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Hotel property performance: The role of strategic management accounting

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ABSTRACT

In the current study, we contend that to enhance their competitiveness and performance, hotel properties need to develop and implement internal policies and procedures such as strategic management accounting that are consistent with their business strategies and account for changing competitive demands. We employ a sample composed of 80 hotel properties to investigate the key precursor of hotel property strategic management accounting use and its impact on hotel property customer and financial performance. The results highlight that market orientation business strategy is a key determinant of hotel property strategic management accounting use and illuminate the mediating influence of hotel property strategic management accounting use and hotel property customer performance on the relationship between hotel property market orientation business strategy use and hotel property financial performance. Recommendations are provided for both researchers and hotel managers concerning their future study of, or use of, strategic management accounting.

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1. Introduction

Scholars have highlighted that to enhance their competitiveness and performance, hotel properties must develop and implement internal policies and procedures that are consistent with their business strategies and account for competitive demands (cf. Tracy et al., 2008). Although prior studies highlight hotel property size (Pavlatos, 2015) and business strategies (cf. McManus, 2013; Pavlatos, 2015) as potential precursors of hotel property strategic management accounting (SMA) use and the potential positive influence of hotel property market orientation business strategy (cf. McManus, 2013; Wang et al., 2012) and SMA use (cf. McManus, 2013) on hotel property customer and financial performance, there is a dearth of empirical evidence that illuminates these effects (see Carlsson-Wall et al., 2015). Hence, the aims of this study are to investigate the determinants of hotel property SMA use and its impact on hotel property customer and financial performance.

Hotels have an active interest in hotel management accounting practices (e.g. Alsoboa et al., 2015; Anderson and Guilding,

2006; McManus, 2013; Pavlatos, 2015; Pavlatos and Paggios, 2009a, 2009b), which suggests a potential for SMA to play an important role in hotels (Pavlatos, 2015). The current study builds on Cadez and Guilding's (2008) contingency examination of SMA usage among large Slovenian corporations but is distinctive in several ways. First, this study focuses on a specific industry, the hotel industry. Industries with a high degree of competition are more conducive to SMA (Cadez and Guilding, 2008) and the hotel industry has a high degree of competition (Mia and Patiar, 2001). Second, while corporate-level hotel studies (e.g. Collier and Gregory, 1995) have documented the increasing use of SMA, at the hotel property-level the use of SMA has not been high even though hotel executives have expressed a strong 'intention' to want to make higher use of SMA (Pavlatos and Paggios, 2009a). Third, the corporate-level strategies (Enz, 2010; Hodari and Sturman, 2014) and management control systems (Cruz et al., 2011) of hotel groups are often customized at the hotel property-level.

We use a sample composed of 80 hotel properties to investigate key determinants of SMA use and its influence on hotel property customer and financial performance. The results highlight hotel property market orientation business strategy use as a key determinant of hotel property SMA use and illuminate the mediating influence of hotel property SMA usage and customer performance on the relationship between hotel property market orientation business strategy use and financial performance.

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Recommendations are provided to both researchers and hotel managers concerning their future study of, or use of, strategic management accounting.

2. Literature review

2.1. Contingency theory: management control systems, strategy, and performance

The central tenet of contingency theory is that there is an optimal structural design that best fits a given strategy and therefore results in optimal performance (Gerdin and Greve, 2004). Relationships between management control systems and strategy have been one of the focal points of contingency theory research (Langfield-Smith, 2008). It is argued that management control systems need to be tailored to support business strategy to enhance competitiveness and performance (Widener, 2004). Management control systems are designed to provide a firms' managers with information to aid in decision-making (Simons, 1995). While the management control systems of corporate hotel groups are often reproduced at the hotel property-level, they tend to go through a process of localization. As Cruz, Scapens and Major (2011, p. 412) explain, hotel property managers can make "the global system 'work' for them" by engaging in a variety of heterogeneous practices which allow the local to differentiate itself from the global, thus overcoming the homogenizing tendencies of globalization.

2.2. Strategic management accounting

As management control typically involves extensive measurement, it is often related to and requires contributions from accounting (Maciariello and Kirby, 1994), and SMA is part of a firms' management control system (Nixon and Burns, 2012). SMA evolved from a failure of traditional management accounting techniques to provide sufficient information to enable managers to externally monitor customers and competitors (Guilding et al., 2000). SMA provides for a more external, long-term, forward-looking, and strategic focus (Guilding et al., 2000) and includes customer accounting, attribute and strategic costing, competitor accounting, benchmarking and integrated performance measurement, and strategic pricing and decision-making (Cadez and Guilding, 2008).

While there remains no agreed definition of SMA (Nixon and Burns, 2012), Simmonds (1981) was the first to use the term 'strategic management accounting', which was determined as "the provision and analysis of management accounting data about a business and its competitors, for use in developing and monitoring business strategy" (p. 26); thus suggesting a link between strategy and SMA. Ward (1993, p. 36) demarcated SMA as "An approach to management accounting that explicitly highlights strategic issues and concerns. It sets management accounting in a broader context in which financial information is used to develop superior strategies as a means of achieving sustainable competitive advantage." Hence, Ward (1993) explicitly delineated SMA as including links with strategy and performance.

The gap which this current study seeks to address stems from the literature on SMA and its constituent techniques being wide-ranging. Indeed "the number of publications, in both the professional and academic literatures, that address SMA runs into the thousands" (Langfield-Smith, 2008; p. 213). However, and despite the definitional bounds of SMA (e.g. Ward, 1993), there has been a relative neglect for research examining the linkages among business strategies, SMA usage, and performance (see Carlsson-Wall et al., 2015). Research of this nature is warranted, however, because despite the potential benefits of SMA, the results of studies con-

ducted across multiple-industries indicate that practitioners' use of SMA has been relatively limited (Langfield-Smith, 2008).

SMA implementation requires a shift in focus to the external environment (Shields and Young, 1989) and it has been viewed as riskier than adhering to conventional management accounting (Ingram and Baum, 1997). This led some commentators to question whether SMA is something of "a figment of academic imagination" (Lord, 1996; p. 364). Such concerns would be quelled if research can illustrate the circumstances in which SMA usage improves the competitiveness and financial performance of organizations.

