A measure of revenue management orientation and its mediating role in the relationship between market orientation and performance

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ABSTRACT

This research conceptualizes revenue management as a specific strategic orientation—that is, the belief, and the processes that guide this belief, that revenue management leads to greater performance. As a first step, we propose REMANOR, a two-dimensional measure of revenue management orientation (RMO). Then, we investigate the impact of RMO on firm performance in the French hotel industry. The results show that RMO plays a mediating role in the relationship between market orientation and performance. The article also highlights the moderating role of customers' acceptance of revenue management practices on the RMO-performance relationship. The article concludes with the theoretical and managerial implications of the research.

1. Introduction

The literature has long established the importance of revenue management –or yield management– in services (e.g., Abrate & Viglia, 2016; Kimes & Wirtz, 2003; Wang, Yoonjoung Heo, Schwartz, Legohérel, & Specklin, 2015). Revenue management is the "application of information systems and pricing strategies to allocate the right capacity to the right customer at the right price at the right time" (Kimes & Wirtz, 2003, p. 125). Because of its strong relationship to perishability and capacity-constraint problems (Lee & Ng, 2001), many service industries (e.g., hotels, airlines, car rental, restaurants, health care) and the nonprofit sector have adopted revenue management. While pricing strategies based on revenue management seem to exert a positive impact on firm performance (Altin, Schwartz, & Uysal, 2017; Ortega, 2016), Desiraju and Shugan (1999) suggest that some industries may find revenue management extremely profitable whereas others do not.

These mixed effects may be explained by the fact that all these studies focus on the impact of specific tactics of revenue management on firms' performance; however, revenue management has now become a more complex system geared not only to managing demands but also to creating demands (Cross, Higbie, & Cross, 2009; Kimes, 2016). Understanding how revenue management can influence the organization and its revenues thus means viewing it as a strategic orientation. Indeed, Jones and Hamilton (1992) suggest that revenue management describes a new corporate orientation—"a yield culture"—that affects the entire organization (Aubke, Wöber, Scott, & Baggio, 2014;

Brotherton & Turner, 2001; Wirtz, Kimes, Theng, & Patterson, 2003; Yeoman & Watson, 1997). As Chase (2005, p. 193) explains, implementing revenue management in the firm "involves changing the corporate culture, gathering and examining an unprecedented amount of data, and challenging established marketing and sales practices, as well as decision-making philosophies."

We thus conceptualize a revenue management orientation (RMO) as a belief that revenue management leads to greater performance as well as the processes that guide this belief (Homburg & Pflesser, 2000; Ramani & Kumar, 2008). However, no comprehensive construct exists in the literature that captures the key elements of an RMO. We address this research gap herein and test its impact. More specifically, because we consider revenue management an orientation that points the entire organization toward a higher profitability, we suggest that market orientation has a positive impact on RMO. Furthermore, we argue that service companies with a strong RMO achieve greater performance, and thus we treat RMO as a mediator between market orientation and firm performance with performance being measured by two objective (room-occupancy rate and revenue per available room) and one subjective (the perception of the performance in comparison with direct competitors) indicators. We also test the moderating role of market turbulence, a firm's experience in revenue management, and customers' acceptance of revenue management practices in this model. A review of the literature, our methodology and findings follow. The article concludes with theoretical contributions, managerial implications, and directions for further research.

2. Literature review

2.1. Definition of the domain of RMO

The term "revenue management" encompasses a range of techniques intended to optimize the profitability of services when capacity limits the availability of the offering, as in the case of airline seats or hotel rooms. Jauncey, Mitchell, and Slamet (1995, p. 25) formally define the term as "an integrated, continuous and systematic approach to maximizing the revenue from each unit by the manipulation of tariffs in response to demand-forecasting models." The implementation, development, and effectiveness of the operation depend on sophisticated informatics and the existence of established and motivated teams (Cetin, Demirçiftçi, & Bilgihan, 2016; Wang et al., 2015; Yeoman & Watson, 1997). Premised on the notion that different customers will pay different prices for the same service, revenue management is based on a fine-tuned segmentation of the market, facilitating variable pricing with the objective of filling available capacity while maximizing revenue (Desiraju & Shugan, 1999). This kind of price discrimination helps cushion the effect of fluctuations in demand and amortize fixed operating costs (Jauncey et al., 1995). It also allows the firm to concentrate on high-value customers and thereby achieve a higher level of financial performance.

Since its introduction in service industries in the late 1970s and 1980s, the scope of revenue management has expanded in both its methods and fields of action. In the hotel industry for instance, revenue management practices were initially applied only to room inventory and based on predetermined prices: revenue management was considered as an inventory function in which room rates were opened and closed (Kimes, 2016). Now, revenue management is applied to other hotel aspects, such as length of stay, and has moved from predetermined rates to price optimization. More fundamentally, companies now use revenue management to manage their entire revenue stream (Wang et al., 2015), thus suggesting a shift from a revenue orientation to a profit orientation (Cross et al., 2009).

All these evolutions indicate that revenue management has moved from simple tactics to a strategic orientation that involves a new vision of customers, the associated distribution costs to reach them, and overall resource planning (Aubke et al., 2014; Brotherton & Turner, 2001; Wirtz et al., 2003). Thus, we argue that RMO refers to a specific strategic orientation, i.e. to a strategic direction implemented by a firm in order to create the proper behaviors for the continuous superior performance of the business (Narver & Slater, 1990; Voss & Voss, 2000). More precisely, we define RMO as a strategic orientation that reflects a firm's ability to maximize its profitability by means of dynamic pricing and inventory optimization systems. RMO means that the entire organization is fully dedicated toward the implementation of revenue management and the search of profitability.

2.2. Development of the hypotheses

Research has shown that revenue management exerts a positive influence on a firm's performance (Altin et al., 2017; Emeksiz, Gursoy, & Icoz, 2006; Jones & Hamilton, 1992; Ortega, 2016). In general, according to Boyd (1998), increased revenue attributable to revenue management varied between 2 and 8% which could correspond to as much as a 100% increase in profitability levels. Emeksiz et al. (2006) observe similar results in the hotel industry. According to Wang (2012), revenue management aims to maximize revenue and ultimately profit through improving sales by increasing operating efficiency and effective management of pricing and inventory control.

In addition, the marketing strategy literature has presented evidence that a firm's strategic orientation is a significant indicator of its performance (Day, 1999; Mu, Thomas, Peng, & Di Benedetto, 2017). Market orientation, learning orientation, entrepreneurial orientation or employee orientation are all positively associated with firm's

performance because all the firm is fully dedicated toward one goal (Gatignon & Xuereb, 1997; Grinstein, 2008). As a consequence, we assume that a revenue management–oriented firm will achieve superior performance because all the service organization will be dedicated toward the positive implementation of revenue management. Therefore:

Hypothesis 1. The greater the RMO of a firm, the greater is its performance.

In connection with Hypothesis 1, we propose that customers' acceptance of revenue management practices moderates RMO effects on performance. Specifically, we suggest that RMO effects become weaker as customers reject revenue management practices. We use two related theoretical explanations for this prediction.

First, service literature has questioned the ethical implications of revenue management (Kimes & Wirtz, 2003; Sahut, Hikkerova, & Pupion, 2016; Wirtz et al., 2003), arguing that maximization of revenue can be a legitimate corporate aim only if there are no negative effects on customers' overall evaluation of the service and their satisfaction with it. Wang (2012) has examined the compatibility between revenue management and customer management and has identified the potential conflicts that may arise including goals (revenue versus customer spending), timescales (daily versus long-term) and business assets (fixed capacity versus customers). Because of these conflicts, negative customer feelings can arise not only from unjustified differences in all the prices (not just the main services offered) but also from the complexity of the system, the illegibility of prices, and the problems caused by overbooking and restrictions (Sahut et al., 2016). Thus, a basic condition for the implementation of revenue management is customers' acceptance of a more complex tariff and all the consequences derived from this situation.

