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Author

McManus, Lisa

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**Customer Accounting and Marketing Performance Measures in the Hotel
Industry: Evidence from Australia**

Lisa McManus

Department of Accounting Finance & Economics, Griffith University

Associate Professor Lisa McManus
Department of Accounting, Finance & Economics
Griffith Business School
Griffith University - Gold Coast
PMB 50
Gold Coast Mail Centre Q 9726
Australia
Phone: 61 7 555 28022
Fax: 61 7 555 28068
E-mail: L.McManus@griffith.edu.au

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Customer Accounting and Marketing Performance Measures in the Hotel Industry: Evidence from Australia

Abstract

Increasingly competitive environments have focused hotel managers' attention on gaining competitive advantage by maximising the potential of their customer base. This paper provides the results of a study of the use and antecedents of customer accounting and marketing performance measures in the Australian hotel industry. The findings of a survey of 165 Australian hotel managers provide evidence that large, highly market orientated hotels with a decentralised structure use more customer focused accounting and marketing practices. Additionally, support was also found for a significant positive relationship between market orientation and a prospector-type strategy, as well as market orientation and both financial and non-financial performance.

Key words: Customer accounting, strategic management accounting, customer satisfaction, customer loyalty, customer profitability, and hotel industry.

Customer Accounting and Marketing Performance Measures in the Hotel Industry: Evidence from Australia

1. Introduction

Increasingly competitive environments have focused hotel managers' attention on trying to gain competitive advantage by maximising the potential of their customer base. This imperative has become even more pressing due to the extreme pressures confronting managers of most businesses in the wake of the global financial crisis. Customer accounting (CA) and marketing performance measures have been suggested as a group of techniques that can endow managers with the information needed to gain this advantage (Wayland and Cole, 1994; Reicheld, 2003; Reinartz and Kumar, 2003). CA is defined as the process of identifying, measuring, communicating and reporting economic information relating to a customer or customer group (Guilding and McManus, 2002) whereas marketing measures incorporate metrics such as market share, customer loyalty, customer retention and customer satisfaction.

The hotel industry is particularly pertinent to the examination of CA and marketing practices. Firstly, the hotel industry is highly customer focused and market orientated, which has been found to be more conducive to higher levels of CA usage (Guilding and McManus, 2002; McManus and Guilding, 2009). Secondly, a sale in the hotel industry (of accommodation) initiates the potential for relatively immediate sales of other hotel services. This characteristic is in greater evidence in the hotel industry than most other business contexts and provides an explanation as to why customer profitability analysis has received significant attention in the hotel management literature. Thirdly, Downie (1997) has called for improved accounting information to support the

“critical relationship between customers and profitability” (p. 312); therefore examining CA and marketing performance measures in the hotel industry appears particularly relevant.

The aims of the study are to appraise the extent of CA and marketing metrics use in the hotel industry and to examine the impact that external factors have on the use of these measures and their impact upon hotel performance. Enhancing the understanding of CA and marketing metrics in the hotel industry is important as no previous study has considered these metrics together in this industry sector. Consequently the insight gained will prove useful for hotel managers to identify the roles that CA and marketing information can play in providing valuable customer data for business decision-making. Appraising the extent of CA practice use in the hotel industry will fill an existing gap in the literature as prior studies have focused on multiple industry analyses of CA (Guilding & McManus, 2002; McManus & Guilding, 2009). Additionally this paper provides a contribution by considering the impact of a prospector strategy and a decentralised structure on hotels use of CA and marketing performance measures. These contextual factors have not been considered in relation to these measures previously. The accounting profession and hotel managers will also benefit as the study aims to identify the most relevant CA and marketing metrics adopted in the hotel industry and further elucidate the relationship between these measures and other key external factors such as market orientation, hotel size and competition intensity. These findings will provide important contextual understanding of the specific customer information needs of hotel managers.

The paper is structured as follows. The next section provides a review of the relevant accounting and hotel management literature. Then, the conceptual framework of the study is outlined. The following sections provide the development of hypotheses, the research method including the sampling procedures, survey questionnaire design and sample characteristics, and finally the results of the analysis are outlined. The last sections provide the discussion and conclusion to the paper.

2. Literature Review

A review of the customer-focused research conducted from an accounting perspective reveals a modest amount of prior work. Although past years have witnessed a slight increase in the number of studies promoting accounting analyses based on individual customers or customer groups, the number of studies remains small. Guilding and McManus (2002) appraised the incidence of CA usage and the antecedents of CA adoption in Australian firms across a number of industries. Most of the other accounting literature concerned with CA comprises normative commentaries that provide a description of the nature and potential of CA (eg. Foster and Gupta, 1994; Foster and Young, 1997; Chenhall, 2003; Luft and Shields, 2003). Other commentaries have extolled the virtues of customer profitability analysis to support business decisions (Bellis-Jones, 1989), identify customers that are loss generating (Ward, 1992), assist resource allocation decision making and provide support for management control (Guilding, Kennedy and McManus, 2001). While further commentaries and teaching cases have introduced and expanded the idea of segmented customer profitability analysis (Cooper and Kaplan, 1991(a); Hartfeil, 1996), lifetime customer profitability analysis (Foster and Gupta, 1994, Cooper and Kaplan, 1991(b)) and customer valuation analysis (Foster, Gupta and Sjoblom, 1996).

The marketing construct of customer satisfaction has received attention in the wider accounting literature with inconsistent results reported with respect to an association between customer satisfaction and financial performance. Ittner and Larcker (1998) found significant relationships between customer satisfaction and customer retention, revenues and revenue changes within one large telecommunications firm, yet only a significant relationship between customer satisfaction and revenue for a financial services firm. Similarly, Banker, Potter and Srinivasan (2000) reported mixed results for the association between customer satisfaction and financial

performance in a single hotel firm, and Smith and Wright (2004) found that in the personal computer industry, higher customer loyalty (seen as a proxy for customer satisfaction) is related to higher average product price, sales growth and return on assets.

In the hotel management literature there has been minimal work conducted in regard to CA. Some of the prior published works include Guilding, Kennedy and McManus (2001) who elaborate on customer profitability analysis and customer asset accounting in a review of CA's potential in the hotel industry. In another conceptually based hotel paper, Quain (1992) outlines a hypothetical segmental customer profitability analysis example in a hotel. The author illustrates the importance of including all revenues earned by a hotel's customer segments from all hotel activities when measuring segment profitability.

In one of the only applications of a CA practice in the hotel industry, Noone and Griffin (1999) present the case study findings concerning a thirteen-month study of the development and implementation of a segmental customer profitability analysis in an Irish hotel. Other more recent hotel industry related research has examined the effects of relationship marketing orientation on business performance in Hong Kong hotels (Sin, Tse, Chan, Heung and Yim, 2006); the relationship between total quality management, market orientation and hotel performance in Chinese hotels (Wang, Chen and Chen, 2011); the impact of strategy on hotel performance in Spain (Claver-Cortés, Molina-Azorín and Pereira-Molina, 2007); the impact of market structure and location on profitability of Taiwanese hotels (Pan, 2005); the impact of customer satisfaction on hotel performance in Africa (Capiez and Kaya, 2004); an exploration of the use of new performance measurement techniques in an international hotel chain (Cruz, 2007); the financial accounting statement format used by hotels in China (Chan and Wong, 2007); the association of non-financial measures of customer satisfaction with future financial performance (Banker, Potter and Srinivasan, 2005).

Sainaghi (2010) provides a literature review of 20 years of research relating to hotel performance using the balanced scorecard as a model to summarise the main research areas of customer perspective, strategy and process perspective and according to the main functional areas of strategy, production, marketing and organisation. Previous research has highlighted that accounting-based measures are inadequate in service sectors (Phillips and Louvieris, 2005). Positive relationships have been found between hotel performance and external macroeconomic factors of market concentration (Pan, 2005); money supply (Barrows and Naka, 1994) and gross domestic product (Tang and Jang, 2009). Internal hotel traits of size, location, ownership and affiliation have been identified as having a positive association with hotel performance (Capó et al., 2007; Enz et al., 2001; Israeli, 2002; Pine and Phillips, 2005). Particularly relevant to this study, market orientation has been found to have a strong positive relationship with hotel performance (Sin et al., 2005; Cizmar and Weber, 2000; Gu and Ryan, 2008). Other factors that have been found to have a positive impact on hotel performance are service quality (Bowen and Schumaker, 1998), destination and seasonality (Jeffrey and Barden, 2000), and indirect links have been identified with human resource management (Chand and Katou, 2007; Namasivayam et al., 2007; Harrington, 2004).