The current study builds on the prior work of Cadez and Guilding (2008) who used contingency theory to examine the impact of strategic choices, market orientation, and company size on the use of SMA by large Slovenian corporations as well as the mediating effect of SMA use on the influence of strategic choices, market orientation, and company size on corporate financial performance. The other poignant study in the field was also conducted by Cadez and Guilding (2012) who used configurational theory to investigate the effectiveness of different configurational archetypes of strategy and SMA and to appraise how SMA's horizontal and vertical alignment with strategy could facilitate performance. Configurational theory, however, has been deemed inappropriate for use in this current study because: 1) it carries a problem whereby conflicting contingencies can make interpretation and theory building difficult; 2) it does not lend itself well to providing insight with respect to which accounting practices positively influence performance; and 3) the simultaneous testing of multiple fits excludes the use of rigorous statistical methods, such as regression or structural equation modeling (see Cadez and Guilding, 2012).

2.3. Hotel property customer focused business strategies

In the hotel industry, a hotel property's long-term survival often depends on its capacity to efficiently and readily attend to the changing needs and expectations of its customers (Sin et al., 2005). Hence, hotel properties often pursue customer focused business strategies (Pizam and Ellis, 1999). Hotel managers often have a relatively high degree of autonomy in tailoring the business strategy of their hotel property to best suit their needs (Hodari and Sturman, 2014) and this autonomy can improve hotel performance (Hodari et al., 2017). Selection of a competitive strategy, for example, and the specific tactics needed to carry it out are one of a hotel manager's major strategic responsibilities (Enz, 2010). Although several generic taxonomies of customer focused business strategies have been advanced,¹ the focus of the current study is on the market orientation and quality leadership business strategies.

2.4. Market orientation business strategy

A market orientation involves a distinct philosophy of business that places the customer at the center of an establishment's strategic and operational thinking (Deshpande et al., 1993). According to Ruekert (1992), the degree of market orientation in a business unit is the degree to which the business unit: 1) obtains and uses information from customers; 2) develops a strategy which will meet customer needs; and 3) implements that strategy by being responsive to customer needs and wants. A market orientation business strategy can be used to create superior customer value and enhance competitiveness (Kohli and Jaworski, 1990).

¹ Product differentiation strategy, defender-prospecter-analyzer strategies, et cetera.

2.5. Quality leadership business strategy

Quality has been defined differently in various disciplines, but there are two fundamental premises; reduction of variation in operational processes and routines, and an organization-wide commitment to continuous improvement in the delivery of customer-perceived quality (Oliver, 2009). In the service industry, quality tends to focus on unique characteristics such as intangibility, inseparability, and heterogeneity (Parasuraman et al., 1985). For example, in order to successfully implement a quality leadership business strategy, a hotel property must commit to strategic management (Deming, 2000) around a customer focus aiming to meet and satisfy customers' expectations by offering high quality and unique amenities and services, continuous improvement through a dedication to the production of high quality goods and services, and a systems perspective that synergizes hotel property systems to support a climate of quality (Sitkin et al., 1994).

2.6. Market orientation and quality leadership business strategies

Market orientation and quality leadership business strategies are the focus of the current study because they overlap, have embedded similarities (Sittimalakorn and Hart, 2004), tend to reinforce one another (Malhotra et al., 2012), and may need to be linked in order to enhance customer satisfaction (Kotler and Keller, 2012). However, market orientation and quality leadership business strategies may enact distinct paths/reflect distinct ways of enhancing the competitiveness and customer performance of hotel properties (equifinality) because despite their conceptual connection, in actual practice their relationship has appeared somewhat disconnected (see Longbottom et al., 2000).

2.7. Customer and financial performance

The use of financial performance measures alone is likely to be inadequate because they do not capture the customers' perspective of performance (Kaplan and Norton, 2001). Studies conducted across industries have found a positive association between organizational-level customer satisfaction and financial performance (e.g. Fornell et al., 2006). Customer performance has also been linked with business strategy as organizations strive to deliver value not only to their shareholders but also to customers (Franco-Santos et al., 2012).

While the measurement of customer performance is considered one of the emergent issues in the field of managing and measuring organizational performance (Alsoboa, 2015), there is a lack of research concerning the composition of such measures and their relationship with organizational financial performance (Franco-Santos et al., 2012). One definition is that customer performance is related to (but is not limited to) repeat customers, ratings from customer surveys, and percentage of market share (Abu Kasim and Minai, 2009). In the hospitality industry, measures of customer performance have included customer satisfaction ratings (Enz and Way, 2016; Pizam and Ellis, 1999), customer service quality ratings (Enz and Way, 2016; Hayes, 1998), and customer retention (Birch, 1990). There is empirical support for the positive linkages between customer satisfaction, customer loyalty, and customer performance (Etemad-Sajadi et al., 2016; Helgesen, 2006) and between customer satisfaction and financial performance (Banker et al., 2005; Chi and Gursoy, 2009).

3. Hypotheses development

The aims of this current study are to investigate the key determinants of hotel property SMA use and its impact on hotel property customer and financial performance. Building on the prior work

of Cadez and Guilding (2008) and others (e.g. McManus, 2013; Pavlatos, 2015) we investigate the effects of a hotel property market orientation business strategy use, quality leadership business strategy use, and size on hotel property SMA use and its effects on hotel property customer and financial performance. Fig. 1 provides a schematic overview of the current study's conceptual model and hypotheses.

3.1. Hotel property market orientation business strategy and SMA use

Organizations following a market orientation have an external (Kotler and Keller, 2012) long-term emphasis (Narver and Slater, 1990) where their focus is on collecting information about target customers' needs (Guilding and McManus, 2002) as well as competitors' capabilities to create superior customer value (Slater and Narver, 1995). Guilding and McManus (2002) found a positive association between corporate-level market orientation and customer accounting use (an aspect of SMA). Some examples of when SMA use is complementary to hotel properties that are pursuing a market orientation business strategy include when managers require the cost and revenue dynamics of their customers (Zeithaml et al., 2001), the amenity and product attributes that customers desire (Porter, 1985), or information concerning the cost positions and performance of competitors (Day and Wensley, 1988). Furthermore, McManus (2013) and Pavlatos (2015) found positive associations between market orientation and hotel property customer accounting and SMA use, respectively. Congruently, we hypothesize the following:

Hypothesis 1a. Market orientation business strategy will be positively associated with hotel property SMA usage.

3.2. Hotel property quality leadership business strategy and SMA use

Externally oriented customer and competitor information can assist firms to enact a strategy of superior quality (Van Birgelen et al., 2001). Hotel managers can benefit from externally oriented customer and competitor information because it helps them to identify priorities and improvements in customer service quality attributes (Chen, 2014). While a positive relationship exists between a strategy of quality and the use of management control systems (see Ittner and Larcker, 1997), no prior research has examined the association between hotel property quality leadership business strategy and SMA use. Organizations and business units pursuing a quality leadership business strategy, however, do tend to make greater use of management control systems such as external benchmarking (a particular SMA technique) (Cadez and Guilding, 2008). We therefore hypothesize the following:

Hypothesis 1b. Quality leadership business strategy will be positively associated with hotel property SMA usage.

