, and customer orientation, which influence hotel performance. Those findings highlight the importance of hotels' customer orientations (i.e., luxury hotels, entertainment hotels, and family hotels) as a contextual factor (e.g., Frambach, Fiss, & Ingenbleek, 2016).

This paper's contributions are twofold. First, it contributes to the literature on organizational performance by showing that complexity is an important consideration that goes beyond industry or national characteristics. In the case of the hotel industry, we identified various existing causal relationships between three key MCS design choices and performance. By emphasizing the fact that an appropriate MCS is a determinant of organizational performance (e.g. Bangchokdee & Mia, 2016; Frösén, Luoma, Jaakkola, Tikkanen, & Aspara, 2016; Gong & Ferreira, 2014; Messner, 2016), our findings reaffirm the need to consider and study MCS within the organizational context to better understand performance. Second, the combination of PLS-POS and fsQCA proves very useful for better understanding the complexity of the causal pathways leading to performance. That combined approach allows sample heterogeneity to be taken into account, addresses the shortcomings identified in the performance literature, mainly based on null hypothesis statistical testing (Chenhall & Moers, 2007; Hartmann & Moers, 2003), and generates interesting alternative results to explain the literature's mixed and contradictory findings.

The remainder of the paper is structured as follows. The next section references the literature on the relevance of performance measurements in incentive systems and delegation of decision rights as performance drivers, then highlights the importance of customer orientation. Section 3 presents the data collection process and methods. Section 4 presents the empirical findings, which are then discussed in Section 5 along with our suggestions for future research in the area.

2. Theoretical development

The literature related to organizational performance highlights the critical importance of MCS design choices in influencing organizational performance (e.g., Gong & Ferreira, 2014; Llach et al., 2017;

¹ France presents an interesting case. As Bouamama, Basly, and Zian (2021) note, research is still very scarce on the variety of performance measures used in MCS there. Moreover, the country receives a lot of tourists, both domestic and international, with the French Riviera being one of their main destinations, thus leading to a high concentration of diverse hotel organizations.

Speckbacher & Wentges, 2012). However, it also highlights mixed results regarding the relationships between those design choices in terms of delegation, performance measurement types, and their use in incentive systems. Only a few studies really investigate the whole causal relationship chain, with most examining bivariate relationships. Those relationships are positive, negative or nonsignificant, and very dependent on the context under study. We review those mixed findings and highlight the importance of the customer orientation concept in studying those relationships in a service sector context.

2.1. Delegation, performance measures in incentive systems, and organizational performance

From a conceptual perspective, the literature has long held that there is a relationship between design choices for MCS (delegation, performance measurement types, and incentive systems) and organizational performance (e.g., Gong & Ferreira, 2014; Malmi et al., 2020), but it has generally studied those relationships on a bivariate basis.

On the one hand, the literature develops several perspectives regarding the delegation of decision rights (Bangchokdee & Mia, 2016; Moers, 2006). In this context, two papers are particularly insightful. First, Nagar (2002) shows that delegation influences incentive-system design. However, that relationship is asymmetrical, with that author finding that the use of incentives is not related to the delegation of decision rights. Second, Widener, Shackell, and Demers (2008) study interdependency relationships (substitution or complementarity) in MCS design and take into account the influence of controls related to social supervision (i.e., all the vertical control mechanisms performed by the hierarchy and the horizontal control mechanisms performed by peers). Those results show that: (1) high vertical (or hierarchical) controls are a substitute for delegation, (2) horizontal controls are a substitute for incentive systems, and (3) delegation has a positive influence on the use of incentive systems. Overall, this literature shows different types of causal relationships between delegation and other MCS practices. Nevertheless, Gong and Ferreira (2014) emphasize how such studies are limited especially by the failure to explore the whole causal relationships between MCS design choices and their influence on performance. Moreover, Malmi et al. (2020) demonstrate further limitations arising from studies not considering the complexity related to the cultural aspects, which can explain different causal relationships.

On the other hand, the existing literature on non-financial performance measurements in incentive systems has focused on testing the assumption that they have a positive influence on performance. That is due to the possible predictive ability of non-financial measures regarding organization success, so they are considered to be leading indicators of both non-financial and (future) financial performance (Banker et al., 2000; Gong & Ferreira, 2014; Ittner & Larcker, 1998; Rotaru, Fehrenbacher, Liang, & Schulz, 2020). Non-financial performance has been considered through various concepts such as customer satisfaction, quality, and market share (Ittner & Larcker, 1998; Ittner, Larcker, & Randall, 2003; Mintz & Currim, 2013; Rego, Morgan, & Fornell, 2013). However, empirical results regarding the effects of incentive systems and non-financial performance measurements on performance are mixed. Some studies show contradictory results related to the fact that the relationship is not always established. Franco-Santos et al. (2012) highlight here that previous research has established a link between non-financial performance measures and incentives sometimes without considering the cause-and-effect relationships between those practices. That is particularly so when we consider the sector under study (e.g., industrial versus service sector) (Ittner & Larcker, 2009; Ittner, Larcker, & Meyer, 2003). Although the context of the service sector is more favorable to the validation of this link in the literature (Banker et al., 2000; Ittner, 2008; Ittner & Larcker, 1998; Kelly, 2007), such relationships are not always significant. Relationships between concepts such as customer satisfaction or service quality and organizational performance still need to be explored.

2.2. The causal relationships chain and the service sector

This study focuses on the service sector. Previous research provides insightful findings through which to explore how factors can or cannot influence delegation, performance measurement in incentive systems, and organizational performance.

With regard to delegation in service activities (and the hotel sector particularly), the literature highlights the relevance of front-office staff as a key resource for ensuring service quality and customer satisfaction (Bangchokdee & Mia, 2016; Karatepe, 2013). As such staff has specific information related to the customer relationship, a certain amount of decision rights can be delegated to customer-facing employees. They are in direct contact with customers and service operations, and they act as coproducers of the service to customers. They are also better informed for dealing with customer requests, complaints, and claims. The literature also shows that front-office managers and employees are important in terms of customer loyalty and positive word of mouth (e.g., Eiglier, 2004; Manes & Tchetchik, 2018; Wilkins, Merrilees, & Herington, 2007). Delegation of some decision rights to such staff ensures that customer relationships meet customer expectations by enabling responsiveness in service execution and conflict resolution, both of which are prioritized by customers. That delegation of decision rights gives employees the authority to use organizational resources, especially when doing so can benefit the service relationship outcome. In the hotel context, Bangchokdee and Mia (2016) study the relationships between delegation, the senior managers' use of performance measure and hotel performance. They find that the use of non-financial performance measures mediates the positive relationship between delegation and organizational performance. However, the authors do not consider the influence of the use of this type of performance measurement in incentive systems.

Indeed, when it comes to non-financial performance measures in incentive systems, the literature highlights the interdependence of those types of performance measurement and incentive mechanisms (e.g., Banker et al., 2000; van Veen-Dirks, 2010), but does not provide a clear background in the service context at lower levels of hierarchy. Ittner and Larcker (2002) point out that non-financial performance measures are a key dimension of non-manager incentive systems. In that context, several researchers highlight the relevance of the non-financial performance measurements used in incentive systems for lower-manager and worker (Ittner & Larcker, 2002; Ittner, Larcker, & Pizzini, 2007; Ittner, Larcker, & Rajan, 1997; van Veen-Dirks, 2010). Banker et al. (2000; 2005) show a strong and significant relationship between the use of incentive systems based on non-financial measures and non-financial performance in the hotel industry. They also show a relationship between the use of incentive systems and financial performance when stressing an effect on future financial performance.