3. Hypotheses Development

Figure 1 provides an overview of the framework of the study. The review of the literature has identified a number of environmental and organisational-based factors that may impact upon the adoption of CA and marketing performance measures. Additionally, the literature review suggested that when there is a fit between CA and marketing metrics usage and a firm's environmental and organisational contexts, overall organisational performance maybe improved. This framework forms the basis of the development of the hypotheses of the study (Shields and Shields, 1998; Luft and Shields, 2003).

Insert Figure 1 here

3.1 Competition Intensity

Bellis-Jones (1989) and Foster and Gupta (1994) have suggested that CA techniques are particularly appropriate for firms operating in highly competitive markets. Kohli and Jaworski (1990) assert that greater competition creates a heightened need to focus on customers and to analyse performance in a manner consistent with providing insights concerning customer desires and how customer value can be created. These views extend a number of accounting studies that have investigated the relationship between the design and use of management accounting systems and competition intensity (Govindarajan, 1984; Khandwalla, 1972; Libby and Waterhouse, 1996; Merchant, 1981, 1984; Simons, 1990). The findings of these studies suggest that hotels confronting intensely competitive market environments tend to employ relatively sophisticated management accounting systems. CA practices have been identified as being advanced strategic management accounting practices (McManus and Guilding, 2009).

Furthermore, Guilding and McManus (2002), in their contingency study of CA usage in Australian firms, identified intensity of competition as a contingent factor that impacts CA usage rates. While no support was found for a hypothesised inverted-U relationship between intensity of competition and CA, mixed support was found for a positive linear relationship with CA practices. Based on this mixed finding, it is hypothesised that:

Hypothesis 1: CA and marketing performance measures usage is higher in hotels experiencing high competition intensity.

3.2 *Perceived Environmental Uncertainty*

Perceived environmental uncertainty (PEU) is concerned with managers' perceived inability to accurately predict their hotel's external environment (Tymon, Stout and Shaw, 1998). It has been accepted that it is the perceptions of the external environment that managers' react to, rather than the actual physical external environment (Ferris, 1977; Magnusson, 1981; Weick, 1969). PEU has been identified as an important variable in accounting information system design (Gordon and Miller, 1976). Chenhall and Morris (1986) found that PEU has a profound effect on a company's information needs. Specifically, they observed a positive relationship between environmental uncertainty and timely broader scope information. That is, in highly uncertain environments managers need information that is presented on request, is current, provides rapid feedback on decisions and is frequent, but managers also need information that is related to the external environment, is future orientated and non-financial.

It therefore follows that a greater need for CA and marketing information exists in hotels operating in more uncertain environments. Hotel managers that perceive their environment to be highly uncertain require not only more information, but also more external information to manage the uncertainty. CA and marketing information can be expected to assist managers in their decision-making relating to their external customer base. In this manner CA and marketing information can assist hotel managers to cope with the complexities of their external environment. It is therefore hypothesised that:

Hypothesis 2: CA and marketing performance measures usage is higher in hotels where managers perceive greater environmental uncertainty.

3.3 *Hotel Structure*

In a manner similar to strategy (as outlined below in Hypothesis 4), an organisation's structure can be appraised along a number of dimensions. Pugh, Hickson and Hinnings (1969) for example distinguished between six fundamental dimensions of organisational structure: specialisation, standardisation, formalisation, centralisation, configuration and traditionalism. Organisational structure can thus be viewed as a multi-dimensional concept, and as such, an organisation can be viewed from many different structural perspectives. For this study, structure has been conceptualised in terms of the centralisation/decentralisation dimension (Bruns and Waterhouse, 1975; Chenhall and Morris, 1986; Chia, 1995, Gul et al, 1995; Libby and Waterhouse, 1996; and Merchant, 1981). A decentralised structure distributes authority for decision making to a large number of lower level managers; whereas, a centralised structure focuses decision-making authority at the headquarters level with few managers involved.

It is argued here that hotels that are more decentralised are likely to require a greater volume of information at lower levels of management to assist in decision making relative to centralised hotels. Therefore, it is suggested that decentralised hotels would have a greater need for CA and marketing performance information, as it provides additional information in relation to customers, to help lower level managers in their decision-making processes. Furthermore, information relating to a particular customer or customer segment will need to be accessed by more managers in a decentralised organisation. This 'duplication' of information access can be most efficiently managed if supported by a relatively formalised CA and marketing performance measurement system. Therefore, it is hypothesised that:

Hypothesis 3: CA and marketing performance measures usage is higher in decentralised hotels than in centralised hotels.

3.4 Hotel Strategy

Strategy is another important variable that has been suggested in the management accounting literature as potentially having an effect on a hotel's CA information needs (Guilding and McManus, 2002). Strategy has been considered in a number of different ways in previous research. For example, Miles and Snow (1978) identified "defender", "prospector" and "analysers" as three successful firm archetypes. In this study, Miles and Snow's (1978) definition of strategy is adopted. Defenders are conceptualised by Miles and Snow as organisations that have constricted product-market areas and their managers are generally specialised in the product or service that the organisation produces. A defender organisation has a narrow focus and rarely makes major adjustments to its technology, structure or methods of operations; its primary attention is on cost efficiency of its operations, emphasising stability and earning the best profit possible given its internal environment. A prospector strategy approach can be viewed as the polar opposite to the defender strategy, as prospectors search for market opportunities and regularly experiment with possible new trends and innovations. They are creators of change and as such, generally focus attention on service innovation and market opportunities, emphasising creativity over efficiency and maintaining flexibility. The third category of analysers operates in two different types of market; one is relatively stable and the other dynamic. Analysers seem to incorporate both defender and prospector attributes. Many see Miles and Snow's typology as constituting a continuum with defenders and prospectors as the two anchor points.

Based on *a priori* rationale, it is anticipated that hotels that are defenders are less likely to have a developed CA and marketing performance measurement system and conversely, hotels that are prospectors are more likely to have a relatively developed system. That is not to say that defender hotels do not require any customer accounting or marketing information. It is suggested here that these types of hotels do need this information, but in comparison to prospector type hotels

not as much. By definition, prospector hotels have a relatively external focused outlook as they search for market opportunities. Defender hotels have more of an internally focused view as they concentrate on offering higher quality services and superior service at a lower price. This contrasting internal/external focus suggests that prospector hotels would be more likely to need more externally focused information (eg., customer information) than defender hotels. In addition, prospectors are firms that experiment with innovation, new trends and technologies and are therefore more likely (relative to defender firms that rarely change their technology and value stable operations) to embrace what could be considered the somewhat new, emerging management accounting techniques of customer profitability analysis or customer valuation analysis. It is therefore hypothesised that:

Hypothesis 4: CA and marketing performance measures usage is higher in hotels pursuing a prospector-type strategy than in hotels pursuing a defender-type strategy.

3.5 *Market Orientation*

The Narver and Slater (1990) conceptualisation of market orientation is adopted in this study. Narver and Slater view market orientation as requiring market information about customer needs over the long-term and the need for organisation-wise integration of information and activities to meet competitively customer needs. Day and Wensley (1998) suggest that this ‘customer focus’ market orientation is mandatory in dynamic, highly segmented markets with many competitors. On the other hand, they suggest that a ‘competitor focused’ market orientation is appropriate when the market is stable and predictable, competition is concentrated and there are only a handful of influential customers. It is argued companies should not focus solely on one market orientation to the detriment of the other, irrespective of the type of market they are competing in (Day and Wensley, 1998).