3.3. Hotel property size and SMA use

Organizational size influences the design and use of management control systems (Hoque and James, 2000) and as firms become larger they face increased communication and control problems (Merchant, 1984). Specialization and sophistication of control processes, for example, are greater in larger organizations (Guilding and McManus, 2002) and smaller organizations have weaker control systems (Wallace and Kreutzfeldt, 1995). And the strategic pricing decisions of larger firms tend to follow a longer-term systematic approach with the incorporation of more competitor-related information (Indounas, 2014). McManus (2013) and Pavlatos (2015) have found positive associations between hotel

Conceptual Model and Hypotheses

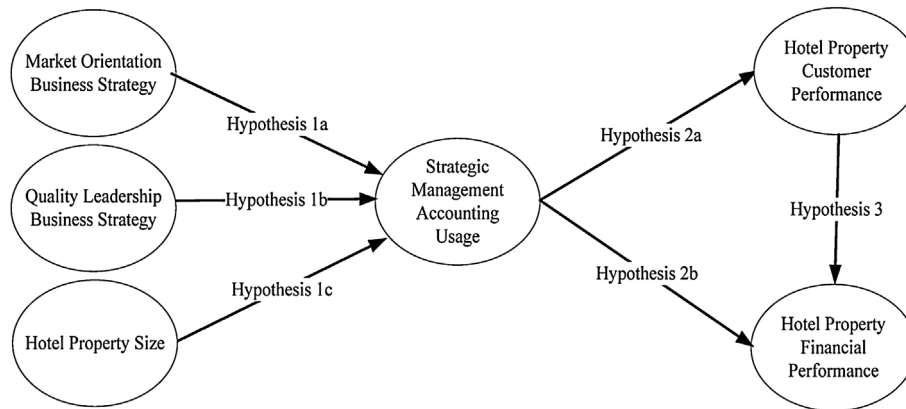


Fig. 1. Conceptual Model and Hypotheses.

Presents a schematic overview of the current study's conceptual model and hypotheses.

property size and hotel property customer accounting (an aspect of SMA) and SMA use, respectively. Hence, we hypothesize the following:

Hypothesis 1c. Hotel property size will be positively associated with hotel property SMA usage.

3.4. Hotel property SMA use and customer performance

Management control systems' design starts with defining the fundamental objectives considered essential to a firm's overall future success or failure (Otley, 1999). Achieving high levels of customer satisfaction (Avcikurt et al., 2011), customer service quality (Hua et al., 2009), and customer retention (Zhang et al., 2013) are vital to the success of a hotel property. Here the use of accounting information can enhance customer performance because firms differentiating based on customer intimacy require forward-looking metrics (Kaplan and Norton, 2004) and traditional management accounting systems use has been positively linked with customer performance (Currie et al., 2015). Further, service organizations are typically highly sensitive to external factors (Kim et al., 2013). Considering that customer profitability analysis (a SMA technique) can be used to focus attention on the interests of customers in order to facilitate the development of new products and improvements to existing products (Jacobs et al., 2001) and to transform unprofitable relationships into profitable ones (Narayanan and Kaplan, 2001), we hypothesize the following:

Hypothesis 2a. Hotel property SMA usage will be positively associated with hotel property customer performance.

3.5. Hotel property SMA use and financial performance

The definitional bounds of SMA suggest that it can enhance the competitiveness and financial performance of organizations (e.g. Ward, 1993). Better information enables managers to make more effective decisions (Christensen and Demski, 2003), which can improve organizational performance (Chenhall, 2003). Information about strategic pricing (a particular SMA technique), for example, can enable the creation of a long-term sustainable competitive advantage which competitors may not be able to easily copy (Indounas, 2014). Evidence indicates a positive association between competitor focused accounting practices (an aspect of SMA) and company financial performance (Subramanian and IsHak, 1998). Alsoboa et al. (2015) found strategic costing and strategic pricing (particular SMA techniques) to be positively associated with hotel property financial performance. And Pavlatos (2015) found a

positive association between hotel property SMA use and financial performance. Congruently, we hypothesize the following:

Hypothesis 2b. Hotel property SMA usage will be positively associated with hotel property financial performance.

3.6. Hotel property customer and financial performance

Service-profit chain theory describes a process in which the growth and profitability (financial performance) of firms stem from customer loyalty, which is a direct result of customer satisfaction (Heskett and Sasser, 2010). Evidence concerning the relationship between customer performance and financial performance, however, is mixed with some studies reporting a positive relationship (e.g. Bernhardt et al., 2000; Capiez and Kaya, 2004) and others a non-significant or negative relationship (e.g. Banker et al., 2000; Schneider, 1991; Wiley, 1991). This may be due to profits capable of being earned at the expense of customer relationships (e.g. bad profits), while profits can alternatively be derived through strong relationships (e.g. good profits) (Reichheld, 2006). Hotels, however, cannot survive without satisfied customers (Chi and Gursoy, 2009) because customers are a key driver of a hotel property's financial performance (Kim et al., 2013). It is also the case that customer satisfaction is positively associated with future (Banker et al., 2005) and perceived (Chi and Gursoy, 2009) hotel financial performance. Congruently, we hypothesize the following:

Hypothesis 3. Hotel property customer performance will be positively associated with hotel property financial performance.

4. Method

4.1. Sample and procedures

The current study's questionnaire was sent by the Hospitality Financial and Technology Professionals (HFTP®) Association² to 300 individuals with financial oversight responsibilities for a hotel property; i.e. 300 individuals from 300 hotel properties. Responses were obtained from 95 individuals from 95 hotel properties; representing a 31.7% response rate, which is similar to the response rates achieved in related studies (e.g. McManus, 2013; Pavlatos, 2015).

² The Hospitality Financial and Technology Professionals (HFTP®) is a global non-profit hospitality association, headquartered in Austin, Texas, USA, which has about 5200 members and several thousand stakeholders across the globe and assists its members in finding solutions to industry problems via its expert networks, research, conferences and certification programs.

