Management accounting practices in the Greek hospitality industry

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Abstract

Purpose – The purpose of this paper is to report the level of adoption and the benefits derived from traditional and contemporary management accounting practices in the Greek hospitality industry.

Design/methodology/approach – An empirical survey via questionnaires was conducted on a sample of 85 leading hotels in Greece. Descriptive statistics on the adoption level, the relative benefits and future emphasis of individual practices provide the basis for discussion.

Findings – The adoption rates for many recently developed practices were very satisfactory. Overall, traditional management accounting techniques (e.g. budgeting practices, profitability measures, product profitability analysis, customer profitability analysis absorption costing, and nonfinancial measures for performance evaluation) were found to be more widely adopted than recently developed tools. It is concluded that traditional management accounting is very much alive and well. Many hotels intended to place greater emphasis on more recently developed techniques in the future, particularly activity based costing techniques (activity based costing, activity based budgeting, and activity based management), balanced scorecard and benchmarking.

Research limitations/implications – The study, examined a large array of items since, as with all surveys, it is possible that respondents may have misinterpreted some elements. Second, the findings of this study should be interpreted bearing in mind that the survey included the largest Greek hotels and not the general population of hotel enterprises. Finally, this research was limited to the Greek hotel sector.

Originality/value – The survey provides a unique detailed examination of the management accounting practices and an indication of future trends.

Keywords Management accounting, Hotels, Greece

Paper type Research paper

Introduction

In recent years, the increasing level of global competition has intensified the challenges for managers and many experts have warned that if management accounting is to maintain its relevance, it needs to adapt to meet the changing needs of managers. In response to these concerns, a range of new management accounting techniques has emerged (Chenhall and Smith, 1998a).

Traditional management accounting techniques, such as absorption costing, standard costing, traditional budgets, CVP analysis and profit-based performance measures, focus on concerns internal to the organization. The more recent management accounting tools, such as activity based costing (ABC, BSC), target costing, value chain analysis and benchmarking have affected the whole process of management accounting (planning, controlling, decision making, and performance evaluation) and have shifted its focus from a "simple" or "naive" role of cost determination and financial control, to a "sophisticated" role of creating value through improved deployment of resources (Kaplan and Atkinson, 1998; Otley, 1995; Haldma and Laats, 2002). Briedley *et al.* (2001) argue that "[g]iven that notions such as "current practice" and "current state" are situated in time and space there is a continuous need for empirical studies to keep track of developments ... and compare the [current] results ... with prior research ..."

Managerial Auditing Journal
Vol. 24 No. 1, 2009
pp. 81-98

0268-6902
DOI 10.1108/02686900910919910

Very little is yet known about management accounting in tourism enterprises and especially in hotels (Pellinen, 2003). Research in management accounting has traditionally focused on accounting systems of large manufacturing companies. In addition, most accounting researchers interested in service production have conducted their research in nonprofit, public sector organizations (Olson *et al.*, 1998). There is no question about the importance of the above mentioned surveys in accounting, but the number of studies on cost and management accounting of profit-seeking organizations other than auditing firms has remained very limited (Brignall *et al.*, 1991; Sharma, 2002). Interestingly, however, there is an active interest in hospitality management and more specifically there is a lot of research in cost and management accounting practices of hotels and tourism enterprises (Harris and Brown, 1998). Potter and Schmidgall (1999) state that little innovation has occurred in hospitality cost and management accounting practices and there are many issues that deserve research attention.

The aim of this paper is to report the adoption rate and the benefits derived from traditional and contemporary management accounting practices in the hospitality industry. The findings of this study are compared to earlier management accounting practices in the lodging industry.

The Greek lodging industry provides the context for this research. Tourism is one of Greece's three biggest industries, along with construction and shipping. The Greek tourism sector is a growth market and represents 18 per cent of the country's GDP, with annual arrivals projected at 20 million by 2010. The contribution of the tourism economy to employment is expected to rise from 963,000 jobs in 2008, 20.9 per cent of total employment, to 1,349,000 jobs, or 21.9 per cent of total employment, by 2018. Greece ranks in the top 15 destinations worldwide.