Market orientation is included as a control variable in this study for a number of reasons. Highly marketed orientated hotels have, by definition, an extremely strong external focus (Kotler, 1988). As marketing managers use marketing information extensively for decision making (Kotler, 1988), highly marketing focused hotels would require not only more information, but would tend to place more emphasis on external information as a means of dealing with the greater emphasis placed on the external environment. As a hotel's customer base is a construct that resides outside the organisation, it is expected that CA and marketing performance measurement systems will tend to be more developed in highly market oriented hotels. It is also expected that hotels with a strong market orientation will tend to attach a relatively high degree of importance to the acquisition of marketing-orientated knowledge such as customer-related information (Slater and Narver, 1994). Furthermore, hotels with a strong marketing focus can be expected to incur relatively large discretionary marketing costs in areas such as customer support. This larger expenditure would appear to warrant higher levels of CA as CA can inform decisions concerning allocation of the marketing budget.

Furthermore, while most previous studies have included market orientation as part of a hypothesized relationship, it is included as a control variable here due to the number of previous findings of a significant positive relationship between market orientation and management accounting techniques. For example, Guilding and McManus (2002) found a significant positive association between market orientation and CA usage in publicly listed Australian companies. Cravens and Guilding (2000) found a significant positive relationship between brand valuation and market orientation; likewise Cadez and Guilding (2008) found a positive relationship with strategic management accounting. Based on these findings, market orientation is included as a control variable in this study.

The relationship between market orientation and firm performance has produced mixed results. Some have suggested a positive relationship with a manager's perception of organisational performance (Wang, Chen and Chen, 2011; Jaworski and Kohli, 1993; Narver and Slater, 1990; Slater and Narver, 1994); and others have not found a direct positive relationship (Han et al., 1998). Additionally, in the management accounting literature, Cadez and Guilding (2008) found a direct positive relationship between market orientation and performance in large Slovenian companies. While the previous results have not been definitive, it is hypothesised that:

Hypothesis 5(a): Market orientation is positively associated with hotel performance.

Furthermore, previous marketing research has shown that market orientation has a positive relationship to an organisation's differentiation strategy (Narver and Slater, 1990; Pelham and Wilson, 1996; Homburg, Krohmer and Workman, 2004). Porter (1985) defined a differentiation strategy as one where a firm seeks to be unique; is externally orientated as it requires tracking and understanding changes in the market in order to develop new products or services which customer perceive as different to competitors'. As noted in the development of the strategy hypothesis above, Porter's (1985) differentiation strategy is similar to Miles and Snow's (1998) prospector strategy that has been adopted in this study. A defender strategy on the other hand, entails focusing more on internal operations, managing costs and earning the best profit from the internal environment. Therefore, a defender hotel would be less likely to have a customer focused market orientation in comparison to a hotel pursuing a prospector strategy. Applying the definition of market orientation of Day and Wensley (1998), a hotel with a customer focused market orientation would more likely pursue a prospector strategy than a defender strategy. Therefore, it is hypothesised that:

Hypothesis 5(b): Market orientation is positively associated with hotels pursuing a prospector-type strategy.

3.6 *Hotel Performance*

The outcome variable of interest in this study is hotel performance i.e., does the application of a particular accounting system design ‘fit’ with the contextual variables described above resulting in enhanced performance? In this study, the ‘fit’ relates to the model of the relationship between greater CA and marketing measures usage in hotels, increased competition intensity, greater perceived environmental uncertainty, decentralised structure, prospector type strategy, high market orientation, large size and increased hotel performance. As Chenhall (2007) advocates, the relationship between management accounting usage and performance depends upon organisational contextual factors.

Previous studies have provided mixed results of the relationship between accounting information and performance. For example, Ittner and Larcker (1998) found significant relationships between customer satisfaction and customer retention, revenues and revenue change in a telecommunications firm, yet only a significant relationship between customer satisfaction and revenue for a financial services firm. Similarly, Banker, Potter and Srinivasan (2000) reported mixed results for the association between customer satisfaction and financial performance in a single hotel firm, and Smith and Wright (2004) found that in the personal computer industry, higher customer loyalty is related to higher average product price, sales growth and return on assets. Perrara, Harrison and Poole (1997) found no support for a positive relationship between performance and use of non-financial performance measures, whilst Agbejule (2005) found a negative effect on performance of the use of sophisticated management accounting practices under low levels of perceived environmental uncertainty. In addition, while Qianpin (2010) found that customer satisfaction was the most important indicator of a firm’s shareholder value, it was also found that customer loyalty had a negative impact on shareholder value.

Conversely, other studies have found significantly positive relationships between strategic management accounting usage and performance (Cadez and Guilding, 2008); broad scope management accounting information and performance (Baines and Langfield-Smith, 2003; Cravens and Guilding, 2001; Mahama, 2006; Mia and Chenhall, 1994); and Ittner, Larcker and Randall (2003) identified a significantly positive relationship between broad information usage and stock returns.

It has also been suggested that information systems support management decision-making (Abernethy and Bouwens, 2005) that can result in improved decision-making in regard to resource allocation (Baines and Langfield-Smith, 2003). In conjunction with the overall proposition of a necessary fit between CA usage, the study's contextual variables and hotel performance, it is put forth that CA practices provide important customer focused information that results in better management decision-making. It is therefore, hypothesised that:

Hypothesis 6: Greater use of CA and marketing information will result in improved hotel performance.

3.7 Hotel Size

Hotel size is included as a control variable in this study. It has been a persistent finding in previous contingency studies that company size is positively related to management accounting system sophistication (Bruns and Waterhouse, 1975; Gordon and Miller, 1976; Merchant, 1984). In light of the larger customer base and the likelihood of greater expenditure on total customer support in large hotels, it seems reasonable to expect greater usage of CA and marketing performance measures in larger hotels.

4. Methodology

4.1 Questionnaire development and sampling procedures

The survey questionnaire was designed to gather data to test the hypotheses developed. A pilot study was conducted prior to the administration of the survey. The survey was piloted with ten academics drawn from accounting and marketing in order to minimise potential ambiguity and promote intelligibility of the questions. In addition to the survey questionnaire, a glossary of CA terms used in the survey was included in the mail-out (see Appendix A).

The initial random sample consisted of 500 hotels obtained from the white and yellow pages. Hotels were chosen on a random basis from the telephone directories of the six Australian states and territories. Hotel addresses and contact details of the hotel manager (if available) were obtained from each hotel's website. The initial mail-out of the questionnaires to the hotel manager comprised a covering letter, glossary of terms and a return self addressed envelope. A second mail-out to all non-respondents was undertaken approximately three weeks following the initial mail-out.

Of the first and second questionnaire mail out, 188 questionnaires were returned. Of these, 17 mailings were returned marked "Return to Sender" and six were returned with advice that it was hotel policy not to participate in surveys. The response rate was therefore 33%. Potential non-response bias was investigated by undertaking an examination for differences between early and late respondents. Non-parametric Mann-Whitney *U* tests were performed to compare responses provided for the first questionnaire mail-out with the responses of the second questionnaire mail-out for all survey questions. No significance levels were found to be less than 0.05. In addition, Mann-Whitney *U* tests were also performed to compare responses of the first 25% of questionnaires

received with the final 25% received. Results also indicated that there were no significant differences between the early and late respondents on all questionnaire items.

4.2 *Variable Measurement*

Competition Intensity: Competition intensity (CI) was measured by four items adapted from Khandwalla's (1972) and Jaworski and Kohli's (1993) measures. Managers were asked to respond to the four items of: competition in our industry is cut-throat; there are many service promotion wars in our industry; competition for market share in our industry is intense; and price competition in our industry is intense, on a seven point scale ranging from "1" (not at all) to "7" (to a large extent). All correlations between the four items were statistically significant ($p < 0.05$) therefore a confirmatory factor analysis (CFA) with varimax rotation was conducted. The CFA yielded one factor with an eigenvalue greater than one (3.098) that explained 77.45% of the variance and had factor loadings for the four items of 0.892, 0.793, 0.932 and 0.896, respectively. The Cronbach alpha value of the scale was 0.899 suggesting reliability. The average of the four competition intensity (CI) items was used in further analysis.