The second explanation comes from the strategic orientation–performance relationship literature (e.g., Gatignon & Xuereb, 1997; Voss & Voss, 2000), which highlights the moderating role of customer perceptions of firms' ethical behavior in the strategic orientation–performance relationship (Bhattacharya & Sen, 2004; Brik, Rettab, & Mellahi, 2011). Therefore, the relationship between a specific strategic orientation—RMO in our case—and performance will be stronger when customers perceive the actions (i.e., the pricing system and all the other aspects of revenue management such as overbooking and restrictions) of the firm as fair. Thus, we propose the following:

Hypothesis 2a. Customers' acceptance of revenue management practices moderates the relationship between RMO and performance. Specifically, the more customers accept a firm's revenue management practices, the stronger is the positive effect of RMO on performance.

Furthermore, research extensively stresses the importance of the experience of the organization in revenue management (Aubke et al., 2014; Cetin et al., 2016; Lieberman, 2003). According to Cetin et al. (2016), "analyzing behaviors of customers, their price sensitivity and actions of competitors is strongly tied to skills, abilities, knowledge and experience" (p. 134). Yeoman and Watson (1997) describe revenue management as a human activity system. To achieve better performance through revenue management, staff should be adequately qualified (Aubke et al., 2014). This proposal echoes Lieberman's (2003) idea that revenue management is not a simple software that, after installation, functions independently to bring benefits. Jauncey et al. (1995) recommend that all decisions resulting from the application of revenue management (e.g., tariffs, restrictions, special offers) be strictly controlled and approved by an experienced team. The experience of the organization is a decisive factor for the success of revenue management. Thus:

Hypothesis 2b. A firm's experience in revenue management moderates the relationship between RMO and performance. Specifically, the more the firm is experienced in revenue management, the stronger is the positive effect of RMO on performance.

Market orientation is the measure of behaviors and activities that reflect the marketing concept (Kirca, Jayachandran, & Bearden, 2005; Kohli & Jaworski, 1990; Narver & Slater, 1990). Narver and Slater (1990, p. 21) define market orientation as the "organizational culture that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers and thus continues superior performance for the business." Day (1999) describes market orientation as the combination of three elements: an organizational culture focused on producing higher value for the customer, distinctive competencies in marketing strategy, and an organizational setting conducive to satisfying customer expectations. A market-oriented firm has a strategic obligation to gather intelligence on present and future customer needs and competitor activities for dissemination within the organization and subsequent use as the basis for collective interfunctional decision making (Slater & Narver, 2000). Revenue management uses market intelligence too to form a precise picture of consumer preferences and to predict consumption behavior (Cross, 2011). In addition, Wirtz et al. (2003) show that revenue management and customer orientation are not necessarily contradictory, and propose solutions to achieve increased revenues and profitability while improving customer satisfaction. Revenue management is supposed to guarantee the profitability of the firm but also to ensure customers' loyalty (Noone, Kimes, & Renaghan, 2003). In conclusion, for revenue management to be of benefit to both the organization and its customers, it is necessary to give primary consideration to customers' satisfaction and loyalty (Choi & Mattila, 2004). We thus argue that market orientation will positively influence RMO:

Hypothesis 3. The greater the market orientation of a firm, the greater is its RMO.

Furthermore, market turbulence captures the intensity of changes in the preferences and desires of customers (Slater & Narver, 1994). According to Kohli and Jaworski (1990), market turbulence reflects the instability of consumer tastes. However, the main objective of market orientation is to address current and future customer needs. Thus, when market turbulence is low, companies do not need to regularly adapt their offers to customer desires. Conversely, when market turbulence is high and becomes a challenge for organizations, the relationship between market orientation and RMO becomes narrower. Studying chain hotels, Ortega (2016) shows for instance that in a context of economic downturn, companies need to focus all the more on the market and to invest in revenue management systems. We formulate this accordingly as follows:

Hypothesis 4. Market turbulence moderates the relationship between market orientation and RMO. Specifically, the higher the market turbulence, the stronger is the positive effect of market orientation on RMO.

Finally, because the aforementioned literature suggests the positive influence of market orientation on RMO and, in turn, RMO on performance, we propose the following:

Hypothesis 5. RMO mediates the relationship between market orientation and performance.

3. Method

To test our hypotheses depicted in Fig. 1, we need first to develop a measure of RMO. The method used in this research thus involves two phases. The first phase refers to the development, refinement, psychometric evaluation, and properties of REMANOR, a multiple-item scale for measuring RMO. In the second phase, we test our conceptual model.

3.1. Phase 1: REMANOR—Development and refinement of a scale to measure RMO

The process that produced the REMANOR scale involved a sequence of steps consistent with conventional guidelines for scale development (Churchill Jr, 1979). These steps included a development of an initial set of items, scale reduction, and reliability and validity assessment as shown in Fig. 2.

3.1.1. Preliminary exploratory study and development of an initial set of items

To assess the components of the RMO construct identified in the literature, we interviewed 29 executives and revenue managers. To generate this sample, we adopted a purposive sampling plan similar to that which Kohli and Jaworski (1990) use in their study of market orientation. We selected informants according to their experience in revenue management within the hotel industry (at least five years). In addition, we wanted the respondents to represent a wide range of views on revenue management and therefore chose chief executive officers, top managers, and middle managers from different types of hotels (e.g., 2–4 stars, medium-sized to large, urban/suburban/resort). Table 1 provides a description of the profiles of the respondents. Data collection stopped after saturation was reached (i.e., when no new patterns and themes emerged from the interviews). Consistently with the conventional guidelines for scale development, we used at this very first step "grand tour" questions (McCracken, 1988) to avoid influencing the participants and to let them answer as freely as possible. As a consequence, we organized the interview guide around four main themes: (1) the definition of revenue management and all its components, (2) the implementation of revenue management in the company, (3) the consequences of revenue management for the company and for customers, and (4) the key success factors of revenue management. However, consistent with the principles of in-depth qualitative research, the informants were free to guide the content of the discussion. The interviews lasted one hour, on average; they accounted for > 24 h of conversation and produced 78 pages of single-spaced transcribed text.

Overall, the informants agreed that revenue management is the maximization of profitability by means of dynamic pricing and inventory based on advanced forecasting and optimization systems. All the respondents recognized that they cannot simply manage revenues; they must manage revenues in a way that also manages profit: "revenue management is the discipline of optimizing topline revenue opportunities while [...] maximizing the net contribution and integrity of the revenue by creating, deploying and refining business strategies". This process represents total revenue management and its impact on profit. Beyond simply managing demand, revenue management also plays a key role in creating demand: "Revenue management has a responsibility to play that part in creating demand. However, I would say that what there needs to be is that revenue management is working with sales and marketing to be making sure that we are creating the right kind of demand" (Philip Gardner, Vice President, Revenue Management, Europe at IHG).

Furthermore, the respondents agreed that pricing goes well beyond traditional price determination methods to include price optimization methods with the goal of maximizing the share of wallet. As Daryl Hultquist (Director Pricing and Revenue Optimization at Choice Hotels International) explained, the goal of revenue management is to sell the "right product to the right customer, [at] the right time, at the right price." Given the evolution of the hotel industry and how complex the distribution is, however, the informants added that revenue management also means selling through the right distribution channel. As explained by the revenue manager of a 5-star hotel in Paris, "with these developments and the changes in customers' buying behaviors, revenue management is essential for greater visibility in the future because we anticipate things".