Overall, the literature theoretically supports the importance of the coherence between delegation, performance measurements used in incentive systems, and organizational performance by highlighting a causal relationship between those concepts (Malmi et al., 2020; Widener et al., 2008). Nevertheless, as shown above, little empirical evidence supports those claims and studies focusing on the service sector are still limited. In that context, we argue that those mixed findings are as much related to limitations in the empirical approaches (choice of the method or failure to consider the whole causal chain) as to the complexity of the studied phenomenon, i.e., organizational performance, which is by nature very sensitive to contextual factors. Therefore, we want to explore the causal relations between MCS practices and organizational performance. In that context, Bedford (2020) argues that the interdependency between MCS concepts are neither mutually exclusive nor symmetrical, and they can therefore be based on different causal mechanisms. Following that finding and those reported in the literature, we suggest the following proposition:

P1: There is a causal relationship chain between delegation to front-office staff (AD), use of non-financial performance measurements in incentive

systems (WNF), an organization's customer satisfaction (SAT), and organizational financial performance (FP), and that causal relationship chain can differ depending on contextual factors.

AD → WNF → SAT → FP

2.3. The hotel industry and the importance of an organization's customer orientation

Contextual factors are important when studying MCS (e.g., Bouamama et al., 2021) and can differ from one industry to another. In the hotel literature, studies consider specific factors such as the hotel size, number of stars, and location. Among those contextual factors, the concept of market orientation, specifically its customer orientation component, is important due to being a central part of a hotel's strategy (Mattimoe & Tivnan, 2018; Nasution & Mavondo, 2008). Market orientation is defined by Narver and Slater (1990, p. 21) as the "organization culture that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers and, thus, continuous superior performance for the business." In this study, we focus more on customer orientation, which is defined as "the sufficient understanding of one's target buyers to be able to create superior value for them continuously" (Narver & Slater, 1990, p. 21). We adopt that approach because customer orientation has an influence on MCS, the extent of use, or not, of non-financial performance measurements, and organizational performance (Frambach et al., 2016; Frösén et al., 2016).

To conceptualize hotel customer orientation, this study relies on the theoretical background of the "consumer value"² (Gallarza, Gil-Saura, & Holbrook, 2011; Holbrook, 1998; Sánchez-Fernández, Iniesta-Bonillo, & Holbrook, 2009). That concept allows the organization's desired positioning to be considered through its strategic orientation and, more particularly, customer orientation. Several authors have already found the relevance of that concept in the context of the hotel industry (Gallarza & Gil Saura, 2006; Walls, 2013; Wilkins et al., 2007). Considering consumer value characteristics, when assessing hotel customer orientation, helps in identifying the target service quality level and the proposed consumer experience. Understanding the hotel consumer value then allows the organization to define an offer in terms of experiential content, which can be of various orders (Holbrook, 1998). In our study, we run an analysis to identify three customer orientation groups (further discussed in Section 3.2): (1) luxury hotels, (2) family hotels³, and (3) entertainment⁴ hotels. Given the preliminary finding and those in the hotel literature, which emphasizes the specific context of luxury hotels (e.g., Wilkins et al., 2007), we advance the following proposition:

P2: The causal relationship chain in P1 is influenced by the customer orientation.

Our causal model (Fig. 1) follows from the proposition's development. Based on the literature and our preliminary interviews with hotel professionals, it appears that the extent of delegation and the intensity of use of incentives are usually stronger at higher job levels. Therefore, we decided to consider and differentiate between the situation of front-office lower managers and front-office employees (i.e., non-managers).

² Holbrook's (1998) consumer value captures a product or service value perceived by customers through a consumer experience. The consumer value is then used to highlight the current value of the offer for customers and to identify possible positions for future supply.

³ The term "Family" refers to an intimate atmosphere designed to give the feeling of being "at home" and favoring social interactions between customers and front-office staff.

⁴ The term "Entertainment" refers to hotels providing additional services beyond just accommodation (e.g., restaurants and activities).

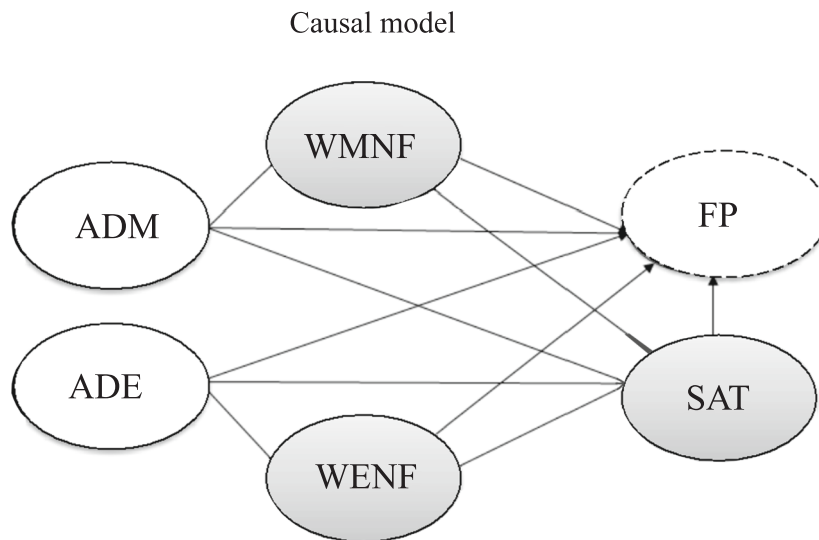


Fig. 1. Causal model. *Legend:* • Concepts in light gray circles are intermediate mediating latent variables. • Concept in the broken line circle (FP) is the fully dependent latent variable. • ADM: delegation of decision right to managers • ADE: delegation of decision right to employees. • WMNF: weight of non-financial performance measures in manager incentive systems. • WENF: weight of non-financial performance measures in employee incentive systems. • SAT: customer satisfaction. • FP: financial performance.

Legend:

- Concepts in light gray circles are intermediate mediating latent variables
- Concept in the broken line circle (FP) is the fully dependent latent variable
- ADM: delegation of decision right to managers
- ADE: delegation of decision right to employees
- WMNF: weight of non-financial performance measures in manager incentive systems
- WENF: weight of non-financial performance measures in employee incentive systems
- SAT: customer satisfaction
- FP: financial performance

3. Data collection and research method

3.1. Sample selection and data collection

We collected data using a questionnaire survey administered to senior managers in French Riviera hotels. To define the study population, we conducted interviews with three hotel managers regarding the research question and incentive system use. From those interviews, we considered that the relevant hotel population was those classified as being from three to five stars in the French context. Indeed, three to five stars hotels are more concerned with service quality, management of employees in contact with customers, and incentives. We follow the guidelines of Dillman (1978) and Van der Stede, Young, and Chen (2007) to maximize the response rate. The survey was pretested with academics and hotel managers, then we called every organization with three to five stars to identify the relevant respondent and send them a questionnaire package by mail or email. To encourage survey completion, prospective participants were promised a summary of the results and assured of the anonymity of their responses. Phone or email follow-up was conducted. As a result, 595 questionnaires were distributed, with the final sample consisting of 64 returned questionnaires (i.e., a response rate of 10.76%).

Due to the low response rate, we investigate the possibility of non-response bias. We compare early respondents to late respondents for each of the variables of interest in this study. The *t*-test results indicate that there are no significant differences between early and late respondents for any constructs. Moreover, during the follow-up procedure, we discussed with non-respondents their reasons for not completing the questionnaire. The reasons stated were great time pressures, that they receive too many surveys from professional associations and government institutions, and, for French managers, the confidentiality of the requested data. It is important to note the struggles of previous hotel

industry researchers to collect primary data. MCS studies also have small sample sizes (e.g., Lunkes, Bortoluzzi, Anzilago, & Silva da Rosa, 2020). The sample used in this study is nevertheless sufficient for running the POS and fsQCA analyses (Becker, Rai, Ringle, & Völckner, 2013; Woodside, 2017). Demographic information was collected from the respondents. Table 1 reports descriptive statistics on the sample hotels.

3.2. Variable measurement

We use principal component analysis (PCA) to pretest the measurement properties of our three Likert scales. The results suggest that the constructs display good reliability and construct validity⁵. As indicated above, the variables measuring the delegation of decision rights and the importance of non-financial performance measurement use in incentive systems have specific treatments to differentiate between the situations of front-office lower managers and front-office employees (i.e., non-

Table 1
Descriptive statistics of participating hotels.

Variable	Observations	Mean	Std. Dev.	Median
Size (number of room)	64	60.25	68.85	34.50
Employees	64	27.67	62.72	9.00
Sales (EUR)	64	3,372,137	9,348,384	743,966

The table presents descriptive statistics on the hotels included in the sample. The sample consists of 64 observations collected by questionnaire.