The potential for non-response bias has been assessed as minimal because there were no significant differences between the early and late responses on all questionnaire items. The 95 individuals from 95 hotel properties were primarily males (70.0%) and middle-aged (~mean 45 years old), with an average of almost 22 years of experience in the hotel industry ($M = 21.81$; $SD = 10.41$), and over 9 years tenure in their current position ($M = 9.14$; $SD = 7.44$). The most common positions held by these 95 individuals were controller (32%), director/vice president of finance (25%), general manager (24%), and accountant/accounting manager (11%). The sample hotel properties were located in eight countries (USA, Belgium, Canada, China, Iraq, Netherlands, Sweden, and Switzerland), 14% were luxury properties, 19% were upper-upscale, 24% were upscale, 23% were upper-midscale, 17% were midscale, and 3% were economy properties. The average number of guest rooms per hotel property was 374 ($M = 374.03$; $SD = 388.47$) and the average number of full-time equivalent (FTE) employees was 218 ($M = 218.08$; $SD = 229.00$).

Responses to the current study's hotel property customer (three items) and financial (three items) performance items were not obtained from 15 of the 95 individuals from 95 hotel properties. A listwise deletion of cases missing hotel property performance data ($n = 15$ hotel properties) reduced the current study's sample to 80 hotel properties (listwise deletion; $n = 80$). The 80 hotel properties that comprise the current study's final sample (listwise deletion; $n = 80$) and the 15 excluded hotel properties did not significantly differ with respect to the number of guest rooms or FTE employees.

To show convergence of results (Way et al., 2016) this study's revised structural model was assessed using both listwise deletion ($n = 80$) and mean replacement ($n = 95$). The close similarity across methods of the standardized direct effect and two-tailed significance estimates (Table 4) and fit indices (Table 1) indicate that listwise deletion did not substantially affect the findings presented in this study (Way et al., 2016).

4.2. Measures

Hotel property customer performance was assessed with three items taken from extant customer performance measures (e.g. Zhou, Brown, and Dev, 2009). Respondents were asked to indicate how over the past three months (on average) their property's 1) service quality performance, 2) customer retention performance, and 3) customer satisfaction performance had compared to their hotel property's direct competitors. Response options ranged from 1 (*much worse*) to 5 (*much better*). The composite reliability estimate for this study's three-item hotel property customer performance latent variable was 0.85 (listwise deletion; $n = 80$); the average variance extracted (AVE) by this study's three-item hotel property customer performance latent variable (AVE = 0.66; $n = 80$) exceeded the 0.50 threshold (see Table 2).

Hotel property financial performance was assessed with three items taken from extant financial performance measures (e.g. Cadez and Guilding, 2008). Respondents were asked to indicate how over the past three months (on average) their property's 1) return on investment, 2) profitability, and 3) gross operating profit had compared to their hotel property's direct competitors. Response options ranged from 1 (*much worse*) to 5 (*much better*). The composite reliability estimate for this study's three-item hotel property financial performance latent variable was 0.88 (listwise deletion; $n = 80$); AVE = 0.72 (see Table 2).

SMA usage was assessed with nine items taken from Cadez and Guilding (2008) and which are presented in the Appendix A. Response options ranged from 1 (*never*) to 5 (*very often*). Respondents were provided with a glossary of terms for each SMA item as per the wording in the Appendix A. Consistent with prior research (e.g. Pavlatos and Paggios, 2009a) the mean scores of all nine of the SMA use items (listwise deletion; $n = 80$) were at or above the mid-

point (3.00 = *sometimes*); i.e. item mean scores ranged from 3.00 for competitor cost assessment to 4.03 for strategic pricing (listwise deletion; $n = 80$), and the sample's reported levels of use for each of these nine items ranged from 1 (*never*) to 5 (*very often*). Finally, to obtain a more favorable indicator to sample size ratio (Little et al., 2002), similar to the parceling technique employed by Way et al. (2016), four parameters were constructed for this study's single-factor SMA use measure.³ The composite reliability value for this study's four-parameter hotel property SMA use latent variable was 0.91 (listwise deletion; $n = 80$); AVE = 0.72 (see Table 2).

The customer orientation and interfunctional coordination facets of hotel property market orientation business strategy use were assessed with seven items (four and three items, respectively) taken from Narver and Slater (1990) and Farrell and Oczkowski (1997). A sample item for the customer orientation facet is, "We monitor our level of commitment and orientation to serving customers' needs" and a sample item for the interfunctional coordination facet is, "All of our business functions (marketing/sales, finance/accounting, etc.) are integrated in serving the needs of our target markets" (see Farrell and Oczkowski, 1997). Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The composite reliability estimates for the four-item customer orientation and three-item interfunctional coordination latent variables were 0.78 and 0.84, respectively (listwise deletion; $n = 80$).

The market orientation business strategy use measures' seven items were included in a principal components extraction factor analyses (varimax rotation). The results yielded a two-component solution with the four customer orientation items loading uniquely onto component one and the three interfunctional items loading uniquely onto component two (listwise deletion; $n = 80$). Thus, this (seven-item, two-factor) second-order market orientation business strategy use measure was included in the confirmatory factor analyses used to assess this study's measurement and structural models. The composite reliability for this study's (two-factor) second-order market orientation business strategy use latent variable was 0.85 (listwise deletion; $n = 80$); AVE = 0.74 (see Table 2).

Quality leadership business strategy use was assessed with the following two items adapted from Parthasarthy and Sethi's (1993) quality leadership business strategy measure: Compared to its direct competitors, over the last 12 months, your hotel property's business strategy has focused on (emphasized the importance of): 1) offering unique services and/or products; and 2) offering high quality services and/or products. Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The composite reliability for this two-item quality leadership business strategy use latent variable was 0.75 (listwise deletion; $n = 80$); AVE = 0.60 (see Table 2).

Chenhall (2003) suggests that the precise measure of size should match the elements of context and dimensions of management control systems being studied, which is why in this study we assessed hotel property size as the number of guest rooms. Although there are other possibilities, such as number of FTE employees, annual sales turnover, and annual net profits, the number of guest rooms is one of the most commonly accepted measures of hotel property size (Vallen and Vallen, 2005). Thus, hotel property size was assessed with the following item: "Your hotel property has the following number of guest rooms (please specify)".

³ Responses to this study's nine SMA use items were included in a principal components extraction factor analyses (varimax rotation); the results yielded a single component solution with all nine of the items loading onto a single component (listwise deletion; $n = 80$). Thus, similar to the parceling technique used by Way et al. (2016), four parameters were constructed for this study's single-factor SMA use measure (see the Appendix A).

Table 1
Confirmatory Factor Analysis of the Measurement and Structural Models.