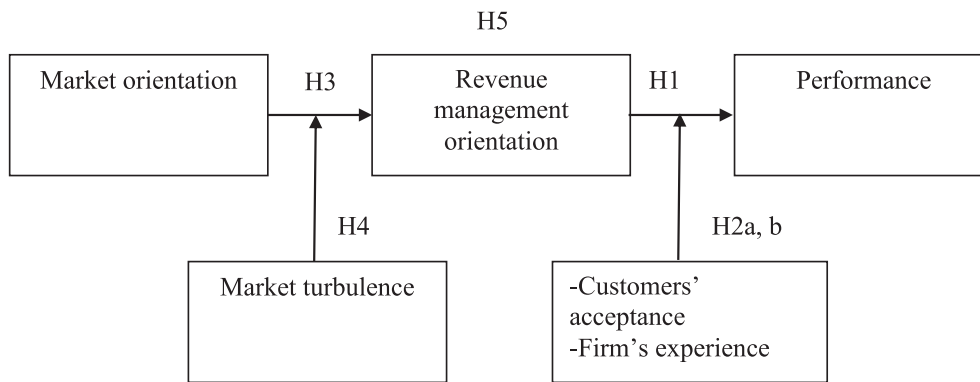Neil Corbett (Former Vice president, Pricing at Walt Disney Parks

H5

| Market orientation | H3 → | Revenue management orientation | H1 → | Performance |

H4 ↑

Market turbulence

H2a, b ↑

-Customers' acceptance
-Firm's experience

Fig. 1. Conceptual model and hypotheses.

Step 1: Development of an initial set of 43 items based on insights from the extant literature and a preliminary exploratory study with 29 executives and revenue managers

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Step 2: Purification process with a panel of 6 experts, 3 academics and 3 practionners, to retain 19 items

⇩

Step 3: Refinement of the scale with the administration of a questionnaire to 47 general managers or revenue managers to retain 13 items

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Step 4: Reliability and validity assessment of the final scale in a conceptual model with 132 directors and revenue management directors of hotels in France
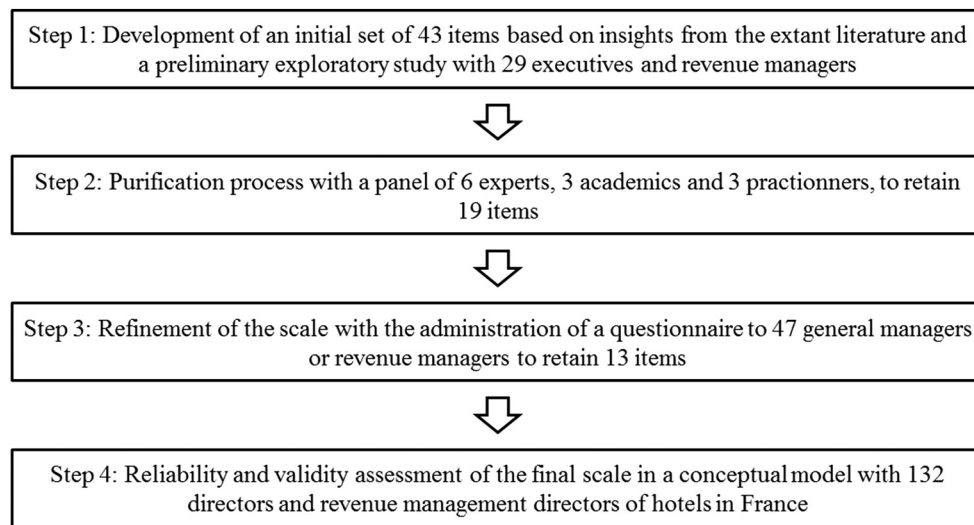
Fig. 2. Process employed in developing the scale to measure RMO.

and Resorts) summarized the evolution in revenue management overall as follows: "We have evolved significantly in the past 20 years, moving from very basic revenue management tactics to a highly evolved system of forecasting and optimization techniques incorporating complex, real-time science-driven business solutions." This view of revenue management as a specific strategic orientation is shared among our respondents: "For us, it's more than integrated, it is more than a mode of operation, that is part of our strategy and our culture".

Given this high complexity, the role of people has become increasingly more important for the respondents. Many mentioned that the staff must be well trained to be able to analyze and interpret the amount of data collected and to make the right decisions based on their interpretations: "The key factors of success in revenue management are a combination of an experienced and knowledgeable revenue manager who understands the market … as well as a coordinated effort across a company to arm the hotel [revenue management] teams with the best strategies". In addition, because revenue management is now considered a strategic orientation that lies at the heart of the organization, all the staff must work in collaboration with other departments (e.g., sales, marketing, customer relationship management). According to Song Park (Technology Executive, Carlson Wagonlit Travel), "revenue management is practiced at all levels—hotel, metro area, area, region, continent and corporate wide. The function works closely with sales, marketing, finance and operations and is typically a part of the executive committee at a hotel." Another Vice President in the hotel industry explains how revenue management has evolved within its company: "At the start, [revenue management] was about the internal communication of what we do and how we do it and an assurance that

our goals align with business and guest service objectives. As we have evolved and built internal credibility, it is more about the continuous evolution, measurement, and improvement of the systems, strategies, and people involved in executing revenue management in our business".

Using as a basis both the preliminary exploratory study and our literature review, we developed a first set of 43 items to measure RMO.

3.1.2. Scale reduction

Two processes of scale reduction were conducted. First, we submitted the preliminary set of 43 items to a depuration process to eliminate items that were superfluous or confusing. A panel of six experts evaluated each statement for content and face validity. To ensure that our items were relevant for research as well as for practice, the panel included three services marketing academics and three senior revenue managers. These experts rated each item using a five-point scale with a range from 1 = "very bad fit" to 5 = "very good fit" with the concept of RMO. We retained items if both the academic score and the managerial score were favorable (> 3.0). As a result of this procedure, a new reduced scale of 19 items emerged.

Second, we administrated a questionnaire composed of the 19 items to 47 general managers or revenue managers of French hotels. We implemented a purposive sampling plan to ensure that the respondents were experienced in revenue management (at least five years). As with the preliminary exploratory study, we tried to select hotels with different ratings, sizes, and locations. The questionnaire was organized as follows: The topic and context of the research were first introduced, and then a brief definition of revenue management was provided ("In this

Table 1
Profiles of respondents in the preliminary exploratory study.

	Respondent information		Hotel information		
	Position in the organization	Experience in revenue management (years)	Size[a]	Stars	Location
1	Managing director	10	b	3	Urban
2	Director	7	a	2	Urban
3	Revenue manager	5	c	4	Suburban
4	Managing director	12	b	3	Suburban
5	Vice president pricing	19	d	3/4	Resort
6	Area revenue manager	9	d	4	Suburban
7	Revenue management systems	14	c	4	Urban
8	Managing director	6	a	3	Suburban
9	Revenue management, reservation & distribution manager	9	d	3	Urban
10	Revenue management director	10	b	3	Resort
11	Revenue director	8	b	4	Suburban
12	Managing director	8	b	3	Suburban
13	Revenue director	12	c	3	Urban/suburban
14	Vice president pricing & revenue management	11	b	3	Urban
15	Area revenue manager	6	c	2	Urban
16	Area revenue manager	5	d	3/4	Urban/suburban
17	Director	21	b	2	Urban/suburban
18	Director pricing and revenue optimization	11	b	2	Urban
19	Area revenue director	10	c	2/3	Urban/suburban
20	Director of revenue management	13	b	3	Suburban
21	Managing director	14	c	4	Urban
22	Revenue management & distribution director	24	c	4	Resort
23	Director	8	a	2	Suburban
24	Revenue management director	11	c	3	Suburban
25	Director	9	b	3/4	Resort
26	Director pricing and revenue optimization	18	c	3	Suburban
27	Director revenue management & distribution	14	d	3	Urban/suburban
28	Vice president central reservation and revenue management systems	5	d	3/4	Urban/suburban/resort
29	Vice president revenue management	16	d	3/4	Urban/suburban

Note. As some of the respondents preferred anonymity, we decided to keep the whole table anonymous.
[a] a = between 0 and 100 rooms; b = between 101 and 500 rooms; c = between 501 and 1000 rooms; d = > 1001 rooms.

research, revenue management is the application of information systems and pricing strategies to allocate the right capacity to the right customer at the right price at the right time"). Finally, managers were asked to evaluate the 19 items identified in the preliminary exploratory study. We assessed the conceptual structure of the 19-item scale by means of a factorial analysis (KMO test = 0.893). We found that the scale contained three principal components that explain 61.07% of the variance. Factor 1 (explaining 42.513% of the variance, integrated by items 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13) is related to the strategic and forecasting aspects of revenue management including inventory management, dynamic pricing and control of demand. As a consequence, we term this dimension "strategic forecasting." Factor 2 (explaining 11.57% of the variance, integrated by items 16, 17, 18, and 19) is related to the human component. The coherence of this human dimension, called "personnel," is clearly identified by the high and similar loading scores of items 16, 17, and 18 (item 19 had a load score lower than 0.8). Factor 3 (explaining only 6.99% of the variance, integrated by items 3 and 15) is related to strategy and human dimensions. These two items have relatively weak score loadings, so we do not retain factor 3. Finally, we eliminated item 14 (referring to the use of software in revenue management practices) because of its weak communality index (0.462 < 0.5) (see Table 2).