⁵ We present here a summarized overview of variables measurement. More details regarding the instrument development are available from the authors upon request.

managers).

Delegation of decision rights. We measure delegation on the basis of the scales used by Abernethy, Bouwens, and van Lent (2010), Bouwens and Van Lent (2007), and Nagar (2002). To adapt that instrument to the case of front-office staff, we use the data gathered in the hotel manager interviews. This five-item instrument is the same for both kinds of staff, and a five-point scale is used to indicate the level of delegation. For the lower manager scale, PCA reveals one factor with an eigenvalue greater than 1 which explains 85% of the total variance. The factor loadings of the five items range from 0.87 to 0.94. The Cronbach's alpha for this five-item scale is 0.95, which is well above the acceptable limits (Nunnally, 1978). For the employee scale, PCA of the five items reveals that one item has a communality below 0.5, so we removed that item. PCA of the four remaining items reveals one factor with eigenvalue greater than 1 which explains 74% of the total variance. The factor loadings of the four items range from 0.83 to 0.90. The Cronbach's alpha for this four-item scale is 0.89.

Importance of non-financial performance measures in incentive systems. In line with the prior literature (e.g. Bouwens & Van Lent, 2007; Ittner & Larcker, 2001; Ittner et al., 1997), our study measures the importance of the use of non-financial performance measures in incentive systems by comparing the relative importance of non-financial measurements to that of financial measurements. We ask respondents to report the overall weight in percentage they assign to non-financial and financial performance measurements in incentive systems for lower managers and employees.

Financial performance and customer satisfaction. To limit the size effect of the financial performance variable, it is assessed by dividing the total sales by the number of rooms in the hotel. This assessment is relevant regarding the hotel industry as it is one of the industry's main financial performance indicators⁶. For customer satisfaction, we consider publicly available data from three websites specializing in electronic word of mouth (eWOM) and recommendations in the hotel industry: TripAdvisor, Booking.com, and Expedia. Indeed, even if those measures are generally considered to be less reliable than traditional offline word of mouth, they appear to be more reliable in the hotel industry due to the large samples of reviewers (Manes & Tchetchik, 2018). Moreover, considering the data availability, hotel managers all measure customer satisfaction, but they use various measurements and are not inclined to communicate that information. Therefore, we collect customer ratings, especially regarding the service and employee category, from the three websites. From that information, we compute a score expressed as an average percentage over three ratings: a rating out of five for TripAdvisor and Expedia, and out of ten for Booking.com.

The hotel customer orientation. To test our proposition regarding the various hotels' customer orientations, we develop a new construct based on Holbrook's (1998) consumer value. To develop the value proposition variable, we first conducted interviews with 30 hotel customers to adapt the consumer value concept to the specifics of the industry. We generated 21 items from those data and the literature. A five-point scale is used to indicate the level of agreement with each item. PCA of the 21 items reveals that several items have communality below 0.5 or greater than 0.4 on at least two factors. That leads to the removal of those items, with a final 11 being retained. The final PCA solution reveals four factors with eigenvalues greater than 1 which explain 72% of the total variance. The factor loadings of the 11 items range from 0.68 to 0.89. The Cronbach's alphas for this 11-item scale based on four factors are 0.73, 0.74, 0.70, and 0.61.

⁶ This measure is similar to REVPAR (revenue per available room), but it does not account for the occupancy rate, which was not available and hotel managers were reluctant to provide such information in the survey.

Based on the customer orientation construct, we conduct a hierarchical ascendant classification to identify various homogenous groups of hotel customer orientation in our sample⁷. This analysis allowed us to identify three kinds of customer orientation group: (1) "family hotels," which are small and medium hotels offering a family atmosphere, (2) "entertainment hotels" offering a wide range of services linked to entertainment or relaxation activities, and (3) "utility luxury hotels" offering high-quality hotel service without proposing other activities.

3.3. Joint PLS and fsQCA investigation

Causal models have traditionally been studied using symmetric quantitative methods, such as multiple regression analysis and structural equation modeling. These traditional symmetric methods, based on the test of relationships between proposed independent and dependent variables, do not deal with some of the complexity of the observed reality. Those last years, several researchers invited to use different methods that consider the complexity of the observed phenomenon and the necessity to consider the context of the study (e.g., Ben Jabeur et al., 2021; Vizcaíno-González, Pineiro-Chousa, & Sáinz-González, 2017). Two methods were acknowledged as good alternatives to traditional symmetric methods: (1) a PLS structural equation model (PLS-SEM) especially designed for assessing the mean effects between prespecified latent constructs. This method, which has a long tradition in management sciences, is a symmetric approach which produces average effects of the independent latent variable on a set of endogenous latent predicted variables; or (2) the fsQCA method, a recently disseminated approach focusing on individual case-by-case relationships and aimed at analyzing structural and configurational models. Its main goal is to explore how various combinations of the independent variables, either categorized as sufficient or necessary, can cause specific levels of outcomes for different groups of cases.

Until now, those two methods have been relied on rather independently, although some recent articles have relied on both approaches (Duarte & Pinho, 2019; Kaya, Abubakar, Behraves, Yildiz, & Mert, 2020). Indeed, it is now recognized that PLS and fsQCA can be considered as complementary approaches, not as entirely different or even competing ones (Pappas & Woodside, 2021; Rasoolimanesh, Ringle, Sarstedt, & Olya, 2021). Very recently, the novel seminal contribution of Rasoolimanesh et al. (2021) advocates the tandem use of PLS and fsQCA, with an explanation provided of the three main steps to follow. In step 1, the PLS model is estimated with regard to the well-established reliability and validity criteria. In step 2, whereas researchers applying fsQCA usually compute sum scores, hence ignoring the effect of measurement error inherent in the indicators, it is proposed that the computed PLS factor scores be used as input for the analysis, thereby explicitly accounting for measurement errors. Step 3 then follows the usual stages proposed for an fsQCA analysis.

Our approach is hence based on that specific sequence. However, we extend the initial approach by relying on a POS investigation, which enables us to identify hidden segments within the full sample. This method is therefore more in line with the core specificity of fsQCA, which in essence explicitly considers the heterogeneity present in the cases studied.

4. Findings

4.1. PLS-POS findings (latent response-based segmentation)

First, we tested and estimated a PLS model on the pooled data. We first carefully checked that all the recommended validity and goodness

⁷ We apply this analysis to the factor scores. We use the Ward criterion based on Euclidian distance. We have not imposed a prespecified number of class criteria.

of fit indices were fully met and we also assessed common method bias⁸. Overall, the results were globally quite deceptive, with very low R² (6.3% for FP and 8.4% for SAT), and none of the path coefficients were statistically significant, hence lending further support for finding any hidden segments. Applying a latent response-based segmentation led to three segments, S1, S2, and S3, with sizes of 17%, 64%, and 19%, respectively. Following the procedure put forward by Mourad and Valette-Florence (2016), we first evaluated the overall quality of the obtained classification by means of a linear discriminant analysis based on the latent scores of all constructs encompassed within our causal model. A jackknifed discriminant analysis indicates that 87.5% of the hotels were well reallocated to the group they belong to.

We then assessed the validity of the solution in terms of interpretation and managerial relevance by characterizing the groups with respect to the latent score mean differences between groups and the differences in terms of path coefficients. A simple ANOVA reveals that all three groups were statistically different in terms of the latent mean scores. Moreover, the R² for the dependent variables had greatly improved compared to the pooled data solution (now ranging from 17% to over 80%). Most of the path coefficients, according to a permutation test (Chin & Dibbern, 2010), were different across groups in terms of magnitude and sign. Ultimately, a simple correspondence⁹ analysis between the three segments and descriptive variables linked to hotel location, customer orientation, and category (number of stars) helped in characterizing those segments and hence gave us a complementary validation in terms of managerial relevance. Those results provide further support to the overall stability and quality of the proposed PLS distance-based segmentation approach. More precisely, the mapping in Fig. 2 shows that the three groups are quite dispersed on the mapping and, more importantly, that the hotel customer orientation and category are relevant factors characterizing the different groups. Table 2 highlights the difference between the mean values of the three groups.