Perceived environmental uncertainty: perceived environmental uncertainty was measured using Kren and Kerr's (1993) five-item instrument. Managers were asked to indicate how predictable or unpredictable each of the five PEU items was in the operations of their hotel. Responses to the predictability of the five PEU items were recorded on a seven point scale, ranging from "1" (very predictable) to "7" (very unpredictable). The five items were the environmental factors of customers, suppliers, competitors, governments/political and technological. A number of correlations between the five items were statistically significant ($p < 0.05$). A CFA with varimax rotation was conducted that yielded one factor with an eigenvalue greater than one (2.027), that explained 40.55% of the variance of the five items and had factor loadings of 0.646, 0.598, 0.723,

0.557 and 0.647, respectively. The Cronbach alpha value of the scale was 0.729 suggesting reasonable reliability. The average of the five perceived environmental uncertainty (PEU) items was calculated and used in further analysis.

Hotel Structure: Hotel structure (STRUC) was measured by Gordon and Narayanan's (1984) eight-item instrument that assesses the level of decentralisation of decision-making. The instrument consists of eight items that assess the extent to which decisions relating to management issues are decentralised. Managers were asked to indicate on a seven point scale ranging from "1" (not at all) to "7" (to a large extent), the extent to which decision making authority is delegated to lower management levels on the following eight management issues:

- (1) development of new services;
- (2) purchasing capital equipment;
- (3) the hiring and firing of personnel;
- (4) sourcing of inputs;
- (5) operating procedures and schedules;
- (6) pricing of services;
- (7) distribution of services; and,
- (8) making trade-offs within their business unit's current period budget.

A number of correlations between the eight items were statistically significant ($p < 0.05$). A CFA with varimax rotation was conducted that yielded one factor with an eigenvalue greater than one (3.363) that explained 42.03% of the variance of the eight items and had factor loadings of 0.677, 0.615, 0.554, 0.641, 0.707, 0.729, 0.669 and 0.575, respectively. The Cronbach alpha value was 0.80 suggesting reliability of the scale. The average of the eight hotel structure (STRUC) items was calculated and used in further analysis.

Hotel Strategy: An adapted version of the instrument used by Abernethy and Brownell (1999) was adopted to measure hotel strategy (STRAT). Following two descriptions of hotels, managers were asked to respond, on a seven-point scale where they would place their hotel's current strategic

position in comparison to their competitors. A “1” (Hotel A) represents a defender hotel and a “7” (Hotel B) represents a prospector hotel. The description of Hotel A read:

Hotel A tries to locate and maintain a secure niche in a relatively stable service area. It offers a more limited and stable range of services than its competitors do. It concentrates on protecting its own domain by offering high quality, superior service, lower prices and so forth. Often this type of hotel is not at the forefront of developments in the industry. Hotel A focuses on cost efficiency and doing the best job possible in a limited area.

Hotel B was described as:

Hotel B makes frequent changes in, and additions to, its services and leads in innovations in its industry. It responds rapidly to early signals concerning areas of opportunity, and these responses often lead to a new round of competitive actions. It often leads other hotels in service development and tends to offer a wider range of services than other companies of similar size in the hotel industry.

Customer and Marketing Performance Measures: Further to Guilding and McManus (2002) who advocated the use of non-singular items, multiple items to measure CA and marketing usage were appraised in this study. CA and marketing practices and techniques were measured using seven accounting customer-related analyses and six marketing customer-related analysis for both single customers and customer segments. The items were:

- (1) Customer cost analysis;
- (2) Customer revenue analysis;
- (3) Customer profitability analysis;
- (4) Lifetime customer cost analysis;
- (5) Lifetime customer revenue analysis;
- (6) Lifetime customer profitability analysis; and,
- (7) Cost of lost customer analysis.

- (1) Market share analysis;
- (2) Customer acquisition rate analysis;
- (3) Customer attrition rate analysis;
- (4) Customer loyalty analysis;
- (5) Customer retention rate analysis; and,
- (6) Customer satisfaction analysis.

Respondents were asked to indicate the extent of use of each form of analysis, for both single and customer segment bases, on a seven point scale ranging from “1” (not at all) to “7” (to a large

extent). In addition, managers were asked to describe any other customer related analyses that their hotel conducts. No significantly different types of analysis were identified.

To ascertain the CA constructs, an exploratory factor analysis with varimax rotation was performed. The factor loading results are presented in Table 1. Eigenvalues of greater than one were used as the minimum threshold value for a factor and loadings of 0.50 was used as the threshold value for item inclusion in a factor. Six factors titled “Lifetime CPA”, “Customer Acquisition/Attrition Rate”, “CPA”, “Segmental CPA”, “Customer Satisfaction” and “Customer Market Share” were identified that explained a total of 77.8% of the total variance of the items. The factors all had Cronbach’s alpha values greater than 0.73. Therefore, the average of the items that had a loading greater than 0.50 on each factor were calculated and used in further analysis.

Insert Table 1 here

Hotel Performance: Hotel performance was measured by an adapted version of the instrument developed by Govindarajan (1988) and Govindarajan and Fisher (1990). Managers were asked to assess their hotel’s performance relative to their principal competitors over the last three years across six dimensions, using a seven point scale ranging from “1” (well below average) to “7” (well above average). In addition, an overall performance item was included. The seven dimensions of hotel performance were sales growth, profitability, return on investment, market share, new service development, customer satisfaction and overall performance.

A CFA with varimax rotation was conducted that yielded two factors with eigenvalues greater than one (3.827 and 1.095, respectively). Table 2 presents the factor analysis results. Items 1, 2, 3 and 7 loaded on factor 1, financial performance (FPERF) and items 4 and 5 loaded on factor

2, non-financial performance (NFPERF). The average of the relevant items for each factor was calculated and used in further analysis.

Insert Table 2 here

4.2.1 Control Variables Measurement

Market Orientation: Market orientation (MO) was measured using an adapted version of Narver and Slater's (1990) 15-item measure. This instrument has been previously adapted and used by other researchers in the area such as Guilding and McManus (2002). Managers were asked to respond to the four items of: my hotel has a strong understanding of our customers; my hotel responds rapidly to competitors' actions; the functions of my hotel work together to create superior customer value; and my hotel has a strong market orientation, on a seven point scale ranging from "1" (not at all) to "7" (to a large extent). All correlations between the four items were statistically significant ($p < 0.05$). A CFA with varimax rotation was conducted that yielded one factor with an eigenvalue greater than one (2.342) that explained 58.55% of the variance of the four items and had factor loadings of 0.771, 0.699, 0.864 and 0.716, respectively. The Cronbach alpha value was 0.753 indicating reliability of the scale. The average of the four market orientation (MO) items was calculated and used in further analysis.

Size: Hotel size has been measured on a number of different dimensions in previous accounting studies including total assets, total sales and number of employees. In this paper, the number of employees measured hotel size. The number of employees ranged from 58 to 647, with an average of 185 employees. Due to the non-normal distribution of this variable, logarithmic transformation was performed prior to the analysis.

4.3 *Data Analysis*

Structural equation modelling, using AMOS 18, was applied to test the hypotheses. Structural equation modelling was chosen as it allows the inclusion of multiple relationships between variables, provides measures of how well the model fits the data, competing models can be tested, identifies the significance of each of the relationships between the variables, allows a large number of variables to be included in the analysis, any number of relationships between variables can be modelled and the measurement error of the latent variables can be accounted for. SEM requires the estimation of both the measurement and structural parameters for a given set of variable relationships. Due to the relatively small sample size, the two-step approach recommended by Schumacker and Lomax (1996) has been adopted. Firstly, the measurement models and composite variables were estimated and secondly, measurements of the model were fixed and the structural model was estimated (Hair et al., 2009). In each of the twelve structural models, the reliability of each construct was fixed to 0.8, as multiple item measures were compressed to a single value construct by the use of the weighted average of relevant items and strategy and size were single indicator variables (Schumacker and Lomax, 1996). In addition to the CFA already described for the measurement of each relevant variable in section 4.2 above, the multidimensionality of the CA and marketing factors and the two performance factors were further examined by investigating alternate factor structure models (Byrne, 1998). The best fitting models had the same factor structures as described above, six factors for CA practices and the two factor model for performance. These factor models resulted in the lowest AIC values as compared to all other models estimated for both construct items (Akaike, 1974).