To assess the validity of the model, we conducted a confirmatory factor analysis. The coefficients of symmetry and flatness indicate individual distributions close to normal. To reduce the low level of the function optimality when the data configuration does not fit with a multinormal distribution, we performed a bootstrap analysis (200 iterations). The fit index was satisfactory ($\chi^2 = 74.413$, $p < .08$; $\chi^2(df = 1.261)$; GFI = 0.921; AGFI = 0.879; NFI = 0.930; CFI = 0.984; RMR = 0.042; RMSEA = 0.046; Akaike information criterion [AIC] model/AIC independent model = 138.413 < 1093.109; expected cross-validation index [ECVI] model/ECVI independent

model = 1.107 < 8.745).

These indicators, except for the AGFI, satisfy the usually recommended criteria (Hu & Bentler, 1998), which means that the model is appropriate for the analysis. The model shows the score loadings (λi), communalities, and the multiple squared correlations, indicating that the variables were well measured. Nevertheless, even if a fixed parameter to assess the correlation degree does not exist, a correlation index > 0.50 indicates a good degree of correlation between the items and their corresponding dimensions or factors. (see Table 3). We eliminated items with low communalities (6, 9, and 12). Thus, the load score of retained indicators (λi) was significant. The results of *t*-tests were also > 1.96 ($\alpha = 0.05$) for all the items.

3.1.3. Reliability and validity assessment

We assessed the reliability of the final scale composed of 13 items with a questionnaire administrated to 132 directors and revenue management directors of hotels in France. The results show that $\alpha = 0.9163$ for the strategic forecasting dimension and $\alpha = 0.8503$ for the personnel dimension. To confirm these results, we carried out a Jöreskog's ρ analysis of covariance (Fornell & Larcker, 1981). The results confirmed an acceptable level of the scale's reliability (0.8464 and 0.7209, respectively).

We determined convergent validity by means of average variance extracted, commonly denoted by the ρvc value (Fornell & Larcker, 1981). For the strategic forecasting dimension, ρvc = 0.538, and for the personnel dimension, ρvc = 0.599, both higher than the threshold level of 0.5. Thus, a significant proportion of covariance between the items, on their own dimension, can be explained by a single and common cause under the influence of a latent variable. We can therefore conclude that factors 1 and 2 (strategic forecasting and personnel dimension, respectively) as measurement constructs have convergent validity.

We tested for discriminating validity by comparing the validated

Table 2
Factorial structure of 19 items to assess RMO (after varimax rotation).

	Items	Communalities	F1	F2	F3
RMO 01	The practice of revenue management is one of the strategic supports of managers in this organization.	0.744	0.639		
RMO 02	We are all involved in the implementation of revenue management practices.	0.721	0.685		
RMO 03	In our organization, the adoption of revenue management practices was accompanied by organizational changes.	0.605			0.699
RMO 04	The practice of revenue management identifies the strengths and weaknesses of all our products in each market segment.	0.596	0.501		
RMO 05	The practice of revenue management optimizes market segmentation.	0.699	0.726		
RMO 06	Forecasts made by using revenue management practices require an important database support.	0.583	0.538		
RMO 07	The practice of revenue management ensures dynamic management of the capacity.	0.654	0.719		
RMO 08	By means of revenue management, the organization is able to manage and create the demand for each market segment.	0.573	0.656		
RMO 09	Revenue management practices ensure control of all the revenues of this organization.	0.604	0.759		
RMO 10	Revenue management practices allow day-to-day management of reservations.	0.586	0.730		
RMO 11	The practice of revenue management ensures accurate analysis of consumer behavior evolutions.	0.538	0.591		
RMO 12	Revenue management practices improve the traditional methods of price determination.	0.755	0.707		
RMO 13	Forecasting is an inherent element of revenue management.	0.683	0.750		
RMO 14	Software used to implement revenue management practices is necessary to complete the "common sense" decisions of managers.	0.462	Eliminated		
RMO 15	A successful revenue management system is primarily related to human performance.	0.786			0.753
RMO 16	In our organization, employees charged with revenue management practices are well-trained to perform their tasks.	0.744		0.810	
RMO 17	In our organization, employees charged with revenue management practices are able to respond quickly.	0.774		0.835	
RMO 18	In our organization, employees charged with revenue management practices are enabled to make decisions.	0.743		0.818	
RMO 19	In our organization, employees charged with revenue management practices work closely with other functional areas.	0.628		0.715	

model (free model) with an identical model in which we forced the correlation between the factors to 1 (restraint model). The goal of this approach is to compare the chi-square values of each model and assess the difference. The sampling distribution of this difference is also distributed according to a chi-square law for analysis according to the same criteria. Thus, if the test results lead us to reject the null hypothesis equality of the chi-square, we can conclude that the model has discriminating validity. The results show that $\chi^2 = 74.413$ (df = 59) for the free model and $\chi^2 = 102.366$ (df = 60) for the restraint model; the difference in the chi-square value is $27.953 > 6.63$ (df = 1, $\alpha = 0.01$), and thus discriminant validity can be established.

3.2. Phase 2: Test of the model

3.2.1. Data collection

We chose the hotel industry as the setting for the test of our conceptual model for three reasons. First, the problem of imbalance between supply and demand that characterizes the service sector is particularly strong in the hotel sector; the optimization problem of the available capacity in the short and long run represents a major challenge for hotel managers. Second, demand for hotel services, whether for tourism or for business, is characterized by strong seasonality, thus creating a need to anticipate (Guadix, Cortés, Onieva, & Muñuzuri, 2010). Third, demand for hotel services is sensitive to economic and political changes in the national and international environment. The hotel sector is therefore a suitable field of study for RMO and its relationship with market orientation, market turbulence and

Table 3
Results of confirmatory factorial analysis of the scale for assessing RMO.

Items	λ_i (Max prob)	SMC (Max prob)	λ_i (After bootstrap)	SMC (After bootstrap)
Strategic forecasting dimension				
RMO 01 The practice of revenue management is one of the strategic supports of managers in this organization.	0.774	0.599	0.766	0.587
RMO 02 We are all involved in the implementation of revenue management practices.	0.780	0.609	0.774	0.599
RMO 04 The practice of revenue management identifies the strengths and weaknesses of all our products in each market segment.	0.765	0.586	0.765	0.585
RMO 05 The practice of revenue management optimizes market segmentation.	0.814	0.662	0.808	0.652
RMO 06 Forecasts made by using revenue management practices require an important database support.	**0.611**	**0.374**	**0.605**	**0.366**
RMO 07 The practice of revenue management ensures dynamic management of the capacity.	0.776	0.603	0.771	0.594
RMO 08 By means of revenue management, the organization is able to manage and create the demand for each market segment.	0.735	0.540	0.732	0.536
RMO 09 Revenue management practices ensure control of all the revenues of this organization.	**0.575**	**0.330**	**0.573**	**0.328**
RMO 10 Revenue management practices allow day-to-day management of reservations.	0.679	0.461	0.682	0.465
RMO 11 The practice of revenue management ensures accurate analysis of consumer behavior evolutions.	0.623	0.388	0.629	0.396
RMO 12 Revenue management practices improve the traditional methods of price determination.	**0.504**	**0.254**	**0.514**	**0.264**
RMO 13 Forecasting is an inherent element of revenue management.	0.627	0.393	0.617	0.381
Personnel dimension				
RMO 16 In our organization, employees charged with revenue management practices are well-trained to perform their tasks.	0.867	0.752	0.860	0.740
RMO 17 In our organization, employees charged with revenue management practices are able to respond quickly.	0.849	0.721	0.848	0.719
RMO 18 In our organization, employees charged with revenue management practices are enabled to make decisions.	0.729	0.531	0.724	0.524
RMO 19 In our organization, employees charged with revenue management practices work closely with other functional areas.	0.627	0.394	0.634	0.402

Note. The items in bold were eliminated due to low communalities.