The findings (see Table 3) show different situations in terms of the relationships between the variables under study. As the focus of this study is the potential cause-and-effect relationships between our constructs, we choose to focus more specifically on the highest positive paths. That approach allows the strongest causal relationships in each of the three groups identified to be investigated and the potential differences between them to be analyzed.

The first group, which we refer to as “high quality oriented hotels,” is

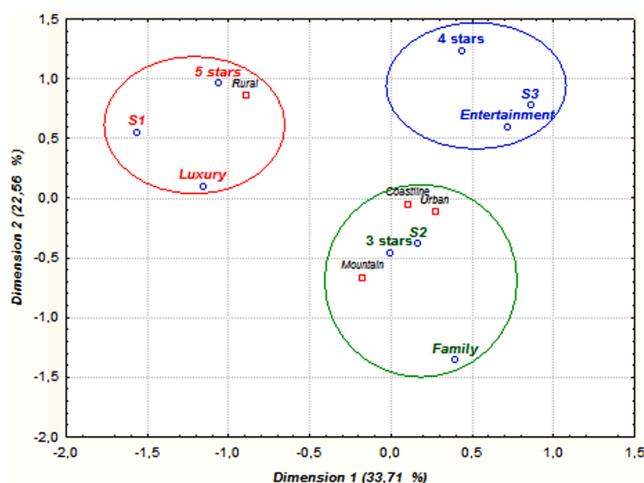


Fig. 2. Simple correspondence mapping.

characterized mostly by five-star and luxury-oriented hotels. Those hotels are large in terms of size and have the highest financial performance. They also use non-financial performance measurements more extensively in manager and employee incentive systems. In this group, the findings show the following highest positive path: the extent of use of non-financial performance measures in manager incentive systems has a positive influence on customer satisfaction, which in turn has a positive influence on financial performance. Those findings are in line with previous literature on luxury hotels and the importance of managers in customer relationship (e.g., Wilkins et al., 2007). It also highlights the importance of front-office managers, the design of their incentive systems, and the need to rely on non-financial performance measurements.

The second group, “mid-range small hotels,” is mostly characterized by three-star hotels and a family orientation. Unlike those in the first group, hotels in this second group are quite small and have lower financial performance. Although the hotels in this group also tend to delegate decision-making to managers and employees, they do not seem to use incentive systems for those two categories of front-office staff. Therefore, they tend not to use non-financial performance measurements in manager incentive systems and demonstrate low usage at the employee level. For this group of hotels, the findings show the following highest positive path: the extent of delegation of decision rights to front-office employees has a positive influence on the extent of use of non-financial performance measures in the incentive systems for those staff. Employee incentive-system design then has a positive influence on hotel customer satisfaction, which in turn has a positive influence on hotel financial performance. Those findings highlight, for mid-range small hotels, the importance of front-office employees and the fact that delegation and incentives, when implemented, are relevant factors leading to higher customer satisfaction and financial performance. That is of particular interest given that hotels in this group tend to make low use of such mechanisms.

Finally, the third group, “service-added hotels,” is characterized by four-star hotels and an entertainment orientation. As with the second group, the service-added hotels report lower financial performance and the lowest customer satisfaction rates. Regarding incentive-system design, hotels in this group are positioned “in-between” compared with the two other groups: they tend to use but not extensively non-financial performance measures in incentive systems at the manager and employee levels. Nevertheless, it is worth noting that this group has the highest level of delegation to managers and employees. The findings for this group show the following highest positive path: the extent of delegation of decision rights to front-office employees and managers has a positive influence on the extent of use of non-financial performance measures in their incentive systems. In turn, employee and manager incentive-system design has a positive influence on hotel customer satisfaction and hotel financial performance. Those findings highlight the importance of managers and employees to hotel customer satisfaction and financial performance. An interesting insight here is that, unlike the other two groups, customer satisfaction with this third group of hotels has no influence on financial performance.

That analysis is interesting as it allows the heterogeneity in the sample of hotels to be characterized. High-quality oriented hotels (S1, with a high use of non-financial measurements in incentive systems) and service-added hotels (S3, with medium use of non-financial measurements in incentive systems) show high coefficients and R², with different patterns of relationships between the variables of interest. However, the findings are exploratory as they are yet to be confirmed with bigger samples. Nevertheless, to enhance the analysis and deepen our understanding of the very different patterns of relationships we observe, we run a complementary fsQCA analysis.

4.2. fsQCA findings

The purpose of using fsQCA is to explore the heterogeneity of our sample and to study cases of high-performing hotels. We used fsQCA 3.0

⁸ Detailed results available from the authors upon request.

⁹ With a canonical normalization.

Table 2
Mean value differences between groups*

	ADM	ADE	FP	SAT	WMNF	WENF	SIZE
S1	4.231	2.681	4.470	83.061	72.818	65.091	113.636
S3	4.628	3.393	4.302	80.472	34.316	35.948	93.417
S2	4.100	2.659	4.362	83.927	0.244	9.999	36.220

* Same color per column indicates no significant differences between the groups
 ADM: delegation of decision right to managers
 ADE: delegation of decision right to employees
 WMNF: weight of non-financial performance measures in manager incentive systems
 WENF: weight of non-financial performance measures in employee incentive systems
 SAT: customer satisfaction
 FP: financial performance

Table 3
Structural coefficients for the three groups.

Predictors	Predicted	Segments (sample size in %)					
		S1 (17%)		S2 (64%)		S3 (19%)	
		coeff	R ²	coeff	R ²	coeff	R ²
ADM	WMNF	-0.136	0.020	0.130	0.017	0.632	0.400
ADE	WENF	0.148	0.023	0.357	0.132	0.641	0.411
ADM		<u>0.268**</u>		-0.043 (ns)		<u>0.307</u>	
ADE		-0.771		-0.128		0.051 (ns)	
WMNF	SAT	0.377*	0.821	-0.292	0.169	0.411	0.329
WENF		-0.742		0.190		0.466	
ADM		-0.167		<u>-0.121</u>		<u>-0.101</u>	
ADE		<u>-0.042 (ns)</u>		-0.118		-0.332	
WMNF	FP	-0.858	0.866	-0.082	0.206	0.390	0.387
WENF		<u>0.240</u>		0.270		0.226	
SAT		0.378		0.278		0.139	

* Numbers in **bold italics and red font** represent the highest positive paths.
 ** Underlined estimates, in light grey shading, are not statistically different between the three segments.
 ADM: delegation of decision right to managers.
 ADE: delegation of decision right to employees.
 WMNF: weight of non-financial performance measures in manager incentive systems.
 WENF: weight of non-financial performance measures in employee incentive systems.
 SAT: customer satisfaction.
 FP: financial performance.

software (Ragin & Davey, 2016) to examine configurations of financial and non-financial incentives associated with high performance. We followed three steps. The first is to calibrate all the variables with scores ranging from extreme points 0.00 for full non-membership to 1.00 for full membership. We follow the literature guidance (e.g., Ragin, 2009) by setting three points: 0.10 for full non-membership, 0.50 for maximum membership ambiguity, and 0.90 for full membership. The second step is to transform the data matrix into a truth table to analyze findings (Woodside & Sharma, 2017). The initial truth table consists of 2^k rows representing all possible configurations of antecedent conditions. The resulting truth table contains the antecedents (columns) and the various configurations of antecedents (rows), each of which sufficiently explains the respective outcome condition. The final step relates to the interpretation of findings. Black circles “●” indicate the presence of a high level of antecedent conditions, white circles “○” indicate a low level of antecedents, and blank cells represent ambiguous ones or “don’t care” conditions. Each truth table includes indices for consistency and coverage for each model solution. The consistency indices indicate whether the configuration is sufficient for causing an outcome to occur (Ragin, 2008b). Consistency assesses the degree to which the combination of conditions consistently produces the focal outcome, and is thus a conceptual analog to statistical significance in regression analysis.