Prior to the statistical analysis, the data was screened for accuracy, missing data, multicollinearity, outliers, normality, linearity and homoscedasticity following Kline (1998). No problems were identified with any of these issues except for missing values. Across the data set, 26

values of missing data were identified. Inspection of the missing data suggested they were missing randomly. As no variable had greater than 5% of missing values and no significant correlations existed between the missing data it was decided that the data was missing completely at random and therefore the missing values were replaced with the mean value on each variable (Hair et al., 2009).

The Spearman's *rho* correlation coefficients for the variables to be analysed in the structural models are presented in Table 3. There are a number of significant correlations between the variables. The overall structural model input to test the hypotheses is presented in Figure 2. Each hypothesis was examined by testing a model for each of the six CA and marketing performance measurement constructs by each of the two performance variables. Each hypothesised relationship is also noted on the relevant path in Figure 2. This model provided the initial input into Amos for each of the six CA constructs with each of the two types of performance. Therefore, twelve models were analysed.

Insert Table 3 here

Insert Figure 2 here

5. Results

The results of the six financial performance models are presented in Table 4. The structural models for the six financial performance variable models were estimated with the covariance of market orientation and competition intensity error terms added in the final models in which competition intensity was included. Inclusion of this covariance improved the fit of the models and appeared appropriate on theoretical grounds, as it seems sensible that a hotel's market orientation

and the competition intensity in their market are highly correlated. These two variables were also significantly positively correlated on a bivariate basis as noted in Table 3 ($r = 0.20$; $p < 0.05$).

All final models presented in Table 4 fitted the data quite well with all major indices of fit (GFI, AGFI, CFI, SRMR and RMSEA) falling with acceptable levels (Hair et al., 2009; Vandenberg and Lance, 2000; Schumacker and Lomax, 1996). As the results presented in Table 4 identify, Hypothesis 1 suggesting a positive relationship between competition intensity and CA and marketing performance measures is supported for four of the six financial performance models. Strong support was shown for Hypothesis 5(a) and (b), which proposed that in higher market orientated hotels, a prospector-type strategy would be pursued (H5(a)) and improved hotel financial performance would be perceived (H5(b)), with positively significant relationships in all six CA and marketing performance measurement models. Additionally, some support was also shown for greater use of CA and marketing performance measures in hotels with a decentralised structure than with a centralised structure with significantly positive paths between structure and lifetime customer profitability analysis ($\gamma = 0.16$; $p < 0.05$), acquisition and attribution rate analysis ($\gamma = 0.13$; $p < 0.05$), customer profitability analysis ($\gamma = 0.22$; $p < 0.01$) and customer satisfaction ($\gamma = 0.14$; $p < 0.05$). No support was shown for Hypothesis 2 and Hypothesis 4, which posited higher CA and marketing performance measures usage rates in hotels where managers perceive greater environmental uncertainty and hotels pursuing a prospector-type strategy, respectively. Additionally, the control variable of market orientation was found to be significantly positively related to all six CA and marketing constructs for the financial performance models. Also, CA and marketing performance measures usage rates were found to be higher in larger hotels, with a significant positive relationship between size and the three marketing analyses of acquisition and attribution rate analysis ($\gamma = 0.21$; $p < 0.01$), customer satisfaction ($\gamma = 0.18$; $p < 0.01$) and market share ($\gamma = 0.17$; $p < 0.05$). Finally, financial performance was not found to be directly associated with any of the six CA and marketing constructs.

Insert Table 4 here

The results of the structural equation models for the non-financial performance models are presented in Table 5. The results for these models are similar to the results obtained for the financial performance models. Again, Hypothesis 1, which suggested a positive relationship between competition intensity and CA and marketing practices, is supported for three of the six models (in comparison to four of the financial performance models). The same strong support was shown for Hypothesis 5(a) and (b) which hypothesised that in higher market orientated hotels a prospector-type strategy would be pursued (H5(a)) and improved hotel performance would be perceived (H5(b)), with positively significant relationships in all six CA and marketing models. Additionally, the same level of support was also shown for greater use of CA and marketing performance measures in hotels with a decentralised structure than with a centralised structure for the non-financial performance models with the same four CA and marketing constructs showing statistical significance. No support was shown for Hypothesis 2 and Hypothesis 4, which posited higher CA and marketing performance measures usage rates in hotels where managers perceive greater environmental uncertainty and hotels pursuing a prospector-type strategy, respectively. Again, the market orientation was found to be highly positively related to five of the six non-financial models, with lifetime customer profitability analysis being the only non-significant finding. Size is significantly positively related to CA and marketing practices in the same three models for non-financial performance as financial performance. Additionally, non-financial performance was found to be significantly positively associated with the marketing construct of customer satisfaction analysis.

Insert Table 5 here

6. Discussion and Conclusion

This study has examined the use of CA and marketing performance measures and a number of contextual factors that may impact their use in the Australian hotel industry. Six different practices were identified, three accounting practices of lifetime CPA, CPA and segmented CPA and three marketing of acquisition/attrition analysis, satisfaction and market share analysis. A number of significant relationships of varying strengths between the different CA and marketing practices and the contextual variables were found although perceived environmental uncertainty and organisational strategy were not found to have any direct impact. The findings highlight the importance of the 'fit' between management accounting systems, organisational and environmental factors such as strategy and marketing orientation (Langfield-Smith, 1997).

It has also been found that competition intensity, hotel size and a decentralised hotel structure have moderate impacts on the use of CA and marketing performance measures. Specifically, hotels experiencing highly competitive environments appear more likely to use lifetime CPA, acquisition/attrition analysis, CPA and market share analysis to gain competitive advantage. Large hotels have been found to use acquisition/attrition analysis, customer satisfaction and market share analyses; additionally, decentralised hotels are more likely to use lifetime CPA, acquisition/attrition analysis, CPA and customer satisfaction measures. That is, hotels that have devolved authority for decision making to lower level managers require more accounting and marketing based customer information. Interestingly, segmented CPA was the only CA practice not associated with any of these contextual factors.

Clearly, hotels facing greater competition in their markets are required to keep their 'eye on the ball' in regard to their customers. They have a greater need to focus on their customers, create customer value and consider the cost of creating that customer value. To aid understanding of their

customers, hotel managers need to have an appreciation of their customers' long-term worth, their current profitability, the rate they acquire new customers and lose current customers, and their share of the highly competitive hotel market. The importance of customer-focused information in intensely competitive markets adds weight to the previous findings of Guilding and McManus (2002).

While hotel size was included in the study as a control variable, it was found to be related to greater usage of the three marketing focused performance measures. Therefore, interestingly hotel size was not found to be associated with greater use of any of the accounting based practices. This flies in the face of prior management accounting research, which has found that company size is related to greater management accounting sophistication, mostly due to larger companies having greater expenditure available to outlay on more expensive sophisticated systems. It does though find some support from Guilding and McManus (2002) who found that company size was only associated with the overall CA construct and not the four specific accounting focused techniques.¹ While previous accounting studies have sampled companies across all industries and have not solely examined the hotel industry, it is possible that the lack of an association between hotel size and accounting based performance measures could be explained by the unique features of hotels compared to all business types, such as the accounting system design being determined by the hotel management company and not the accounting staff at the individual hotels. In further research it would appear more appropriate to measure size of the hotel's management company and not hotel size. Despite this observation, one would expect a positive relationship between size of hotels and size of hotel management companies. Also, it is possible that as many accounting software providers, such as Oros, ACCPAC and SAP, are now actively selling CA software, the cost for what has often been considered a group of sophisticated management accounting techniques, has

¹ Guilding and McManus (2002) measured CA practices with five single measure items of CPA, segment CPA, lifetime CPA, valuation of customers or groups of customers as assets and a global measure of CA.

fallen and has now come into reach of most hotels. So what are seen as sophisticated accounting based CA practices are now more readily available to smaller sized hotels.