Table 4
Scale items and coefficient alpha.

Construct measure	Factor loading	Cronbach's alpha
Market orientation		
Customer orientation		
Customer commitment	0.78	0.89
Create customer value	0.67	
Customer satisfaction objectives	0.69	
Measure customer satisfaction	0.69	
After-sales service	0.54	
Competitor orientation		
Salespeople share competitor information	0.74	
Respond rapidly to competitors' actions	0.78	
Top managers discuss competitors' strategies	0.77	
Target opportunities for competitive advantage	0.62	
Interfunctional coordination		
Interfunctional customer calls	0.70	
Information shared among functions	0.68	
Functional integration in strategy	0.68	
All functions contribute to customer value	0.63	
Share resources with other business units	0.81	
Performance		
Occupancy rate	0.76	0.86
Revenue per room	0.94	
Overall performance	0.91	
Market turbulence		
Extent of market turbulence in the environment	0.76	0.71
Frequent changes in customer preferences	0.72	
Ability to reduce market uncertainty	0.74	
Ability to respond to market opportunities	0.71	

performance.

A self-completion questionnaire was distributed by e-mail to 1021 directors and revenue management directors of hotels in France. After one follow-up, we received 132 usable questionnaires. This represents a 13% response rate, which lies in the middle of the range described in the literature (e.g., Deutskens, De Ruyter, Wetzels, & Oosterveld, 2004). More than three-quarters (78%) of respondents were revenue management directors and hotel directors of 3- and 4-star hotels, 53% of which had fewer than 200 rooms. To minimize concerns about common method variance (CMV) and response biases, we reassured our respondents that their answers would remain anonymous and that no particular answer was encouraged or discouraged. In addition, all the items met Podsakoff, MacKenzie, Lee, and Podsakoff (2003) criteria for minimizing ambiguity (e.g., no double-barreled questions, no complicated syntax).

3.2.2. Measures

RMO was measured using the REMANOR scale. We drew the measurements of the other key constructs from extant literature and adapted them to the present context (see Table 4). We assessed market orientation through the MARKOR scale developed by Narver and Slater (1990). Consistent with the literature, the factorial analysis revealed three dimensions, with six items measuring customer orientation, four measuring competitor orientation, and five measuring the level of interfunctional coordination. In line with Gotteland and Boulé (2006), we dropped the "understand customer needs" item because of its negative effect on reliability.

We assessed market turbulence using the four positively framed items from Miller (1987) ($\alpha = 0.84$). The measure of the firm's experience is based on the number of years in which the organization has applied revenue management practices. We measured customers' acceptance using respondents' evaluation of customers' negative reactions

to the practices of revenue management ("Revenue management leads to negative reactions from customers"). All these constructs were measured on a 5-point Likert scale anchored by 1 (do not agree at all) and 5 (totally agree).

The measurement of performance has long been debated in the literature (González-Benito & González-Benito, 2005). It is possible to distinguish objective from subjective measures of performance. Objective measures are based on financial indicators obtained directly from the organization and on secondary sources, whereas subjective measures refer mainly to judgments and perceptions of respondents. To have a complete measure of organization performance and the benefits of the two measures, we decided to measure not only objective but also subjective performance, as judgmental assessments significantly facilitate the measurement of certain aspects of performance, such as customer satisfaction or positioning relative to competitors (Hooley et al., 2000). In addition, subjective measures take into account lagged effects and, more specifically, the strategy of the firm (Jaworski & Kohli, 1993). We thus decided to measure organization performance using three common indicators in the hotel industry, two objective and one subjective (Chen, Lin, Chi, & Wu, 2016): (1) room-occupancy rate for the previous year; (2) revenue per available room (RevPAR) for the previous year, which is an indicator combining occupancy rate with average price, the advantage of which is that it reflects the reality of hotel activity and overcomes the shortcomings associated with simple occupancy levels or average prices; and (3) the overall subjective performance measured in comparison with direct competitors ("How would you characterize the overall performance of your hotel compared with your main direct competitors?") on a 5-point scale anchored by 1 (below average) and 5 (above average).

We analyzed the data through principal component analysis (SPSS 23.0) and confirmatory factor analysis (AMOS 4.01). Because the latter approach does not offer robust Satorra–Bentler statistics, the discrepancy multivariate normality could have posed problems for the estimation of the parameters by a maximum likelihood fitting function (Bollen, 1989). Regarding the size of the sample, while traditional rules of thumb suggest 5 or 10 observations per estimated parameter (Bollen, 1989), Gignac (2006) argues that these rules should rather be considered as a hypothesis to be tested. More precisely, he explains that "if a SEM model of interest converges within a reasonable number of iterations (< 50), and yields sensible parameter estimates (i.e., all variances are positive, the standard errors are not excessively large, inter-latent variable correlations do not exceed j1.0j), then a researcher should feel confident that the sample size upon which the analyses are based is sufficient" (p. 1575). Because the small sample did not permit the use of an asymptotically distribution-free covariance test as an alternative, we systematically applied the bootstrap resampling procedure to estimate the reliability of the data set.

4. Findings

4.1. Testing the direct relationships among market orientation, RMO, and performance

Fig. 3 presents the structural coefficients of the complete causal model, representing a path from the three components of market orientation to the three components of firm performance, through the hypothesized mediating effect of two operational aspects of RMO. The comparative fit indexes of the model are satisfactory ($\chi^2/df = 1.432$; GFI = 0.956; AGFI = 0.901; NFI = 0.926; CFI = 0.975; RMR = 0.038; RMSEA = 0.059; AIC of the model/AIC of the independent model = $62.923 < 325.474$; ECVI of the model/ECVI of the independent model = $0.503 < 2.604$). These results show that RMO has a positive impact on overall performance ($\beta_1 = 0.56$, $t = 4.24$, $p < .01$), in support of Hypothesis 1, and that market orientation positively influences RMO ($\gamma_1 = 0.52$, $t = 3.42$, $p < .01$), in support of Hypothesis 3.
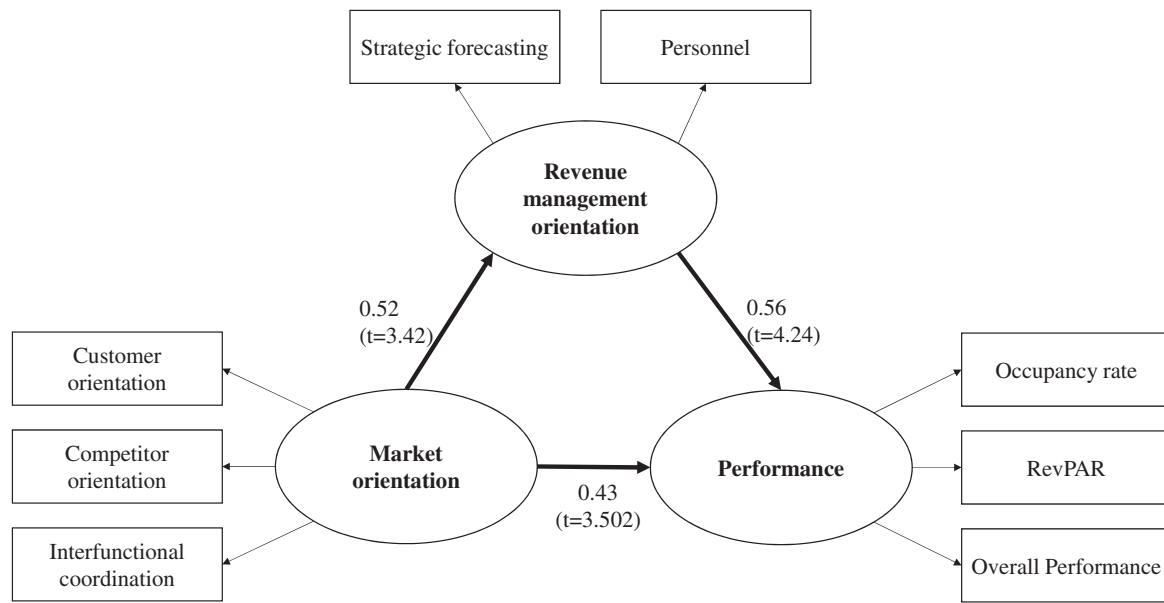
Fig. 3. Structural coefficients of complete model.