Coverage indicates the proportion of the sample’s cases that share a particular configuration. The coverage statistic for each configuration is an analogue of the coefficient of determination (R²) in regression analysis. If all the consistency scores are above 0.85, all configurations of antecedents and the solution as a whole are sufficient for identifying a high level of outcome. If raw coverage indices for configurations of antecedents are low but the consistency is higher than 0.85, it implies that configurations of antecedents are sufficient but not necessary for identifying the outcome.

In practice, the analysis performed explores configurations leading to high financial performance and considers customer satisfaction, delegation, and the use of non-financial performance measurements in front-office staff incentive systems as antecedent conditions. The resulting truth table considers the possible combinations observed in our hotel sample. The results of the intermediate solution show three different configurations consistent with high financial performance (Table 4). All the consistency scores are above 0.9, thus the three configurations of antecedents are sufficient for identifying the outcome. The overall solution presents a consistency level of 0.93, which is above the minimum recommended level of 0.75 (Ragin, 2008a), and a solution coverage of 0.39, which means that the three configurations account for 39% of the membership in the high-performing hotels group.

Table 4

Sufficient configurations of high delegation to front-office managers and employees, high weight on non-financial performance measures in manager and employee incentive systems, and customer satisfaction for high financial performance.

	Antecedent conditions						Overall solution		
	SAT	ADE	ADM	WENF	WMNF	Coverage	Consistency	Coverage	Consistency
Config 1	●	○	○		●	0.19	0.99	0.39	0.93
Config 2	○	●	○	●		0.19	0.91		
Config 3	●	●	○		○	0.28	0.94		

ADM: delegation of decision right to managers

ADE: delegation of decision right to employees

WMNF: weight of non-financial performance measures in manager incentive systems

WENF: weight of non-financial performance measures in employee incentive systems

SAT: customer satisfaction

FP: financial performance

Note: black circles (●) indicate presence; white circles (○) denote negation; blank spaces denote no matter. This analysis is based on the Intermediate Solution.

Configuration 1 shows that high customer satisfaction and the use of non-financial performance measures in manager incentive systems form a combination of antecedent conditions leading to high financial performance. Two hotels form this configuration and have different characteristics (entertainment vs luxury, four vs five stars, locations, organizational forms, and size). However, regarding the incentive-system design, they have both had front-office manager incentive systems in place for more than six years that are based at least 50% on non-financial performance measurements and lead to financial rewards. This configuration is relevant for the group S1, “high-quality oriented hotels,” finding in the POS analysis.

Configuration 2 shows that hotels which use both delegation and incentives based on non-financial performance measure for front-office employees achieve high financial performance. This configuration relates to two case hotels in our sample. Those two hotels have a luxury customer orientation, similar sizes (more than 100 rooms), and are chain hotels located on the seacoast, but they differ in terms of stars (four vs five). One of them has had incentive systems for both managers and employees for more than six years which incorporate individual financial and non-financial rewards. The other hotel implemented an incentive system for employees more recently (within the last two years) and provides individual financial rewards. Nevertheless, one common feature of those employee incentive systems is that they are 100% based on the achievement of non-financial performance measures (e.g., service quality and customer satisfaction). Those findings relate to the POS group S2 (“mid-range small hotels”), but customer satisfaction is not considered as an antecedent condition in this case. That is particularly interesting because this configuration relates to luxury-oriented hotels. Whereas the POS analysis indicates that most of the luxury-oriented hotels rely on manager incentive systems based on non-financial performance measurements, the fsQCA refines the analyses by showing that, in some cases, employee delegation and incentive system mechanisms are also a relevant pathway for improving those hotels’ financial performance. Overall, configurations 1 and 2 are consistent with the POS analysis in that they confirm the importance of the following two cause-and-effect relationships:

- (1) WMNF → SAT → FP
- (2) ADE → WENF → SAT → FP

However, the fsQCA analysis also gives some indications that, even if those cause-and-effect relationships seem to be related to certain types of hotels, the recipe for mid-range small hotels can be successful for luxury-oriented hotels.

Finally, **configuration 3** shows that hotels which enjoy high customer satisfaction and use delegation to front-office employees also achieve high financial performance. This configuration relates to five hotels in the case sample, four of which have similar characteristics (small individual-owned hotels with around 30 rooms), but they are in

different locations, have varying customer orientations (the three types are represented), and a range of stars (the three categories of hotels are represented). However, regarding the incentive-system design, those hotels share the commonalities of having implemented employee-only incentive systems based at least 50% on non-financial performance measurements leading to financial and non-financial rewards for more than six years. Although those findings differ from those from the POS analysis, they are also somewhat related to the findings of group S2 (mid-range small hotels). Indeed, this group includes small hotels using incentive systems quite extensively (which is not the case for most S2 hotels) and emphasizes the importance of both delegation to employees and customer satisfaction in influencing financial performance. We can argue therefore that delegation to front-office employees and hotel customer satisfaction are both important for small hotels¹⁰.

Overall, we can draw conclusions regarding our research propositions. P1 is partially supported because the findings show that the hypothesized causal relationship chain between our constructs can be effective: (1) either partially (excluding, for instance, the extent of delegation or customer satisfaction as antecedents of financial performance), and (2) at the employee and/or manager levels depending on the group (S1 to S3) to which the hotels belong. That leads most notably to supporting P2, as the POS analysis and the fsQCA show different causal relationships with the three customer orientations.

5. Discussion

The purpose of this paper is to address: (1) performance literature limitations by deepening the understanding of MCS complex causal relationships in a specific context, and (2) methodological shortcomings by using a mixed-method approach (e.g., [Chenhall & Moers, 2007](#); [Isaksson & Woodside, 2016](#); [Mourad & Valette-Florence, 2016](#); [Woodside, 2013](#)).

5.1. Implications for theory and research

Our empirical findings have two theoretical implications. First, they reaffirm the need to consider the specific strategic context to understand organizational performance ([Dittman, Hesford, & Potter, 2009](#); [Frösén et al., 2016](#); [Ittner, Larcker, & Randall, 2003](#); [Messner, 2016](#)). Strategic constructs are often appreciated through generic typologies. This study highlights that customer orientation can be considered as an industry-specific construct and proposes a conceptualization of the customer orientation fully related to the hotel industry. This construct, anchored

¹⁰ To some extent it is not surprising not to find a configuration related to group S3 (service-added hotels) as they had a lower financial performance than the two other groups (see [Table 2](#)). Moreover, as luxury-oriented hotels can be found in every configuration, it can be considered a peripheral condition in recipes leading to high hotel financial performance.

in the consumer value literature (Gallarza et al., 2011; Holbrook, 1998; Sánchez-Fernández et al., 2009), characterizes the extent of customer orientation in our case sample for three kinds of hotel customer orientation (luxury, entertainment, and family).

Second, the findings also highlight the importance of considering front-office staff “empowerment” and incentive-system design. On the one hand, we show that the delegation of decision rights related to customer relationships and operational management can be critical, especially for front-office employees (Karatepe, 2013). On the other hand, the findings also show that it is important to consider the performance measurements used in establishing manager and employee compensation. We show that using non-financial performance measures linked to service quality and customer satisfaction is a component of the causal chain leading to achieving high financial performance, and it can be considered an important performance driver. That is in line with studies showing that non-financial performance measurement leads in time to better hotel financial performance (Bangchokdee & Mia, 2016; Banker et al., 2000, 2005).

From the methodological perspective, we use a mixed-method approach combining PLS-POS and fsQCA techniques. Considering the heterogeneity of our sample, that choice appears suitable and allows a deepening of our understanding of the research question. Those methods allow the complexity of the pathways to high financial performance to be shown, with consideration given to the cases of: (1) our three segment groups in POS, and (2) the highest performers in fsQCA. Moreover, the PLS-POS approach gives complementary and additional insights into the fsQCA analysis (and vice versa). Indeed, focusing on the positive and most important path coefficients for each of the three segments allows us to specify the following causal relationships in connection with the three derived hotel customer orientations:

- For segment 1, WMNF \rightarrow (0.377¹¹) SAT \rightarrow (0.378) FP. This sequence closely matches configuration 1 and gives additional information on the respective impact between the corresponding latent variables.
- For segment 2, ADE \rightarrow (0.357) WENF \rightarrow (0.270) FP. This sequence corresponds to configuration 2. PLS also gives additional information on the plausible impact of WENF on SAT (0.278) which is actually not accounted for in configuration 2.
- For segment 3, ADE \rightarrow (0.641) WENF \rightarrow (0.226) FP and ADM \rightarrow (0.632) WMNF \rightarrow (0.390) FP. The first sequence also seems to be related to configuration 2, but PLS similarly points to another positive sequence, the second one, which was not discovered by the fsQCA investigation.
- Conversely, fsQCA highlights the specific cases of high performers in configuration 3 for which antecedent conditions (i.e., SAT and ADE) were not highlighted by PLS.