Perhaps the most interesting finding (or non-finding) was the lack of a relationship between the use of the accounting and marketing customer focused performance measures and both financial and non-financial hotel performance, except for customer satisfaction analysis. In this study a self-assessed, subjective measure of performance was used and managers were asked to assess their hotel's performance against their principal competitor's over the last three years. While a number of previous studies have found a strong correlation between subjective and objective measures of performance (Pearce, Robbins and Robinson, 1987; Golden, 1992; Hart and Banbury, 1994; and Dawes, 1999) and others have found subjective measures to be reliable and valid (Dess and Robinson, 1984; Dess, 1987) there are some intrinsic study-specific problems with measuring performance by a self-assessed subjective measure. Firstly, it is assumed that hotel managers are aware of the performance of their competitors, when in fact they may not be privy to this knowledge as their focus is on their own performance and the performance of their specific competitors may not be known. It goes without saying that without a yardstick for the performance of competitors any assessment may be flawed and might be over or under estimated. Additionally, it may be difficult for hotel managers to assess performance over a three year period, particularly if their performance (or guesstimate) has ebbed and flowed over this time and has not been consistently better or worse than their competitors. While it was not possible to objectively measure the performance of the hotels in this study, future studies might gain from being based on methods that allow for objective measures of performance such as financial ratios, profitability figures or revenue.

It is also possible that CA and marketing performance measures were not directly related to organisational performance as while customer information is gathered it is not factored into

management decision-making. McManus (2009) found that while some firms were collecting CA information, that information was not being used in decision making in specific departments or not being used in decision making across the firm. It appeared that some firms were performing CA analyses but were not disseminating the customer information to management decision makers. It stands to reason that just because a hotel may use accounting and marketing customer focused performance measures and gather customer information, if the information from the customer analysis is not factored into hotel management decisions then the actual use of these measures may have little impact on the overall performance of the hotel. Future studies would gain by not only appraising the use of these techniques but to also examine if, and to what extent, CA information is factored into management decision-making.

Notwithstanding the above, the non-finding of a direct relationship between the accounting and marketing constructs and financial and non-financial performance, does find some support from previous studies. A number of previous studies have found mixed results in regard to a relationship between performance and customer retention, customer satisfaction, customer loyalty and sophisticated management accounting practices (Agbejule, 2005; Banker et al., 2000, Ittner and Larcker, 1998; Smith and Wright, 2004; and Qianpin, 2010). Even so, it was found in this study that large hotels, with decentralised structures, highly market orientated together with undertaking a prospector strategy, will use customer satisfaction analysis, and together there will be a positive impact on the hotels' non-financial performance.

It is also important to note the strength of the impact of the second control variable, market orientation across all variables of the study. On a bivariate level, market orientation is significantly related to all variables, except for decentralisation. It is not only significantly related to each of the accounting and marketing performance measures, but also to both financial and non-financial performance which supports the findings of previous marketing studies (Jaworski and Kohli, 1993;

Narver and Slater, 1990; Slater and Narver, 1994). On a multivariate level, a strong positive relationship has been found between market-orientated hotels and the use of accounting and marketing customer focused performance measures (Guilding and McManus, 2002 and Cadez and Guilding, 2008). Additionally, market orientation was found to be strongly related to a prospector hotel strategy (Pelham and Wilson, 1996; Homburg et al., 2004) and both financial and non-financial hotel performance (Jaworski and Kohli, 1993; Narver and Slater, 1990; Slater and Narver, 1994). From a holistic point of view, while these findings have found some traction in the marketing literature, it is an important consideration for any study that includes market orientation as a variable of interest to reflect on the direct and indirect relationships between market orientation and other variables, such as competition intensity, strategy, and financial and non-financial performance.

The findings suggest that matching the appropriate strategy to a hotel's market orientation, structure and size may have important implications for a hotel's performance. For example, large hotels that are competing in a highly competitive environment, that have a decentralised decision-making structure, are highly market orientated combined with the pursuit of a prospector strategy, would be best served by incorporating customer marketing based performance measures into their performance measurement system. This study has shown that this 'fit' would improve a hotel's non-financial performance. It is also important to note the strength of the relationships between market orientation, prospector strategy and both financial and non-financial performance. The study has shown that hotels that combine or 'match' a strong market orientation with a prospector type strategy are likely to have improved financial and non-financial performance while incorporating all six types of customer accounting and marketing performance measures.

This study faces all the usual survey related issues and limitations. While a number of strategies have been undertaken to minimise any impacts of these limitations, any conclusions from

the study should be interpreted with these in mind. As this study is an industry specific study that has examined the use of CA and marketing performance measures in the hotel industry, generalisability of the findings to firms in other industries, as well as hotels in other countries, should be undertaken with caution. Future research could be conducted that further examines all Australian companies, companies in other industries or where the use of accounting and marketing customer focused measures may be relevant not only in Australia but also in other countries. In addition, other factors that may influence the adoption of these practices such as management support and their link to performance evaluation systems would also add additional insights. Furthermore, studies that examine the link between CA and marketing metrics usage and organisational performance are still warranted particularly with a focus on the integration of this information into management decision-making and these impacts upon overall organisational performance in the long term.

In conclusion, gaining a better understanding of the contextual factors that impact the use of CA and marketing performance measures and any influence these have on organisational performance in specific industries would add further insights. This study has added to the growing CA literature by providing an analysis of the hotel industry in Australia and provides further evidence of the reasons for CA usage and the different practices that make up the suite of customer accounting and marketing measures. It is hoped that it has provided one further stride in the development of a more inclusive theory of customer focused accounting and marketing performance measurement systems.

References

- Abernethy, M.A., Brownell, P., 1999. The Role of Budgets in Organizations Facing Strategic Change: An Exploratory Study. *Accounting, Organizations and Society* 24, 189-204.
- Abernethy, M.A., Bouwens, J., 2005. Determinants of Accounting Innovation Implementation. *Abacus* 41, 217-239.
- Agbejule, A., 2005. The Relationship Between Management Accounting Systems and Perceived Environmental Uncertainty on Managerial Performance: A Research Note. *Accounting and Business Research* 35, 295-305.
- Baggio, R., Sainaghi, R., 2011. Complex and Chaotic Tourism Systems: Towards a Quantitative Approach. *International Journal of Contemporary Hospitality Management* 23, 840-861.
- Baines, A., Langfield-Smith, K., 2003. Antecedents to Management Accounting Change: A Structural Equation Approach. *Accounting, Organizations and Society* 28, 675-698.
- Banker, R.D., Potter, G., Srinivasan, D., 2000. An Empirical Investigation of an Incentive Plan that Includes Nonfinancial Performance Measures. *The Accounting Review* 75, 65-92.
- Banker, R.D., Potter, G., Srinivasan, D., 2005. Association of nonfinancial performance measures with the financial performance of a lodging chain. *Cornell Hotel and Restaurant Administration Quarterly* 46(4), 394-412.
- Barrows, C.W., Naka, A., 1994. Use of Macroeconomic Variables to Evaluate Selected Hospitality Stock Returns in the US. *International Journal of Hospitality Management* 13, 119-128.
- Bellis-Jones, R., 1989. Customer Profitability Analysis. *Management Accounting* 67, 26-28.
- Bowen, J.T., Shoemaker, S., 1998. Loyalty: A Strategic Commitment. *Cornell Hotel & Restaurant Administration Quarterly* 39, 12-25.
- Bruns, W.J., Jr., Waterhouse, J.H., 1975. Budgetary Control and Organization Structure. *Journal of Accounting Research* 13, 177-203.
- Byrnes, J. P., 1998. *The Nature and Development of Decision Making: A Self-Regulation Mode*. Lawrence Erlbaum Associates, New Jersey.
- Cadez, S., Guilding, C., 2008. An exploratory investigation of an integrated contingency model of strategic management accounting. *Accounting, Organizations and Society* 33, 836-863.
- Capiez, A., Kaya, A., 2004. Yield management and performance in the hotel industry. *Journal of Travel and Tourism Marketing* 16, 21-32.
- Capó, J., Riera, A., Rosselló, J., 2007. Accommodation Determinants of Seasonal Patterns. *Annals of Tourism Research* 34, 1143-11159.
- Chan, W., Wong, K., 2007. Towards a more comprehensive accounting framework for hotels in China. *International Journal of Contemporary Hospitality Management* 19, 546-559.
- Chand, M., Katou, A., 2007. The Impact of HRM Practices on Organizational Performance in the Indian Hotel Industry. *International Journal of Contemporary Hospitality Management* 29, 576-594.
- Chenhall, R.H., 2003. Management Control Systems Design Within Its Organizational Context: Findings from Contingency-Based Research and Directions for the Future. *Accounting, Organizations and Society* 28, 127-168.
- Chenhall, R.H., 2007. Theorising Contingencies in Management Control Systems Research. In: *Handbook of Management Accounting Research*. Elsevier, Oxford.