In line with Baron and Kenny (1986), the test of Hypothesis 5, which posits the mediating role of RMO in the relationship between market orientation and performance, entails the satisfaction of four conditions. The first is the existence of a direct link between market orientation and organizational performance. The results show a significant effect (λ = 0.78, t = 4.53, p < .01). The second condition is the existence of a direct link between market orientation and RMO. The findings show that market orientation has a significant effect on RMO (λ = 0.44, t = 3.09, p < .01), and thus the second condition is satisfied. The third condition, which was previously satisfied, requires proof of a direct link from RMO to overall performance. Finally, the fourth condition requires the testing of the mediating nature of RMO in the structural model. With the exception of the adjusted goodness-of-fit index, the comparative fit indexes were again satisfactory (χ^2/ df = 1.296; GFI = 0.953; AGFI = 0.894; NFI = 0.925; CFI = 0.974; RMR = 0.040; RMSEA = 0.061; AIC of the model/AIC of the independent model = 63.444 < 235.474; ECVI of the model/ECVI of the independent model = 0.507 < 2.604). When we control for the mediation of RMO, the strength of the link between market orientation and performance is reduced, demonstrating its mediating effect. Therefore, Hypothesis 5 is supported. To determine whether this mediation is total or partial, we compared the free and constrained chi-square statistics. The difference between χ^2 = 22.923 (df 16) and χ^2 = 23.344 (df = 18) was not significant ($\Delta\chi^2$ = 0.421; Δdf = 2; p < .01), suggesting that RMO has only a partial mediating effect on the market orientation–performance relationship.

4.2. Testing the moderating effects

Next, we analyzed the moderating effects of three different variables: market turbulence, customers' acceptance of revenue management practices, and the firm's experience in revenue management. To test for Hypothesis 2a and Hypothesis 4, we followed Baron and Kenny's (1986) multigroup analysis procedure to assess these moderating effects. First, we transformed the moderating variables into nominal variables according to the median. Although this method can decrease "the statistical power for detecting the interaction" (Irwin & McClelland, 2001, p. 106), it can "avoid scaling problems when interactions are tested" (p. 105). Second, we controlled for factorial invariance in the measurement model between the two groups. Third, we determined the significance and value of the correlation between the

independent variable and the dependent variable in each of the groups formed.

More specifically, Hypothesis 4 posits the moderating role of market turbulence in the relationship between market orientation and RMO. We created two groups according to the median: one corresponding to high market turbulence and one corresponding to low market turbulence. Then, we checked whether the correlations between constructs and their measurement variables are significantly different from one group to another, which justifies the use of constrained multigroup analysis. The free model has a chi-square of 10.6 with 5 degrees of freedom, whereas restricting the model results in a chi-square of 24.9 with 8 degrees of freedom. Because there was no significant increase between the free model and the restricted model ($\Delta\chi^2$(3) = 13.5, p = .01), we can conclude that there is no difference in the measurement structure between the two groups. Therefore, the use of a constrained multigroup analysis is necessary. The results show that the effect of market orientation on RMO is stronger when market turbulence is low (γ = 0.854, t = 5.940, p < .01) than when it is high (γ = 0.625, t = 2.087, p < .05). This result provides support for the moderating role of market turbulence, but it is not in the hypothesized direction. Thus, Hypothesis 4 is not supported.

Hypothesis 2a posits a moderating effect of customers' acceptance of revenue management practices in the relationship between RMO and performance. For the free model, chi-square equals 12.9 with 5 degrees of freedom, and for the restricted model, chi-square equals 25.6 with 8 degrees of freedom. We find no difference in the measurement structure between the two groups ($\Delta\chi^2$(3) = 12.7, p = .01). The findings show that when customers highly accept revenue management practices, the influence of RMO on performance is stronger (γ = 0.853, t = 5.957, p < .01) than when customers do not accept revenue management practices (γ = 0.483, t = 1.697, p < .10). Thus, Hypothesis 2a is fully supported.

Because most respondents did not answer the question of the experience in revenue management, we tested the moderating role of a firm's experience not with structural equation models but with the regressions for two groups: highly experienced versus less experienced in revenue management. We calculated the t-statistic on the basis of Hardy's (1993) methodology; it shows the moderating effect of a firm's experience on the link between RMO and performance (t = −1.7844, p < .10). Thus, Hypothesis 2b is supported.

5. Discussion

5.1. Theoretical implications

This article proposes three main theoretical contributions. First, in response to research calling for the investigation of an orientation focused on revenue management (e.g. Wirtz et al., 2003), we identify and specify the notion of RMO. We thus define RMO as a strategic orientation that reflects a firm's ability to maximize its profitability by means of pricing and inventory optimization systems based on strategic forecasting and human factors. To measure this concept, we develop a 13-item REMANOR scale, separated into two dimensions. The first dimension involves the strategic forecasting component of revenue management. Indeed, though initially considered a simple pricing tactic, revenue management has expanded into a strategic orientation that encompasses the whole company to manage and forecast its revenues (Kimes, 2016). The second dimension pertains to personnel, consisting of items related to the role of the staff in implementing revenue management. As the discipline of revenue management has evolved over time to include a complete set of skills (data interpretation, anticipation, flexibility) and relationships with all the components of the firm, the role of the human factor has become increasingly important (Cross et al., 2009), as our conceptualization of RMO reflects.

Second, according to Grinstein (2008, p. 124), "there is no single strategic orientation that leads to superior performance in all situations, and that other orientations beyond [market orientation] are also related to higher levels of organizational performance." We thus contribute to both the strategic orientation and service literature streams by demonstrating the positive impact of RMO on performance with performance being measured by two objective (room-occupancy rate and revenue per available room) and one subjective (the perception of the performance in comparison with direct competitors) indicators. When firms implement the processes and practices that constitute RMO, they develop a complex set of skills that lead to continued superior firm performance. The literature shows that the practice of revenue management can improve corporate performance (Abrate & Viglia, 2016; Emeksiz et al., 2006; Jones & Hamilton, 1992; Ortega, 2016), but these studies treat revenue management as a tactic and not as a specific strategic orientation that affects every part of the organization. The direct relationship identified in our study between RMO and performance provides additional empirical proof of that link but from a new perspective—that of the firm—thus identifying the implementation of revenue management as a specific firm ability. In addition, the findings show the moderating role of firms' experience in revenue management in this relationship, in line with previous research suggesting that revenue management is a learning process (Cetin et al., 2016; Lieberman, 2003). Our research also highlights the moderating role of customers' acceptance of revenue management practices. Thus, the impact of RMO on the performance of the company will be stronger if the customer accepts revenue management practices particularly in terms of price discrimination, length-of-stay restrictions and overbooking. This finding is consistent with previous research that argues that perceived fairness of revenue management decreases both customer satisfaction and loyalty and can even lead customers to terminate their relationship with the service provider (Kimes & Wirtz, 2003; Noone et al., 2003). However, we find no support for Hypothesis 4, which states that the higher the market turbulence, the stronger is the positive effect of market orientation on RMO. Note that Harris (2001) also finds this unexpected result in the U.K. context, which raises the question of context in the relevance of market turbulence.