Globally, it seems that both fsQCA and PLS-POS can generate convergent and complementary results. Of course, and due to our small sample size, replications are necessary to delineate clearly the complementarity of those two approaches. Nonetheless, it seems that the joint use of PLS-SEM and fsQCA enables more fine-grained insights to be generated into the variable relationships under study, thereby offering the means with which to derive better managerial conclusions.

5.2. Managerial implications

Our findings can be helpful to hotel managers seeking to understand high performance mechanisms before implementing delegation of decision rights and/or performance measurements in incentive systems in a way that will help to ensure higher performance. Specifically, this research introduces a differentiation between front-office staff based on their status, i.e., as managers or employees. The results highlight the

importance of considering front-office staff status, which leads to different combinations of mechanisms for achieving high performance. The extent of delegation of decision rights can therefore be adapted accordingly.

Moreover, the hospitality literature highlights the importance of hotel characteristics when studying hotel performance (Bangchokdee & Mia, 2016; Banker et al., 2000, 2005; Dahlstrom, Haugland, Nygaard, & Rokkan, 2009; Dittman et al., 2009; Mattimoe & Tivnan, 2018; Sainaghi, 2010). Indeed, Sainaghi (2010, p. 934) notes that “hotel traits (such as size, location, ownership, and affiliation) appear to have a very important link with performance.” Our findings point out the importance of considering the size, number of stars, and customer orientation when making choices regarding the extent of delegation and the type of performance measurements to be used in front-office staff incentive systems. Those results are in line with previous literature related to the importance of customer orientation and hotel categories as signals of quality to customers (López Fernández & Serrano Bedia, 2004; Manes & Tchetchik, 2018; Nasution & Mavondo, 2008). Therefore, in practice, a top manager in a big hotel favoring a luxury customer orientation should consider using manager incentive systems based on non-financial performance measurements (such as customer satisfaction or service quality) to improve overall customer satisfaction, which in turn improves financial performance. Conversely, in mid-range small hotels, the emphasis should be placed on front-office employees by: (1) giving them autonomy to make decisions regarding customer relationships, and (2) using incentive systems based on non-financial performance measures, such as customer satisfaction or service quality, to improve overall customer satisfaction and in turn financial performance.

5.3. Limitations and future research directions

This study has some noteworthy limitations. The findings are based on a single case sample and would therefore require replication studies to analyze in more detail the pathways leading to high hotel performance. Moreover, from an empirical perspective, our distance-based segmentation approach suffers from using a sample of very limited size. Although we relied on a systematic bootstrap procedure with 5,000 replications, obviously our study needs to be replicated on a larger data set to generalize the results obtained so far. Nevertheless, regarding future research, our findings suggest that more industry-based studies should be conducted to show the complexity and heterogeneity of the causal relationship chains leading to the same outcome. That is especially true for the study of performance. Another main research perspective would be to go deeper into understanding why such configurations of customer orientations, delegation, incentive-system design, and overall performance can occur. To do so, both replication and qualitative studies (e.g., case studies) could be relevant for an investigation into the nature of these cause-and-effect relationships and provide a better understanding of the relationships between those antecedent conditions and performance outcomes.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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¹¹ Path coefficient estimate.