- Chenhall, R.H., Morris, D., 1986. The Impact of Structure, Environment and Interdependence on the Perceived Usefulness of Management Accounting Systems. *The Accounting Review* 61, 16-35.
- Chia, Y.M., 1995. Decentralization, Management Accounting Systems (MAS) Information Characteristics and Their Interaction Effects on Managerial Performance: A Singapore Study. *Journal of Business Finance and Accounting* 24, 565-593.
- Cizmar, S., Weber, S., 2000. Marketing Effectiveness of the Hotel Industry in Croatia. *International Journal of Hospitality Management* 19, 227-240.
- Claver-Cortés, E., Molina-Azorín, J.F., Pereira-Moliner, J., 2007. Competitiveness in Mass Tourism. *Annals of Tourism Research* 34, 727-745.
- Cohen, J., Cohen, P., 1983. *Applied Multiple Regression/Correlation for the Behavioural Sciences*. Lawrence Erlbaum Associates, Inc., Hillsdale, New Jersey.
- Cooper, R., Kaplan, R.S., 1991a. Kanthal (A). In: *The Design of Cost Management Systems: Text, Cases and Readings*. Prentice-Hall Inc., Englewood Cliffs, New Jersey.
- Cooper, R., Kaplan, R.S., 1991b. Manufacturers Hanover Corporation: Customer Profitability Report. In: *The Design of Cost Management Systems: Text, Cases and Readings*. Prentice-Hall Inc., Englewood Cliffs, New Jersey.
- Cravens, K.S., Guilding, C., 2000. Measuring Customer Focus: An Examination of the Relationship Between Market Orientation and Brand Valuation. *Journal of Strategic Marketing* 8, 27-45.
- Cruz, I., 2007. How might hospitality organizations optimize their performance measurement systems? *International Journal of Contemporary Hospitality Management* 19, 574-588.
- Dawes, J., 1999. The Relationship Between Subjective and Objective Company Performance Measures in Market Orientation Research: Further Empirical Evidence. *Marketing Bulletin* 10, 65-75.
- Day, G.S., Wensley, R., 1988. Assessing Advantage: A Framework for Diagnosing Competitive Superiority. *Journal of Marketing* 52, 1-20.
- Dess, G.G., 1987. Consensus on Strategy Formulation and Organizational Performance: Competitors in a Fragmented Industry. *Strategic Management Journal* 8, 259-276.
- Dess, G.G., Robinson, R.B., 1984. Measuring Organizational Performance in the Absence of Objective Measures: The Case of the Privately-Held Firm and Conglomerate Business Unit. *Strategic Management Journal* 5, 265-273.
- Downie, N., 1997. The use of accounting information in hotel marketing decisions. *International Journal of Hospitality Management* 16, 305-312.
- Enz, C.A., Canina, L, Walsh, K., 2001. Hotel-Industry Averages: An Inaccurate Tool for Measuring Performance. *Cornell Hotel & Restaurant Administration Quarterly* 42, 22-32.
- Ferris, K.R., 1977. Perceived uncertainty and job satisfaction in the accounting environment. *Accounting, Organizations and Society* 2, 23-28.
- Foster, G., Gupta, M., 1994. Marketing, Cost Management and Management Accounting. *Journal of Management Accounting Research* 6, 43-77.
- Foster, G., Gupta, M., Sjoblom, L., 1996. Customer Profitability Analysis: Challenges and New Directions. *Journal of Cost Management* 10, 5-17.
- Foster, G., Young, S., 1997. Frontiers of Management Accounting Research. *Journal of Management Accounting Research* 9, 63-77.

- Golden, B.R., 1992. SBU Strategy and Performance: The Moderating Effect on the Corporate SBU Relationship. *Strategic Management Journal* 13, 145-158.
- Gordon, L. A., Miller, D., 1976. A Contingency Framework for the Design of Accounting Information Systems. *Accounting, Organizations and Society* 1, 59-69.
- Gordon, L.A., Narayanan, V.K., 1984. Management Accounting Systems, Perceived Environmental Uncertainty and Organizational Structure: An Empirical Investigation. *Accounting, Organizations and Society* 9, 33-47.
- Govindarajan, V., 1984. Appropriateness of Accounting Data in Performance Evaluation: An Empirical Examination of Environmental Uncertainty as an Intervening Variable. *Accounting, Organizations and Society* 9, 125-135.
- Govindarajan, V., 1984. Appropriateness of Accounting Data in Performance Evaluation: An Empirical Examination of Environmental Uncertainty as an Intervening Variable. *Accounting, Organizations and Society* 9, 125-135.
- Govindarajan, V., Fisher, J., 1990. Strategy, Control Systems and Resource Sharing: Effects on Business-Unit Performance. *Academy of Management Journal* 33, 259-285.
- Govindarajan, V., Shank, J.K., 1992. Strategic Cost Management: The value chain perspective. *Journal of Management Accounting Research* 4, 179-197.
- Gu, H., Ryan, C., 2008. Chinese Clientele at Chinese Hotels: Preferences and Satisfaction. *International Journal of Hospitality Management* 27, 337-345.
- Guilding, C., Kennedy, D.J., McManus, L., 2001. Extending the Boundaries of Customer Accounting: Applications in the Hotel Industry. *Journal of Hospitality and Tourism Research* 25, 173-194.
- Guilding, C., McManus, L., 2002. The Incidence, Perceived Merit and Antecedents of Customer Accounting: An Exploratory Note. *Accounting, Organizations and Society* 27, 45-59.
- Gul, F., Tsui, J.S.L., Fong, S.C.C., Kwok, H.Y.L., 1995. Decentralization as a Moderating Factor in the Budgetary Participation-Performance Relationship: Some Hong Kong Evidence. *Accounting and Business Research* 25, 107-113.
- Hair, J.F., Anderson, R.E., Tatham, R.L., Black, W.C., 2009. *Multivariate Data Analysis* 6th Edition. Prentice Hall, Englewood Cliffs, New Jersey.
- Harrington, R., 2004. The Environment, Involvement and Performance: Implications for the Strategic Process of Food Service Firms. *International Journal of Hospitality Management* 23, 317-341.
- Hart, S., Banbury, C., 1994. How Strategy-Making Processes Can Make a Difference. *Strategic Management Journal* 15, 251-259.
- Hartfeil, G., 1996. Bank One Measures Profitability of Customers, Not Just Products. *Journal of Retail Banking Services* 18, 24-31.
- Homburg, C., Krohmer, H., Workman, Jr. J.P., 2004. A strategy implementation perspective of market orientation. *Journal of Business Research* 57, 1331-1340.
- Israeli, A.A., 2002. Star Rating and Corporate Affiliation: Their Influence on Room Price and Performance of Hotels in Israel. *International Journal of Hospitality Management* 21, 405-424.