Model	χ^2	df	p	SRMR	RMSEA	CFI	IFI
1. Measurement model (listwise deletion; n = 80)	214.27	154	0.001	0.07	0.07	0.93	0.93
2. Hypothesized structural model (listwise deletion; n = 80)	244.70	160	0.001	0.12	0.08	0.90	0.90
3. Revised measurement model (listwise deletion; n = 80)	156.19	111	0.001	0.07	0.07	0.94	0.94
4. Revised structural model (listwise deletion; n = 80)	158.31	112	0.003	0.07	0.07	0.94	0.94
5. Revised structural model (mean replacement; n = 95)	158.04	112	0.003	0.07	0.07	0.95	0.95

Provides a summary of the confirmatory factor analyses of the measurement and structural models. Model fit was assessed by examining four conventional fit indices: SRMR (standardized root mean square residual) values as high as (\leq) 0.08 indicate a good fit. RMSEA (root mean square error of approximation) values less than ($<$) 0.06 indicate a good fit, RMSEA values of 0.06 and above (\geq 0.06) and less than ($<$) 0.08 indicate an adequate fit, and RMSEA values of 0.08 and above (\geq 0.08) and less than ($<$) 0.10 indicate a mediocre fit (see Footnote 4 concerning this study's RMSEA values). CFI (comparative fit index) and IFI (incremental fit index) values of 0.90 and above (\geq 0.90) are considered a good fit and CFI and IFI values of 0.95 and above (\geq 0.95) are considered an excellent fit with the data.

Table 2
Measurement Model Validity.

The measurement model's six variables		1	2	3	4	5	6
1.	Hotel property customer performance (three items; CR = 0.85)	0.66					
2.	Hotel property financial performance (three items; CR = 0.88)	0.17	0.72				
3.	Hotel property SMA usage (four parameters; CR = 0.91)	0.07	0.14	0.72			
4.	Market orientation business strategy (two factors; CR = 0.85)	0.26	0.21	0.26	0.74		
5.	Quality leadership business strategy (two items; CR = 0.75)	0.47	0.20	0.19	0.41	0.60	
6.	Hotel property size (one item)	0.01	0.00	0.01	0.10	0.04	NA

Presents the composite reliability (CR) estimates for each of the measurement model's five latent variables and the average variance extracted by each of the measurement model's five latent variables (AVE values are in bold font) and the variance shared (squared correlation) between the measurement model's six variables (listwise deletion; n = 80). As shown in Table 1 Model 1 (see Footnote 4), the measurement model demonstrated a good fit with the data (listwise deletion; n = 80). And as shown in Table 2 all five CR values are higher than the 0.70 threshold and all five AVE values are higher than the 0.50 threshold and greater than the corresponding squared correlations (listwise deletion; n = 80). Hence, these results provide support for the convergent and discriminant validity of the current study's measurement model.

4.3. Measurement – common method variance

Given that all of the measurement model's variables were derived from data that were obtained from the same rater (a single source), the Harman single-factor test was used to address the possibility of single rater bias or common method variance (see Enz and Way, 2016; Podsakoff and Organ, 1986; Way et al., 2010). That is, all 25 items used to generate the measurement model's customer performance (three items), financial performance (three items), SMA use (nine items), market orientation business strategy use (seven items), quality leadership business strategy use (two items), and size (one item) variables “were entered into a principal components factor analysis, and the results of the unrotated solution were examined” (Enz and Way, 2016, p. 103). Seven factors with an eigenvalue greater than 1 emerged from this analysis and no single factor accounted for the majority of the variance (listwise deletion; n = 80). Thus, the results of the Harman one-factor test indicate that common method variance is not a concern in the current study (see Enz and Way, 2016; p. 103).

5. Results

We analyzed the data in two steps (McDonald and Ho, 2002): assessment of the measurement model (Table 1, Model 1) and assessment of the hypothesized structural model (Table 1, Model 2). As shown in Table 1, Model 1, the confirmatory factor analysis (CFA) of the measurement model demonstrated good fit with the data⁴ (listwise deletion; n = 80). And as shown in Table 2, the composite

⁴ The SRMR (standardized root mean square residual), CFI (comparative fit index), and IFI (incremental fit index) values derived from the CFA of the measurement model (see Table 1, Model 1) indicate a good fit with the data (listwise deletion; n = 80); however, the RMSEA (root mean square error of approximation) value derived from the CFA of the measurement model (see Table 1, Model 1) – as well as the CFAs of the revised measurement model (see Table 1, Model 3) and revised structural models (see Table 1, Models 4–5) – indicate only an adequate fit. These results are not unexpected given the current study's small sample (listwise deletion; n = 80 and mean replacement; n = 95) and the well documented criticism that RMSEA values are greatly affected by sample size; i.e. RMSEA values can be arti-

reliability estimates of all five of the measurement model's latent variables were higher than the 0.70 threshold (listwise deletion; n = 80) and the model's five AVE values (listwise deletion; n = 80) were both higher than the 0.50 threshold and greater than the corresponding squared correlations (Chung and Petrick, 2013). These results provide support for the convergent and discriminant validity of the current study's measurement model (Etemad-Sajadi et al., 2016).

The bootstrapping function (Preacher and Hayes, 2008) in Amos 22 (IBM SPSS Amos 22, 2013) was used to assess the hypothesized structural model (Table 1, Model 2). As shown in Table 1, Model 2 (see Footnote 4), this study's hypothesized structural model demonstrated a mediocre with the data (listwise deletion; n = 80). Table 3 presents squared multiple correlations (R^2 estimates) for hotel property SMA use (three structural paths), customer performance (one structural path), and financial performance (two structural paths) as well as standardized regression weight (SRW), standard error (SE), and two-tailed significance estimates for the hypothesized structural model's six posited structural paths. Fig. 2 displays the hypothesized structural model with SRW and two-tailed significance estimates for the model's six hypothesized structural paths.

As shown in Table 3 and Fig. 2, in contrast with Hypothesis 1b and Hypothesis 1c, hotel property quality leadership business strategy use (SRW = 0.21, $p > 0.13$) and size (SRW = 0.12, $p > 0.26$), respectively were not positively associated with hotel property SMA use at the $p < 0.05$ level (listwise deletion; n = 80). In support of Hypothesis 1a, hotel property market orientation business strategy use was positively related to hotel property SMA use (SRW = 0.44, $p < 0.05$). In support of Hypothesis 2a, hotel property SMA use was positively associated with hotel property customer performance (SRW = 0.28, $p < 0.05$). In support of Hypothesis 2b,

cially high when smaller samples (such as the current sample) are used to assess model fit (Rigdon, 1996), and thus, that other fit indices (CFI and IFI) should be given greater consideration when smaller samples such as this current study's sample are used to assess model fit (Tabachnick and Fidell, 2007).