References

- Abernethy, M. A., Bouwens, J., & Van Lent, L. (2010). Leadership and control system design. *Management Accounting Research*, 21(1), 2–16. <https://doi.org/10.1016/j.mar.2009.10.002>
- Baik, B., Evans, J. H., III, Kim, K., & Yanadori, Y. (2016). White collar incentives. *Accounting, Organizations and Society*, 53(August), 34–49. <https://doi.org/10.1016/j.aos.2015.11.006>
- Bangchokdee, S., & Mia, L. (2016). The role of senior managers' use of performance measures in the relationship between decentralization and organizational performance. *Journal of Accounting & Organizational Change*, 12(2), 129–151. <https://doi.org/10.1108/JAOC-11-2012-0110>
- Banker, R. D., Potter, G., & Srinivasan, D. (2000). An Empirical Investigation of an Incentive Plan that Includes Nonfinancial Performance Measures. *The Accounting Review*, 75(1), 65–92. <https://doi.org/10.2308/accr.2000.75.1.65>
- Banker, R. D., Potter, G., & Srinivasan, D. (2005). Association of Nonfinancial Performance Measures with the Financial Performance of a Lodging Chain. *Cornell Hotel and Restaurant Administration Quarterly*, 46(4), 394–412. <https://doi.org/10.1177/0010880405275597>
- Becker, J.-M., Rai, A., Ringle, C. M., & Völckner, F. (2013). Discovering Unobserved Heterogeneity in Structural Equation Models to Avert Validity Threats. *MIS Quarterly*, 37(3), 665–694. <https://doi.org/10.25300/MISQ/2013/37.3.01>
- Bedford, D. S. (2020). Conceptual and empirical issues in understanding management control combinations. *Accounting, Organizations and Society*, 86, 101187 in press. 10.1016/j.aos.2020.101187.
- Ben Jabeur, S., Belhaj Hassine, R., & Mefteh-Wali, S. (2021). Firm financial performance during the financial crisis: A French case study. *International Journal of Finance & Economics*, 26(2), 2800–2812. <https://doi.org/10.1002/ijfe.1935>
- Bouamama, M., Basly, S., & Zian, H. (2021). How do contingency factors influence the content of balanced scorecards? An empirical study of French intermediate-sized enterprises. *Journal of Accounting & Organizational Change*, 17(3), 373–393. <https://doi.org/10.1108/JAOC-04-2020-0048>
- Bouwens, J., & Van Lent, L. (2007). Assessing the performance of business unit managers. *Journal of Accounting Research*, 45(4), 667–697. <https://doi.org/10.1111/j.1475-679X.2007.00251.x>
- Chenhall, R. H., & Moers, F. (2007). The issue of endogeneity within theory-based, quantitative management accounting research. *European Accounting Review*, 16(1), 173–196. <https://doi.org/10.1080/09638180701265937>
- Chin, W. W., & Dibbern, J. (2010). A Permutation Based Procedure for Multi-Group PLS Analysis: Results of Tests of Differences on Simulated Data and a Cross Cultural Analysis of the Sourcing of Information System Services between Germany and the USA. In V. Esposito Vinzi, W. W. Chin, J. Henseler, & H. Wang (Eds.), *Handbook of partial least squares: Concepts, Methods and Applications (Springer Handbooks of Computational Statistics Series (pp. 71–193))*. Heidelberg, London, New York: Springer. https://doi.org/10.1007/978-3-540-32827-8_8
- Dahlstrom, R., Haugland, S. A., Nygaard, A., & Rokkan, A. I. (2009). Governance structures in the hotel industry. *Journal of Business Research*, 62(8), 841–847. <https://doi.org/10.1016/j.jbusres.2007.07.033>
- Dillman, D. A. (1978). *Mail and telephone surveys: The total design method* (Vol. 19). <https://doi.org/10.1080/00913367.1979.10673275>
- Dittman, D. A., Hesford, J. W., & Potter, G. (2009). Managerial Accounting in the Hospitality Industry. In C. S. Chapman, A. G. Hopwood, & M. D. Shields (Eds.), *Handbooks of management accounting research* (Vol. Volume 3, pp. 1353–1369). Oxford: Elsevier. [https://doi.org/10.1016/S1751-3243\(07\)03008-8](https://doi.org/10.1016/S1751-3243(07)03008-8)
- Duarte, P., & Pinho, J. C. (2019). A mixed methods UTAUT2-based approach to assess mobile health adoption. *Journal of Business Research*, 102, 140–150. <https://doi.org/10.1016/j.jbusres.2019.05.022>
- Eiglier, P. (2004). *Marketing et stratégie des services*: Economica.
- Endrikat, J., Guenther, T. W., & Titus, R. (2020). Consequences of strategic performance measurement systems: A meta-analytic review. *Journal of Management Accounting Research*, 32(1), 103–136. <https://doi.org/10.2308/jmar-52575>
- Fatima, T., & Elbanna, S. (2020). Balanced scorecard in the hospitality and tourism industry: Past, present and future. *International Journal of Hospitality Management*, 91, 102656 in press. 10.1016/j.ijhm.2020.102656.
- Frambach, R. T., Fiss, P. C., & Ingenbleek, P. T. (2016). How important is customer orientation for firm performance? A fuzzy set analysis of orientations, strategies, and environments. *Journal of Business Research*, 69(4), 1428–1436. <https://doi.org/10.1016/j.jbusres.2015.10.120>
- Franco-Santos, M., Lucianetti, L., & Bourne, M. (2012). Contemporary performance measurement systems: A review of their consequences and a framework for research. *Management Accounting Research*, 23(2), 79–119. <https://doi.org/10.1016/j.mar.2012.04.001>
- Frösén, J., Luoma, J., Jaakkola, M., Tikkanen, H., & Aspara, J. (2016). What Counts Versus What Can Be Counted: The Complex Interplay of Market Orientation and Marketing Performance Measurement. *Journal of Marketing*, 80(60–78). <https://doi.org/10.1509/jm.15.0153>
- Gallarza, M. G., Gil-Saura, I., & Holbrook, M. B. (2011). The value of value: Further excursions on the meaning and role of customer value. *Journal of Consumer Behaviour*, 10(4), 179–191. <https://doi.org/10.1002/cb.328>
- Gallarza, M. G., & Gil Saura, I. (2006). Value dimensions, perceived value, satisfaction and loyalty: An investigation of university students' travel behaviour. *Tourism Management*, 27(3), 437–452. <https://doi.org/10.1016/j.tourman.2004.12.002>
- Gong, M. Z., & Ferreira, A. (2014). Does consistency in management control systems design choices influence firm performance? An empirical analysis. *Accounting and Business Research*, 44(5), 497–522. <https://doi.org/10.1080/00014788.2014.901164>
- Guenther, T. W., & Heinicke, A. (2019). Relationships among types of use, levels of sophistication, and organizational outcomes of performance measurement systems: The crucial role of design choices. *Management Accounting Research*, 42, 1–25. <https://doi.org/10.1016/j.mar.2018.07.002>
- Hartmann, F. G., & Moers, F. (2003). Testing contingency hypotheses in budgetary research using moderated regression analysis: A second look. *Accounting, Organizations and Society*, 28(7), 803–809. [https://doi.org/10.1016/S0361-3682\(03\)00019-9](https://doi.org/10.1016/S0361-3682(03)00019-9)
- Holbrook, M. B. (1998). *Consumer value. A framework for analysis and research*. London: Routledge. <https://doi.org/10.4324/9780203010679>
- Isaksson, L. E., & Woodside, A. G. (2016). Modeling firm heterogeneity in corporate social performance and financial performance. *Journal of Business Research*, 69(9), 3285–3314. <https://doi.org/10.1016/j.jbusres.2016.02.021>
- Ittner, C. D. (2008). Does measuring intangibles for management purposes improve performance? A review of the evidence. *Accounting and Business Research*, 38(3), 261–272. <https://doi.org/10.1080/00014788.2008.9663338>
- Ittner, C. D., & Larcker, D. F. (1998). Are Nonfinancial Measures Leading Indicators of Financial Performance? An Analysis of Customer Satisfaction. *Journal of Accounting Research*, 36(3), 1–35. <https://doi.org/10.2307/2491304>
- Ittner, C. D., & Larcker, D. F. (2001). Assessing empirical research in managerial accounting: A value-based management perspective. *Journal of Accounting and Economics*, 32(1–3), 349–410. [https://doi.org/10.1016/S0165-4101\(01\)00026-X](https://doi.org/10.1016/S0165-4101(01)00026-X)
- Ittner, C. D., & Larcker, D. F. (2002). Determinants of Performance Measure Choices in Worker Incentive Plans. *Journal of Labor Economics*, 20(S2), S58–S90. <https://doi.org/10.1086/338674>
- Ittner, C. D., & Larcker, D. F. (2009). Extending the Boundaries: Nonfinancial Performance Measures. In C. S. Chapman, A. G. Hopwood, & D. S. Michael (Eds.), *Handbooks of management accounting research* (Vol. Volume 3, pp. 1235–1251). Elsevier. [https://doi.org/10.1016/S1751-3243\(07\)03002-7](https://doi.org/10.1016/S1751-3243(07)03002-7)
- Ittner, C. D., Larcker, D. F., & Meyer, M. W. (2003). Subjectivity and the weighting of performance measures: Evidence from a balanced scorecard. *The Accounting Review*, 78(3), 725–758. <https://doi.org/10.2308/accr.2003.78.3.725>
- Ittner, C. D., Larcker, D. F., & Pizzini, M. (2007). Performance-based compensation in member-owned firms: An examination of medical group practices. *Journal of Accounting & Economics*, 44(3), 300–327. <https://doi.org/10.1016/j.jacceco.2007.05.001>
- Ittner, C. D., Larcker, D. F., & Rajan, M. V. (1997). The choice of performance measures in annual bonus contracts. *Accounting Review*, 72(2), 231–255. <https://www.jstor.org/stable/248554>
- Ittner, C. D., Larcker, D. F., & Randall, T. (2003). Performance implications of strategic performance measurement in financial services firms. *Accounting, Organizations and Society*, 28(7–8), 715–741. [https://doi.org/10.1016/S0361-3682\(03\)00033-3](https://doi.org/10.1016/S0361-3682(03)00033-3)
- Kaplan, R. S., & Norton, D. P. (1992). The Balanced Scorecard - Measures That Drive Performance. *Harvard Business Review*, 70(1), 71–79. <https://hbr.org/1992/01/the-balanced-scorecard-measures-that-drive-performance-2>
- Karatepe, O. M. (2013). High-performance work practices and hotel employee performance: The mediation of work engagement. *International Journal of Hospitality Management*, 32, 132–140. <https://doi.org/10.1016/j.ijhm.2012.05.003>
- Kaya, B., Abubakar, M., Behraves, E., Yıldız, H., & Mert, I. (2020). Antecedents of innovative performance: Findings from PLS-SEM and fuzzy sets (fsQCA). *Journal of Business Research*, 114, 278–289. <https://doi.org/10.1016/j.jbusres.2020.04.016>
- Kelly, K. O. (2007). Feedback and Incentives on Nonfinancial Value Drivers: Effects on Managerial Decision Making. *Contemporary Accounting Research*, 24(2), 523–556. <https://doi.org/10.1506/Q5X8-5912-W613-OUTL>
- Llach, J., Bagur, L., Perramon, J., & Marimon, F. (2017). Creating value through the balanced scorecard: How does it work? *Management Decision*, 55(10), 2181–2199. <https://doi.org/10.1108/MD-11-2016-0812>
- López Fernández, M. C., & Serrano Bedia, A. M. (2004). Is the hotel classification system a good indicator of hotel quality? An application in Spain. *Tourism Management*, 25(6), 771–775. <https://doi.org/10.1016/j.tourman.2004.06.007>
- Lunke, R. J., Bortoluzzi, D. A., Anzilago, M., & Silva da Rosa, F. (2020). Influence of online hotel reviews on the fit between strategy and use of management control systems: A study among small- and medium-sized hotels in Brazil. *Journal of Applied Accounting Research*, 21(4), 615–634. <https://doi.org/10.1108/JAAR-06-2018-0090>
- Malmi, T., Bedford, D. S., Brühl, R., Dergård, J., Hoozee, S., Janschek, O., ... Toldbod, T. (2020). Culture and management control interdependence: An analysis of control choices that complement the delegation of authority in Western cultural regions. *Accounting, Organizations and Society*, 86, 101116 in press. 10.1016/j.aos.2020.101116.
- Manes, E., & Tchetchik, A. (2018). The role of electronic word of mouth in reducing information asymmetry: An empirical investigation of online hotel booking. *Journal of Business Research*, 85, 185–196. <https://doi.org/10.1016/j.jbusres.2017.12.019>
- Mattimoe, R., & Tivnan, J. P. (2018). In search of hospitality: Theoretical and practical issues in performance measurement and management in hotels. In E. Harris (Ed.), *The Routledge Companion to Performance Management and Control*. London and New York: Routledge. <https://doi.org/10.4324/9781315691374>
- Messner, M. (2016). Does industry matter? How industry context shapes management accounting practice. *Management Accounting Research*, 31, 103–111. <https://doi.org/10.1016/j.mar.2015.09.001>
- Mintz, O., & Currim, I. S. (2013). What drives managerial use of marketing and financial metrics and does metric use affect performance of marketing-mix activities? *Journal of Marketing*, 77(2), 17–40. <https://doi.org/10.1509/jm.11.0463>
- Moers, F. (2006). Performance measure properties and delegation. *The Accounting Review*, 81(4), 897–924. <https://doi.org/10.2308/accr.2006.81.4.897>