Third, the relationship between market orientation and performance has been an important focus of research in recent years (e.g., Kirca et al., 2005). We contribute to this literature by introducing a new mediator in the relationship: RMO. In the service industry, RMO thus mediates the market orientation–performance link. In other words, our results show that firms that develop a strong market orientation will have stronger revenue management, which in turn will positively affect the performance of the organization. This result is in line with that of Grinstein (2008), who shows that market orientation is strongly correlated with other strategic orientations, such as learning, entrepreneurial, employee, and innovation orientations.

5.2. Managerial implications

First, our study provides managers with a comprehensive description of RMO. Our definition of the concept, identification of its underlying dimensions, and development of the REMANOR scale to measure it offer managers useful insights into what it means to be revenue management oriented and what it implies concretely, especially with regard to the strategic forecasting and personnel dimensions that structure the concept.

The second managerial implication of our research is the empirical evidence of a link between RMO and measures of overall firm performance. This finding is a further indication of the strategic importance of revenue management for any organization offering a service that has fixed capacity and is perishable. Our results specifically show that RMO has a positive impact on firm performance, but to generate superior performance, revenue management must be deemed a stand-alone strategic orientation, not a simple set of tactics. In particular, and in line with our conceptualization of RMO, revenue management is the interaction between employees, those are in relationships with customers but also those in the back office, and the strategic planning process that leads RMO to have a greater impact on performance. Thus, the role of managers in the distillation of this orientation through formal and informal discourse or through training for employees is crucial.

However, our data indicate that for an effective RMO–performance relationship, the customer must accept revenue management practices. Although the negative effect of customer acceptance is not new, we demonstrate its specific influence on the RMO–performance relationship. In other words, even if the company is oriented toward a revenue management, this will have no impact on performance if customers perceive the tariffs unfairly. To avoid this situation, responsible managers must strive to ensure that their customers do not view revenue management as an unfair tool. As such, companies must aim to clearly explain the different rates to customers so that they understand the logic behind these prices. The role of frontline employees not only in explaining the pricing policy or length-of-stay restrictions but also in listening to customers and their potential claims is central. From this perspective, developing an RMO should help the company better understand customers and, in doing so, better communicate with them.

Third, by demonstrating a direct effect of market orientation on RMO, this research suggests that service managers can benefit by adopting a true market view that their activities influence the way their organizations implement revenue management. In a sense, the orientation and the management process work in the same way and, above all, imply the same vision of a learning organization, wholly directed at the collection and optimum deployment of intelligence gathered from the operating environment and related to customers, competitors, partners in the supply chain, and so forth. RMO must necessarily be rooted in a market culture to be pertinent. Revenue management uses market intelligence to adjust the service specification to customer expectations and to offer continuously better value than the competition. Hotels, for example, combine separate databases and coordinate the activities of the various management functions, to identify precisely what their customers want. The appropriate practice of revenue management thus offers a strategic route for managers to respond effectively to customer needs on the one hand and to defend against the actions and responses of competitors on the other hand.

5.3. Directions for further research

This study raises several questions for future inquiry. First, the

REMANOR scale demonstrates good psychometric properties. However, we created and developed REMANOR only in a French context. Thus, research should examine the reliability and validity of REMANOR in different contexts and refine the scale if necessary. In the same vein, we tested the mediating role of RMO in the relationship between market orientation and performance only in the hotel industry. A next step would be to replicate this study in other sectors that habitually practice revenue management, such as air, road, rail, and sea travel; tourist accommodation other than hotels; car hire; hairdressing; catering; and so on.

Second, we used a combined measure of performance that consisted of objective (room-occupancy rate and revenue per available room) and subjective (perceived overall performance) indicators. Although these indicators are appropriate in the hotel industry (e.g., Chen et al., 2016), it would be worthwhile to measure the impact of RMO on other measures of performance, such as the Average Daily Rate (ADR), the Gross Operating Profit Per Available Room (GOPPAR) or the Market Penetration Index (MPI) to ensure that the results are consistent and confirm the positive impact of RMO. In addition, because the traditional indicators of performance do not account for revenue coming from other sources (e.g., catering, groups) (Cross et al., 2009), further research could include more general and financial metrics, such as the global profit of the company.

Third, although this study establishes that firms embracing an RMO perform well, longitudinal studies would help assess the long-term nature of such benefits. Linkages within the RMO dimensions, which would mean strengthening the interaction between planning capacities and personnel skills over time, could also be investigated with longitudinal data. Doing so would reinforce the learning dimension of RMO.

Finally, this study examines two of the many moderating variables of the impact of an RMO on firm performance—namely, customers' acceptance of revenue management practices and a firm's experience in revenue management. Further research could measure the acceptance of revenue management practices from the customer side to determine whether the results are consistent with our measure from the manager side. To shed more light on the effect of RMO on performance, further research could also examine other moderators such as competitive intensity, firm characteristics other than experience (e.g., size, activity, competitive position), and sector influences (e.g., business-to-consumer vs. business-to-business, profit vs. nonprofit).

6. Conclusion

Research on revenue management began in the 1980s. The main objective of this literature was the search of optimization solutions through statistical and mathematical modeling. The literature in the 1990s focused on the popularity of revenue management practices in industries other than the air industry. Since then, the issues raised by revenue management practices, including the long-term profitability of the firm (e.g. Altin et al., 2017) and customers' acceptance of such practices (e.g. Kimes & Wirtz, 2003), have attracted a great deal of research interest. More recent works on revenue management have highlighted a shift from a simple set of tactics intended to manage fixed capacity to a strategic orientation dealing with all the revenues of a company (e.g., Kimes, 2016). Because these questions remain relevant today, this article is consistent with previous literature but also represents an additional step. Our investigation of the RMO concept and its measurement (REMANOR) is the culmination of a rich literature on revenue management and a new direction opened for services academics and practitioners.

References

Abrate, G., & Viglia, G. (2016). Strategic and tactical price decisions in hotel revenue management. *Tourism Management, 55*, 123–132.

Altin, M., Schwartz, Z., & Uysal, M. (2017). "Where you do it" matters: The impact of hotels' revenue-management implementation strategies on performance. *International Journal of Hospitality Management, 67*, 46–52.

Aubke, F., Wöber, K., Scott, N., & Baggio, R. (2014). Knowledge sharing in revenue management teams: Antecedents and consequences of group cohesion. *International Journal of Hospitality Management, 41*, 149–157.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173.

Bhattacharya, C. B., & Sen, S. (2004). Doing better at doing good: When, why, and how consumers respond to corporate social initiatives. *California Management Review, 47*(1), 9–24.

Bollen, K. A. (1989). A new incremental fit index for general structural equation models. *Sociological Methods & Research, 17*(3), 303–316.

Boyd, A. (1998). *Airline alliance revenue management. OR/MS today, October, 28–31.*

Brik, A. B., Rettab, B., & Mellahi, K. (2011). Market orientation, corporate social responsibility, and business performance. *Journal of Business Ethics, 99*(3), 307–324.

Brotherton, B., & Turner, R. (2001). Introducing yield management systems in hotels: Getting the technical/human balance right. *Journal of Services Research, 1*(2), 25–47.