Table 3
Structural Paths of Hypothesized Structural Model.

Final sample (listwise deletion; n = 80)	R ²	SRW	SE	p
Hotel property SMA usage	0.31			
1. Market orientation business strategy → SMA usage (H1a)		0.44	0.20	*
2. Quality leadership business strategy → SMA usage (H1b)		0.21	0.20	
3. Hotel property size → SMA usage (H1c)		0.12	0.00	
Hotel property customer performance	0.08			
1. SMA usage → customer performance (H2a)		0.28	0.14	*
Hotel property financial performance	0.25			
1. SMA usage → financial performance (H2b)		0.31	0.12	*
2. Customer performance → financial performance (H3)		0.32	0.11	*

Presents squared multiple correlations (*R*² estimates) for hotel property SMA use, customer performance, and financial performance as well as the standardized regression weight (SRW), standard error (SE), and two-tailed significance estimates for the hypothesized structural model's six posited structural paths. As shown in Table 1 Model 2 (see Footnote 4), the hypothesized structural model demonstrated a mediocre fit with the data (listwise deletion; n = 80). **p* < 0.05. ***p* < 0.01. ****p* < 0.001.

Table 4
Structural Paths of Revised Structural Model.

Listwise deletion (n = 80)	R ²	SDE	SE	p
Hotel property SMA usage	0.25			
1. Market orientation business strategy → SMA usage (H1a)		0.50	0.17	**
Hotel property customer performance	0.26			
1. SMA usage → customer performance (H2a)		-0.01	0.16	
2. Market orientation strategy → customer performance		0.52	0.22	**
Hotel property financial performance	0.26			
1. SMA usage → financial performance (H2b)		0.30	0.12	*
2. Customer performance → financial performance (H3)		0.34	0.11	**
Mean replacement (n = 95)	R ²	SDE	SE	p
Hotel property SMA usage	0.24			
1. Market orientation business strategy → SMA usage (H1a)		0.49	0.17	**
Hotel property customer performance	0.26			
1. SMA usage → customer performance (H2a)		-0.03	0.14	
2. Market orientation strategy → customer performance		0.52	0.20	**
Hotel property financial performance	0.24			
1. SMA usage → financial performance (H2b)		0.27	0.10	*
2. Customer performance → financial performance (H3)		0.36	0.10	**

Table 4 presents squared multiple correlations (*R*² estimates) for hotel property SMA use, customer performance, and financial performance as well as the standardized direct effect (SDE), standard error (SE), and two-tailed significance (bias-corrected percentile method) estimates for the revised structural model's five posited structural paths. As shown in Table 1, Model 4 and Model 5 (see Footnote 4), the revised structural models demonstrated a good fit with the data (listwise deletion; n = 80 and mean replacement; n = 95, respectively) **p* < 0.05. ***p* < 0.01. ****p* < 0.001.

Hypothesized Structural Model

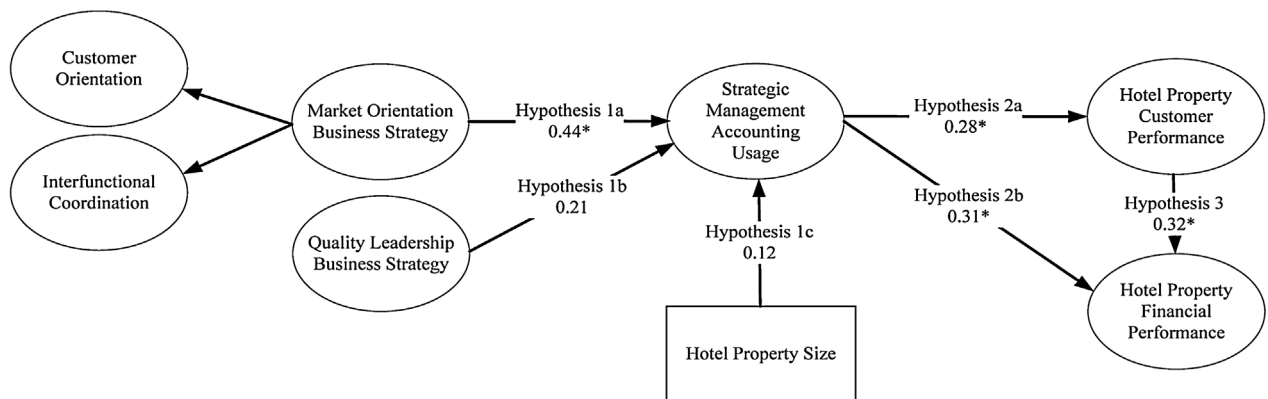


Fig. 2. Hypothesized Structural Model. Displays the hypothesized structural model with standardized regression weight and two-tailed significance estimates (listwise deletion; n = 80). **p* < 0.05. ***p* < 0.01.

hotel property SMA use was positively associated with hotel property financial performance (SRW = 0.31, *p* < 0.05). And in support of Hypothesis 3, hotel property customer performance was positively associated with hotel property financial performance (SRW = 0.32, *p* < 0.05). Given the hypothesized structural model's modification

indices and that the hypothesized structural model only demonstrated a mediocre fit with the data (see Table 1, Model 2) and the findings that hotel property quality leadership business strategy use and size were not significantly related to hotel property SMA use (see Table 3 and Fig. 2), we removed these two variables – and

Revised Structural Model

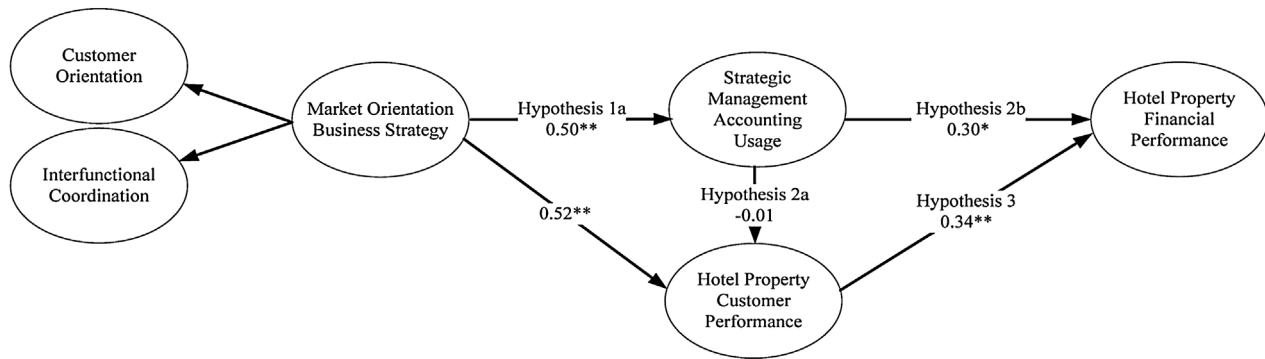


Fig. 3. Revised Structural Model.