- Mourad, S., & Valette-Florence, P. (2016). Improving prediction with POS and PLS consistent estimations: An illustration. *Journal of Business Research*, 69(10), 4675–4684. <https://doi.org/10.1016/j.jbusres.2016.03.057>
- Nagar, V. (2002). Delegation and incentive compensation. *The Accounting Review*, 77(2), 379–395. <https://doi.org/10.2308/accr.2002.77.2.379>
- Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *The Journal of marketing*, 20–35. <https://doi.org/10.1177/002224299005400403>
- Nasution, H. N., & Mavondo, F. T. (2008). Customer value in the hotel industry: What managers believe they deliver and what customer experience. *International Journal of Hospitality Management*, 27(2), 204–213. <https://doi.org/10.1016/j.ijhm.2007.02.003>
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw Hill.
- Pappas, I., & Woodside, A. (2021). Fuzzy-set Qualitative Comparative Analysis (fsQCA): Guidelines for research practice in Information Systems and marketing. *International Journal of Information Management*, 58, In press. 10.1016/j.ijinfomgt.2021.102310.
- Ragin, C. (2008). *Redesigning social inquiry: Fuzzy sets and beyond* (Vol. 240). <https://doi.org/10.7208/chicago/9780226702797.001.0001>
- Ragin, C. (2008b). *User's guide to fuzzy-set/qualitative comparative analysis*: <https://www.socsci.uci.edu/~cragin/fsQCA/download/fsQCAManual.pdf>. Accessed November 13 2021.
- Ragin, C. (2009). Qualitative comparative analysis using fuzzy sets (fsQCA). In B. Rihoux, & C. Ragin (Eds.), *Configurational comparative methods* (pp. 87–122). Thousand Oaks, CA: Sage. <https://doi.org/10.4135/978145226569.n5>.
- Ragin, C., & Davey, S. (2016). Fuzzy-Set/Qualitative Comparative Analysis 3.0. [computer program] (Version 3.0). Irvine, California: Department of Sociology, University of California. Retrieved from <https://www.socsci.uci.edu/~cragin/fsQCA/software.shtml>.
- Rasoolimanesh, S. M., Ringle, C. M., Sarstedt, M., & Olya, H. (2021). The combined use of symmetric and asymmetric approaches: Partial least squares-structural equation modeling and fuzzy-set qualitative comparative analysis. *International Journal of Contemporary Hospitality Management*, 33(5), 1571–1592. <https://doi.org/10.1108/IJCHM-10-2020-1164>
- Rego, L. L., Morgan, N. A., & Fornell, C. (2013). Reexamining the market share–customer satisfaction relationship. *Journal of Marketing*, 77(5), 1–20. <https://doi.org/10.1509/jm.09.0363>
- Rotaru, K., Fehrenbacher, D. D., Liang, M. H., & Schulz, A.-K.-D. (2020). Causal inference in judgment using the balanced scorecard. *Journal of Management Accounting Research*, 32(2), 201–224. <https://doi.org/10.2308/jmar-52574>
- Sainaghi, R. (2010). Hotel performance: State of the art. *International Journal of Contemporary Hospitality Management*, 22(7), 920–952. <https://doi.org/10.1108/09596111011066617>
- Sánchez-Fernández, R., Iniesta-Bonillo, M.Á., & Holbrook, M. B. (2009). The Conceptualisation and Measurement of Consumer Value in Services. *International Journal of Market Research*, 51(1), 93–113. <https://doi.org/10.1177/147078530905100108>
- Speckbacher, G., & Wentges, P. (2012). The impact of family control on the use of performance measures in strategic target setting and incentive compensation: A research note. *Management Accounting Research*, 23(1), 34–46. <https://doi.org/10.1016/j.mar.2011.06.002>
- Van der Stede, W. A., Young, S. M., & Chen, C. X. (2007). Doing Management Accounting survey research. In C. S. Chapman, A. G. Hopwood, & M. D. Shields (Eds.), *Handbooks of management accounting research* (Vol. 1, pp. 445–478). Oxford: Elsevier. [https://doi.org/10.1016/S1751-3243\(06\)01018-2](https://doi.org/10.1016/S1751-3243(06)01018-2).
- van Veen-Dirks, P. (2010). Different uses of performance measures: The evaluation versus reward of production managers. *Accounting, Organizations and Society*, 35(2), 141–164. <https://doi.org/10.1016/j.aos.2009.02.002>
- Vizcaíno-González, M., Pineiro-Chousa, J., & Sáinz-González, J. (2017). Selecting explanatory factors of voting decisions by means of fsQCA and ANN. *Quality & Quantity*, 51(5), 2049–2061. <https://doi.org/10.1007/s11135-016-0375-5>
- Walls, A. R. (2013). A cross-sectional examination of hotel consumer experience and relative effects on consumer values. *International Journal of Hospitality Management*, 32, 179–192. <https://doi.org/10.1016/j.ijhm.2012.04.009>
- Widener, S. K., Shackell, M. B., & Demers, E. A. (2008). The juxtaposition of social surveillance controls with traditional organizational design components. *Contemporary Accounting Research*, 25(2), 605–638. <https://doi.org/10.1506/car.25.2.11>
- Wilkins, H., Merrilees, B., & Herington, C. (2007). Towards an understanding of total service quality in hotels. *International Journal of Hospitality Management*, 26(4), 840–853. <https://doi.org/10.1016/j.ijhm.2006.07.006>
- 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. <https://doi.org/10.1016/j.jbusres.2012.12.021>
- Woodside, A. G. (2017). Releasing the death-grip of null hypothesis statistical testing (p <.05): Applying complexity theory and somewhat precise outcome testing (SPOT). *Journal of Global Scholars of Marketing Science*, 27(1), 1–15. <https://doi.org/10.1080/21639159.2016.1265323>
- Woodside, A. G., & Sharma, M. (2017). Case-based modeling of prolific liars and constant truth-tellers: Who are the dishonesty and honesty self-reporters? *Journal of Business Research*, 71, 142–153. <https://doi.org/10.1016/j.jbusres.2016.10.003>

Nathalie Benet is associate professor in Management Accounting. She studies performance measurement systems in the service industry (hotels, cooperative banks) and more recently management control and operational risks management.

Aude Deville is professor in Management Accounting. Her research focuses on management control systems, performance measurement and Balanced Scorecard in the insurance and banking industry (bank branch networks, etc...).

Karine Raies is associate professor in Marketing. She studies the consumer and his relationship to brands in a complex environment (digitization - hyper connectivity - etc.) and fsQCA analysis.

Pierre Valette-Florence is professor in Marketing and Quantitative Methods. He has published numerous articles in highly recognized scientific journals in the fields of luxury branding, consumer behavior and multivariate data analysis.