Cetin, G., Demirçiftçi, T., & Bilgihan, A. (2016). Meeting revenue management challenges: Knowledge, skills and abilities. *International Journal of Hospitality Management, 57*, 132–142.

Chase, C. (2005). Revenue management: A business process that combines market segmentation, price optimization, and fact-based forecasting. In C. L. Jain, & J. Malehorn (Eds.). *Practical guide to business forecasting* (pp. 191–196). Flushing, NY: Graceway.

Chen, C. M., Lin, Y. C., Chi, Y. P., & Wu, S. C. (2016). Do competitive strategy effects vary across hotel industry cycles? *International Journal of Hospitality Management, 54*, 104–106.

Choi, S., & Mattila, A. S. (2004). Hotel revenue management and its impact on customers' perceptions of fairness. *Journal of Revenue and Pricing Management, 2*(4), 303–314.

Churchill Jr, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research,* 64–73.

Cross, R. G. (2011). *Revenue management.* New York: Crown Business.

Cross, R. G., Higbie, J. A., & Cross, D. Q. (2009). Revenue management's renaissance: A rebirth of the art and science of profitable revenue generation. *Cornell Hospitality Quarterly, 50*(1), 56–81.

Day, G. S. (1999). *The market driven organization: Understanding, attracting and keeping valuable customers.* New York: The Free Press.

Desiraju, R., & Shugan, S. M. (1999). Strategic service pricing and yield management. *Journal of Marketing, 63*(1), 44–56.

Deutskens, E., De Ruyter, K., Wetzels, M., & Oosterveld, P. (2004). Response rate and response quality of internet-based surveys: An experimental study. *Marketing Letters, 15*(1), 21–36.

Emeksiz, M., Gursoy, D., & Icoz, O. (2006). A yield management model for five-star hotels: Computerized and non-computerized implementation. *International Journal of Hospitality Management, 25*(4), 536–551.

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

Gatignon, H., & Xuereb, J. M. (1997). Strategic orientation of the firm and new product performance. *Journal of Marketing Research, 34*(1), 77–90.

Gignac, G. E. (2006). Self-reported emotional intelligence and life satisfaction: Testing incremental predictive validity hypotheses via structural equation modeling (SEM) in a small sample. *Personality and Individual Differences, 40*(8), 1569–1577.

González-Benito, Ó., & González-Benito, J. (2005). Cultural vs. operational market orientation and objective vs. subjective performance: Perspective of production and operations. *Industrial Marketing Management, 34*(8), 797–829.

Gotteland, D., & Boulé, J. M. (2006). The market orientation–new product performance relationship: Redefining the moderating role of environmental conditions. *International Journal of Research in Marketing, 23*(2), 171–185.

Grinstein, A. (2008). The relationships between market orientation and alternative strategic orientations: A meta-analysis. *European Journal of Marketing, 42*(1/2), 115–134.

Guadix, J., Cortés, P., Onieva, L., & Muñuzuri, J. (2010). Technology revenue management system for customer groups in hotels. *Journal of Business Research, 63*(5), 519–527.

Hardy, M. A. (1993). *Regression with dummy variables.* Thousand Oaks, CA: Sage.

Harris, L. C. (2001). Market orientation and performance: Objective and subjective empirical evidence from UK companies. *Journal of Management Studies, 38*(1), 17–43.

Homburg, C., & Pflesser, C. (2000). A multiple-layer model of market-oriented organizational culture: Measurement issues and performance outcomes. *Journal of Marketing Research, 37*(4), 449–462.

Hooley, G., Cox, T., Fahy, J., Shipley, D., Beracs, J., Fonfara, K., & Snoj, B. (2000). Market orientation in the transition economies of central Europe: Tests of the Narver and slater market orientation scales. *Journal of Business Research, 50*(3), 273–285.

Hu, L. T., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods, 3*(4), 424–453.

Irwin, J. R., & McClelland, G. H. (2001). Misleading heuristics and moderated multiple regression models. *Journal of Marketing Research, 38*(1), 100–109.

Jauncey, S., Mitchell, I., & Slamet, P. (1995). The meaning and management of yield in hotels. *International Journal of Contemporary Hospitality Management, 7*(4), 23–26.

Jaworski, B. J., & Kohli, A. K. (1993). Market orientation: Antecedents and consequences. *Journal of Marketing, 57*(3), 53–70.

Jones, P., & Hamilton, D. (1992). Yield management: Putting people in the big picture. *The Cornell Hotel and Restaurant Administration Quarterly, 33*(1), 89–95.

Kimes, S. E. (2016). The evolution of hotel revenue management. *Journal of Revenue and Pricing Management, 15*(3/4), 247–251.

Kimes, S. E., & Wirtz, J. (2003). Has revenue management become acceptable? Findings

from an international study on the perceived fairness of rate fences. *Journal of Service Research, 6*(2), 125–135.

Kirca, A. H., Jayachandran, S., & Bearden, W. O. (2005). Market orientation: A meta-analytic review and assessment of its antecedents and impact on performance. *Journal of Marketing, 69*(2), 24–41.

Kohli, A. K., & Jaworski, B. J. (1990). Market orientation: The construct, research propositions, and managerial implications. *Journal of Marketing, 54*(2), 1–18.

Lee, K. S., & Ng, I. C. (2001). Advanced sale of service capacities: A theoretical analysis of the impact of price sensitivity on pricing and capacity allocations. *Journal of Business Research, 54*(3), 219–225.

Lieberman, W. H. (2003). Getting the most from revenue management. *Journal of Revenue and Pricing Management, 2*(2), 103–115.

McCracken, G. (1988). *The long interview.* Beverly Hills, CA: Sage Publications.

Miller, D. (1987). The structural and environmental correlates of business strategy. *Strategic Management Journal, 8*(1), 55–76.

Mu, J., Thomas, E., Peng, G., & Di Benedetto, A. (2017). Strategic orientation and new product development performance: The role of networking capability and networking ability. *Industrial Marketing Management, 64*, 187–201.

Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing, 54*(4), 20–35.

Noone, B. M., Kimes, S. E., & Renaghan, L. M. (2003). Integrating customer relationship management and revenue management: A hotel perspective. *Journal of Revenue and Pricing Management, 2*(1), 7–21.

Ortega, B. (2016). Revenue management systems and hotel performance in the economic downturn. *International Journal of Contemporary Hospitality Management, 28*(4), 658–680.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879.

Ramani, G., & Kumar, V. (2008). Interaction orientation and firm performance. *Journal of Marketing, 72*(1), 27–45.

Sahut, J. M., Hikkerova, L., & Pupion, P. C. (2016). Perceived unfairness of prices resulting from yield management practices in hotels. *Journal of Business Research, 69*(11), 4901–4906.

Slater, S. F., & Narver, J. C. (1994). Does competitive environment moderate the market orientation-performance relationship? *Journal of Marketing, 58*(1), 46–55.

Slater, S. F., & Narver, J. C. (2000). The positive effect of a market orientation on business profitability: A balanced replication. *Journal of Business Research, 48*(1), 69–73.

Voss, G. B., & Voss, Z. G. (2000). Strategic orientation and firm performance in an artistic environment. *Journal of Marketing, 64*(1), 67–83.

Wang, X. L. (2012). Relationship or revenue: Potential management conflicts between customer relationship management and hotel revenue management. *International Journal of Hospitality Management, 31*(3), 864–874.

Wang, X. L., Yoonjoung Heo, C., Schwartz, Z., Legohérel, P., & Specklin, F. (2015). Revenue management: Progress, challenges, and research prospects. *Journal of Travel & Tourism Marketing, 32*(7), 797–811.

Wirtz, J., Kimes, S. E., Theng, J. H. P., & Patterson, P. (2003). Revenue management: Resolving potential customer conflicts. *Journal of Revenue and Pricing Management, 2*(3), 216–226.

Yeoman, I., & Watson, S. (1997). Yield management: A human activity system. *International Journal of Contemporary Hospitality Management, 9*(2), 80–83.

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