Displays the revised structural model with standardized direct effect and two-tailed significance (bias-corrected percentile method) estimates (listwise deletion; $n = 80$). * $p < 0.05$. ** $p < 0.01$.

added a direct link between hotel property market orientation business strategy use and customer performance – and assessed the revised structural model (see Fig. 3).

As shown in Table 1, Models 3–5 (see Footnote 4), the revised measurement model (listwise deletion; $n = 80$) and the revised structural models (listwise deletion; $n = 80$ and mean replacement; $n = 95$), respectively demonstrated a good fit with the data. Table 4 presents R^2 estimates for hotel property SMA use (one structural path), customer performance (two structural paths), and financial performance (two structural paths) as well as standardized direct effect (SDE), SE, and two-tailed significance (bias-corrected percentile method) estimates for the model's posited structural paths (listwise deletion; $n = 80$ and mean replacement; $n = 95$). As shown in Table 4, the pattern of results concerning the SDE, SE, and two-tailed significance estimates for the five posited structural paths – and the revised structural models' fit indices (Table 1, Models 4 and 5) – were congruent (listwise deletion; $n = 80$ and mean replacement; $n = 95$) and the convergence of these results indicate that listwise deletion did not substantially affect the findings presented in this manuscript (Way et al., 2016).

Fig. 3 displays the revised structural model with SDE and two-tailed significance (bias-corrected percentile method) estimates for the model's five posited structural paths (listwise deletion; $n = 80$). In support of Hypothesis 1a, market orientation business strategy had a positive direct effect on hotel property SMA use (SDE = 0.50, $p < 0.01$; $n = 80$). In contrast, with regard to Hypothesis 2a, hotel property SMA use did not have a statistically significant direct effect on hotel property customer performance (SDE = -0.01, $p > 0.97$; $n = 80$) whereas hotel market orientation business strategy use had a positive direct effect on hotel property customer performance (SDE = 0.52, $p < 0.01$; $n = 80$). Hotel property SMA use (Hypothesis 2b) and hotel property customer performance (Hypothesis 3) both had a positive direct effect on hotel property financial performance (SDE = 0.30, $p < 0.05$ and SDE = 0.34, $p < 0.01$, respectively); and hotel property market orientation business strategy use had a positive standardized indirect effect (SIE) on hotel property financial performance (SIE = 0.33, $p < 0.01$; $n = 80$).

In sum, Hypotheses Hypothesis 1a, Hypothesis 2b, and 3 were supported and Hypothesis 2a was not. However, we caution that the positive structural path (Hypothesis 2a; SRW = 0.28, $p < 0.05$) between hotel property SMA use and customer performance found in the hypothesized structural model (see Fig. 2) was not significant (SDE = -0.01, $p > 0.97$) when the structural path between hotel property market orientation business strategy use and customer performance was included in the revised structural model (see Fig. 3), which could be the result of multicollinearity; i.e. the high

correlation between the current study's hotel property market orientation business strategy and SMA use latent variables (estimated correlation was 0.51).

6. Discussion and conclusion

The central finding of this current study is that hotel property SMA use mediates the relationship between hotel property market orientation business strategy use and hotel property financial performance. Cadez and Guilding (2008) did not find support for the posited mediating effect of SMA use on the relationship between market orientation and the financial performance of large Slovenian corporations. The findings of the current study, however, suggest that industry contextual factors may play an important role in determining the posited relationship. Moreover, consistent with contingency theory the findings indicate that the hotel property's management control systems (e.g. SMA use) need to be tailored to support the hotel property's business strategy (e.g. market orientation business strategy) in order to enhance the hotel property's competitiveness and performance (see Widener, 2004).

This study's findings concerning the mediating effects of hotel property SMA use and customer performance on the relationship between hotel property market orientation business strategy use and financial performance are based on the following empirical results: hotel property market orientation business strategy use had a positive, direct effect on both hotel property SMA use (Hypothesis 1a) and customer performance; both hotel property SMA use (Hypothesis 2b) and customer performance (Hypothesis 3) had a positive, direct effect on hotel property financial performance; and hotel property market orientation business strategy use had a positive, indirect effect on hotel property financial performance. However, the empirical evidence concerning Hypothesis 1a and Hypothesis 3 are mixed with some studies reporting a positive association (e.g. Pavlatos, 2015) and others a non-significant association between market orientation and SMA use (e.g. Cadez and Guilding, 2008) and some studies reporting a positive association (e.g. Bernhardt et al., 2000; Capiez and Kaya, 2004) and others a non-significant or negative association between customer and financial performance (e.g. Banker et al., 2000; Schneider, 1991; Wiley, 1991), respectively.

6.1. Limitations and avenues for future research

The current study's strength is its context specificity (the hotel industry and hotel properties); however, this also dictates that the results are not likely to be generalizable to other industries.

In addition, as we cautioned above, the current study's findings may have been affected by multicollinearity (the high correlation) between this study's hotel property market orientation business strategy and SMA use latent variables. Moreover, although we assert that contingency theory suggests that a hotel property's business strategy precedes changes in its use of SMA, such a directional implication is theory-driven. And given the cross-sectional nature of the current study's data, the potential for reverse or reciprocal causality cannot be ruled out. However, future studies could address these limitations by using longitudinal data; e.g. using market orientation business strategy use data collected at time 1 and SMA use data collected at time 2, which would alleviate multicollinearity and reverse or reciprocal causality concerns and allow empirical testing of the direction of causality, as well as shedding light on the process of SMA adaptation.