- Ittner, C.D., Larcker, D.F., 1998. Are Nonfinancial Measures Leading Indicators of Financial Performance? An Analysis of Customer Satisfaction. *Journal of Accounting Research* 36, 1-35.
- Ittner, C.D., Larcker, D.F., Randall, T., 2003. Performance Implications of Strategic Performance Measurement in Financial Services Firms. *Accounting, Organizations and Society* 28, 715-741.
- Jaworski, B.J., Kohli, .K., 1993. Market Orientation: Antecedents and Consequences. *Journal of Marketing* 57, 53-70.
- Jeffrey, D., Barden, R., 2000. Monitoring Hotel Performance Using Occupancy Time-Series Analysis: The Concept of Occupancy Performance Space. *International Journal of Tourism Research* 2, 383-402.
- Khandwalla, P., 1972. The Effects of Different Types of Competition on the Use of Management Control. *Journal of Accounting Research* 10, 275-285.
- Kline, R., 1998. *Principles and Practice of Structural Equation Modeling*. The Guildford Press, New York..
- Kohli, A., Jaworski, B., 1990. Market Orientation: The Construct, Research Propositions, and Managerial Implications. *Journal of Marketing* 54, 1-18.
- Kotler, P., 1988. *Marketing Management: Analysis, Planning and Control*. Prentice-Hall, Englewood Cliffs, NJ.
- Kren, L., Kerr, J.L., 1993. The Effect of Behaviour Monitoring and Uncertainty on the Use of Performance-Contingent Compensation. *Accounting and Business Research* 23, 159-168.
- Langfield-Smith, K., 1997. Management Control Systems and Strategy: A Critical Review. *Accounting, Organizations and Society* 22, 207-232.
- Libby, T., Waterhouse, J.H., 1996. Predicting Change in Management Accounting Systems. *Journal of Management Accounting Research* 8, 137-150.
- Luft, J., Shields, M., 2003. Mapping Management Accounting: Graphics and Guidelines for Theory-Consistent Empirical Research. *Accounting, Organizations and Society* 28, 169-249.
- Magnusson, D., 1981. *Toward a Psychology of Situations: an Interactionist Perspective*. Lawrence Erlbaum Associates, New Jersey.
- Mahama, H., 2006. Management Control Systems, Cooperation and Performance in Strategic Supply Relationships: A Survey in the Mines. *Management Accounting Research* 17, 315-339.
- McManus, L., Guilding, C., 2009. Customer Accounting Adoption in Australian Companies: A Field Study. *Accounting, Accountability and Performance Journal* 15, 33-69.
- McManus, L., 2011. *Accounting for Customers: The impact of Contextual Factors and Implications for Management Decision-Making*. Working paper, Griffith University, Gold Coast, Qld.
- Merchant, K. A., 1981. The Design of Corporate Budgeting System: Influences on Managerial Behaviour and Performance. *The Accounting Review* 56, 813-829.
- Merchant, K.A., 1984. Influences on Departmental Budgeting: An Empirical Examination of a Contingency Model. *Accounting, Organizations and Society* 9, 291-310.
- Mia, L., Chenhall, R.H., 1994. The Usefulness of Management Accounting Systems, Functional Differentiation and Managerial Effectiveness. *Accounting, Organizations and Society* 19, 1-13.

- Miles, R.E., Snow, C.C., 1978. *Organizational Strategy, Structure and Process*. McGraw-Hill, New York, NY.
- Mintzberg, H., 1973. Strategy Making in Three Models. *California Management Review* 16, 44-53.
- Namasivayam, K., Miao, L., Zhao, X., 2007. An Investigation of the Relationships Between Compensation Practices and Firm Performance in the US Hotel Industry. *International Journal of Hospitality Management* 26, 574-587.
- Narver, J.C., Slater, S.F., 1990. The Effect of a Market Orientation on Business Profitability. *Journal of Marketing* 3, 20-35.
- Noone, B., Griffin, P., 1999. Managing the Long-Term Profit Yield from Market Segments in a Hotel Environment: A Case Study on the Implementation of Customer Profitability Analysis. *Hospitality Management* 18, 111-128.
- Pan, C.M., 2005. Market structure and profitability in the international tourist hotel industry. *Tourism Management* 26, 845-850.
- Pearce, J.A., Robbins, D.K., Robinson, R.B., 1987. The Impact of Grand Strategy and Planning Formality on Financial Performance. *Strategic Management Journal* 8, 125-134.
- Pelham, A.M., Wilson, D.T., 1996. A longitudinal study of the impact of Market Structure, Strategy and Market Orientation on Small-Firm Performance. *Journal of the Academy of Marketing Science* 24, 27-44.
- Perrera, S., Harrison, G., Poole, M., 1997. Customer-focused Manufacturing Strategy and the Use of Operations-based Non-financial Performance Measures: A Research Note. *Accounting, Organizations and Society* 22, 557-572.
- Phillips, P., Louvieris, P., 2005. Performance Measurement Systems in Tourism, Hospitality, and Leisure Small Medium-Sized Enterprises: A Balanced Scorecard Perspective. *Journal of Travel Research* 44, 201-211.
- Pine, R. Phillips, P., 2005. Performance Comparisons of Hotels in China. *International Journal of Hospitality Management* 24, 57-73.
- Porter, M., 1980. *Competitive Strategy: Techniques for Analysing Industries and Competitors*. (The Free Press, New York).
- Porter, M., 1985. *Competitive Advantage, Creating and Sustaining Superior Performance*. The Free Press, New York.
- Pugh, D. S., Hickson, D. J., Hinnings, C.R., 1969. The Context of Organization Structures. *Administrative Science Quarterly* 14, 91-114.
- Qianpin, L., 2010. Exploring the Relationship Between Customer-related Measures and Shareholder Value Social Behavior and Personality: An International Journal 38, 647-656.
- Quain, W. J., 1992. Analyzing Sales-Mix Profitability. *The Cornell Hotel Restaurant Administration Quarterly* April, 57-62.
- Reicheld, F.F., 2003. The One Number You Need to Grow. *Harvard Business Review* 81, 46-54.
- Reinartz, W.J., Kumar, V., 2003. The Impact of Customer Relationship Characteristics on Profitable Lifetime Duration. *Journal of Marketing* 67, 77-99.
- Sainaghi, R., 2010. Hotel Performance: State of the Art 22, 920-952.

- Schumacker, R.E., Lomax, R.G., 1996. *A Beginner's Guide to Structural Equation Modeling*. Lawrence Erlbaum Associates, Inc., Hillsdale, New Jersey.
- Shields, J.F., Shields, M.D., 1998. Antecedents of Participative Budgeting. *Accounting, Organizations and Society* 23, 49-76.
- Simons, R., 1990. The Role of Management Control Systems in Creating Competitive Advantage: New Perspectives. *Accounting, Organizations and Society* 15, 127-143.
- Sin, L.Y.M., Tse, A.C.B., Heung, V.C.S., Yim, F.H.K., 2005. An Analysis of the Relationship Between Market Orientation and Business Performance in the Hotel Industry. *International Journal of Hospitality Management* 24, 555-577.
- Sin, L.Y.M., Tse, A.C.B., Chan, H., Heung, V.C.S., Yim, F.H.K., 2006. The effects of relationship marketing orientation on business performance in the hotel industry. *Journal of Hospitality and Tourism Research* 30, 407-421.
- Slater, S.F., Narver, J.C., 1994. Market Orientation, Customer Value and Superior Performance. *Business Horizons* March-April, 22-28.
- Smith, R.E., Wright, W.F., 2004. Determinants of Customer Loyalty and Financial Performance. *Journal of Management Accounting Research* 16, 183-205.
- Tang, C.H., Jang, S.C., 2009. The Tourism-Economy Causality in the United States a Sub-Industry Level Examination. *Tourism Management* 30, 553-558.
- Tymon, W.G., Stout, D.E., Shaw, K.N., 1998. Critical Analysis and Recommendations Regarding the Role of Perceived Environmental Uncertainty in Behavioral Accounting Research. *Behavioral Research in Accounting* 10, 23-46.
- Vandenberg, R.J., Lance, C.E., 2000. A Review and Synthesis of the Measurement Invariance Literature: Suggestions, Practices and recommendations for Organizational Research. *Organizational Research Methods* 2, 4-69.
- Wang, C.H., Chen, K.Y., Chen, S.C., 2011. Total Quality Management, Market Orientation and Hotel Performance: The Moderating Effects of External Environmental Factors. *International Journal of Hospitality Management* 31, 119-129.
- Ward, K., 1992b. *Strategic Management Accounting*. Butterworth-Heinemann Ltd, Oxford UK.
- Wayland, R.E., Cole, P.M., 1994. Turn Customer Service into Customer Profitability. *Management Review* 83, 22-24.
- Weick, K., 1969. *The Social Psychology of Organizing*. McGraw Hill, New York.
- Young, T.R., 1991. Chaos and Social Change: Metaphysics of the Postmodern. *Social Science Journal*, 28 289-306.
- Zahra, A., Ryan, C., 2007. From Chaos to Cohesion – Complexity in Tourism Structures: An Analysis of New Zealand's Regional Tourism Organizations. *Tourism Management* 28, 854-862.