Model parsimony is another potential limitation due to this current study's relatively small sample of hotel properties used to assess the hypothesized and revised structural models and these models' number of posited structural paths. Sample size adequacy in SEM has been debated; e.g. Kline (2005) suggested 10 observations per estimated parameter whereas other scholars (see Jackson, 2003) have offered conflicting recommendations concerning sample size adequacy. And although the hypothesized positive effect of quality leadership business strategy use on SMA use was not supported (Hypothesis 1b), this finding may be constrained because some commentaries conjecture an ordering process whereby quality starts with marketing (Oakland, 2000) or that quality must first be market oriented (Kotler and Keller, 2012). Hence, the results of this study may have been driven by market orientation business strategy use being the somewhat more dominant construct relative to quality leadership business strategy use. Future research should investigate this claim in further detail.

Together with the limitations of context specificity, multicollinearity, reverse causality, and model parsimony, and while several strategies have been undertaken to minimize their impact, this study faces the limitations associated with social scientific research that is based on survey data. Any conclusions drawn from this study should therefore be interpreted with these in mind. First, it is possible that the proposed model may have omitted other important precursors. For example, factors such as organizational structure, organizational technology, organizational culture, and environmental uncertainty, which are associated with the use of traditional management accounting practices (see Chenhall, 2003), may be potential important precursors of SMA use. Second, given the challenges that small hotel properties can experience in adopting a market orientation business strategy (see Harris and Watkins, 1998), an apparent caution of the generalizability of the current study's findings relates to the relatively large size (374 guest rooms per property) of the sample hotel properties. Finally, in the current study, the hypothesized positive association between hotel property size and SMA use was not supported and no significant differences in SMA use across eight countries were found. However, when Guilding et al. (2000) controlled for company size, they found significant differences in the use of several SMA techniques across three countries (New Zealand, UK, and USA). And when Cadez and Guilding (2007) controlled for company size, they found significant differences in the use of a group of SMA techniques across two countries (Slovenia and Australia). Hence, future studies of differences in SMA use across countries that control for organizational size could be fruitful, especially if grounded within the nuances of a specific industry.

6.2. Managerial implications

Hotel managers adopting a market orientation business strategy and not making use of SMA are recommended to consider

implementing SMA. One of the first steps in this process will be for hotel managers to pay close attention to the training needs of key personnel. While top management (e.g. general managers) and management accountant(s) need training, it may also extend to lower-level managers as well as other key specialists (see Baraldi et al., 2007; Carlsson-Wall et al., 2015). Carlsson-Wall et al. (2015), for example, concluded, based on a case study of the relationship between a robotics company and General Motors, that it was important to train key personnel involved in close customer relationships, such as marketers, in accounting because there is often no time to ask accountants and top managers for advice. Instead the personnel involved most closely in the relationship with General Motors needed to be able to improvise and use accounting to make important decisions.

A second consideration is that in market oriented hotels, they are likely to have close inter-organizational relationships because they are increasingly forming permanent alliances with other organizations such as airlines, car rental companies, travel agencies, and suppliers (Garcia-Falcon and Medina-Muñoz, 1999).⁵ In such settings, because strategy is seen as building on interacting, adapting and learning, personnel working for the close partners can have significant reciprocal input into strategic decision-making (Harrison and Prekert, 2009). Hence, there can be several unexpected preparers and recipients of SMA information among the collaborating companies (Jørgensen and Messner, 2010) and the design and use of accounting systems can extend beyond the legal boundaries of a firm (see Cuganesan et al., 2012). Hotel managers should therefore be open to the exchange of accounting information between their own firm and collaborating companies as this can help to identify improvements, make adaptations and initiate change (Baraldi, 2008). The leveraging of knowledge acquired from such processes can also bring additional indirect benefits through, for example, improved dealings with other third-parties (see Baraldi et al., 2007; Carlsson-Wall et al., 2015).

A final issue in the implementation process is the need for close integration and communication between the marketing and accounting functions (Roslender and Hart, 2003; Seal and Mattimoe, 2014). To achieve this, some scholars have suggested a move away from conventional functional organizational structures and toward more team-based cross-functional groups with a customer focus (e.g. McManus and Guilding, 2008). Another suggestion is to ensure that the accounting function focuses on providing managers with information that links marketing performance with financial performance (Gleaves et al., 2008). If the accounting function does not adapt to the marketing function there is a risk that it will provide misleading information (Bocconcelli and Håkansson, 2008; Lind and Strömsten, 2006).

Appendix A. Strategic Management Accounting Items and Glossary

Over the last twelve months, to what extent did your hotel property use each of the following techniques?

1. **Customer profitability analysis** (involves calculating profit earned from a specific customer or customer segment. The profit calculation is based on costs and sales that can be traced to a specific customer or to a specific customer segment).
2. **Benchmarking** (the comparison of company performance to an ideal standard).

⁵ Close inter-organizational relationships occur where there is a "mutually oriented interaction between two reciprocally committed parties" (Håkansson and Snehota, 1995; p. 25), which is characterized by long-term cooperation and adaptation between the involved firms (Gadde et al., 2003).

3. **Competitor cost assessment** (the provision of regularly scheduled updated estimates of competitor's unit cost).
4. **Strategic pricing** (the analysis of strategic factors in the pricing decision process. These factors may include: competitor price reaction, elasticity, market growth, economies of scale, and experience).
5. **Value chain analysis** (involves viewing the organization as a link in the chain of all value-creating activities).
6. **Integrated performance measurement** (a measurement system which focuses typically on acquiring performance knowledge based on customer requirements and may encompass non-financial measures. This measure involves departments monitoring those factors which are critical to securing customer satisfaction).
7. **Competitor performance appraisal** (the numerical analysis of a competitor's published statements as a part of an assessment of a competitor's key sources of competitive advantage).
8. **Attribute costing** (the costing of specific product attributes that appeal to customers. Attributes that may be costed include: operating performance variables, and after sales service).
9. **Strategic costing** (the use of cost data based on strategic and marketing information to develop and identify superior strategies that will produce a sustainable competitive advantage).

Response options ranged from 1 (*never*) to 5 (*very often*).

Responses to the nine SMA usage items listed above were included in a principal components extraction factor analyses (varimax rotation); the results yielded a single component solution with all nine of the items loading onto a single component (listwise deletion; $n = 80$). Thus, similar to the parceling technique used by Way et al. (2016), four parameters were constructed for this single-factor SMA usage measure: parameter 1 (two items: customer profitability analysis, and benchmarking); parameter 2 (two items: competitor cost assessment and strategic pricing); parameter 3 (two items: value chain analysis, and integrated performance measurement); parameter 4 (three items: competitor performance appraisal, attribute costing, and strategic costing). The composite reliability estimate for this four-parameter hotel property SMA use latent variable was 0.91 (listwise deletion; $n = 80$); AVE = 0.72 (see Table 2).

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