The remainder of the paper is organized as follows. The next section briefly sets out the current research in management accounting practices in the lodging industry. This is followed by details of the research method. The fourth section contains a discussion of the survey results. Conclusions, limitations and implications for future research are presented in a final section.

Literature review

Studies in cost and management accounting applied in the lodging industry have been conducted both in the fields of tourism management and accounting. They cover various aspects of the tourism industry. However, most of the studies have focused on hotels (Harris and Brown, 1998).

As far as hotels are concerned, there are studies on cost structures and cost systems. Brignall (1997) concludes that most hotels have a high proportion of fixed cost with approximately three-quarters of the total cost of a hotel being fixed and uncontrollable. Fay *et al.* (1976) showed the possible use of traditional costing systems in the hospitality services industry. Dunn and Brooks (1990) and Noone and Griffin (1997; 1999) document the implementation of customer profitability analysis (CPA) using (ABC). However, the use of ABC in the hotel industry is limited according to an informal survey by Graham (quoted in Tai, 2000).

Schmidgall and Ninemeier (1987) studied operations budgeting practices in hotels chains in US and focused on coordination and control The chains surveyed included the 47 largest lodging chains in the US. They determined that the majority of the hotels used a bottom up approach to budgeting and also reported on variance tolerations. Moreover, Schmidgall *et al.* (1996) compared operations budgeting practices of lodging firms in the US with those in Scandinavia. A majority of hotel chains in both the US and Scandinavia use a bottom-up approach to budgeting. Reasons are reported for varying approaches. Budget revision approaches are reported, the point at which the revision starts, and what management level is responsible. Finally, budgetary control is studied including the different levels of variance toleration for various expenses. Lodging firms in the US have lower tolerance levels over food and beverage costs than their Scandinavian counterparts, while the reverse appears to be the case for other costs.

Pellinen (2003) reports on a field study of pricing practices and their relationship to cost accounting in tourism enterprises located in Finnish Lapland. The results of the study suggest that only the companies with the strongest competitive position are able to use absorption pricing. Furthermore, as the majority of the studied enterprises use the prices set by the leading enterprises, the actual importance of cost accounting is rather limited.

Haktanir and Harris (2005) explore performance measurement practices in the context of an independent hotel in Cyprus. The findings indicated six main themes, which are grouped under business dynamics and overall performance, employee performance, customer satisfaction, financial performance, and innovative activities performance measures. However, Atkinson and Brander Brown (2001) found that UK hotels are still focusing on traditional performance measures. This evidence suggests that although they appear to monitor performance in great detail, with few notable exceptions UK hotels do appear to emphasize only traditional measures.

Collier and Gregory (1995), explore the use made of strategic management accounting in the hotel sector through case studies at six major UK hotel groups. The results demonstrate that the accounting function in hotel groups is becoming increasingly involved in strategic management accounting, both in planning and in *ad hoc* exercises on the market conditions and competitor analysis. The widespread adoption of strategic management accounting is consistent with the open and relatively homogeneous nature of the industry and the high degree of competitiveness among the hotel groups in the market.

A significant body of management accounting research has been published in the field of management accounting practices. (Chenhall and Langfield-Smith, 1998a, b; Ghosh and Chan, 1997; Guilding, Lamminmaki and Drury, 1998; Luther and Longden, 2001; Wijewardena and Zoysa, 1999; Mendoza and Bescos, 2001; Yohikawa, 1994; and Drury *et al.* 1993). These studies report on the use and the benefits derived of various management accounting techniques in different countries.

From the literature review, we observe there is little empirical research in management accounting practices in the lodging industry. Our study builds on, and is informed by, the tradition and accumulated findings of such research. However, the work is distinguished from earlier studies in that it looks at a broad set of management accounting practices (budgeting, performance evaluation, cost accounting, decision-making and strategic analysis) in the hospitality industry. Prior research has focused primarily on management accounting tools (e.g. budgeting), which have taken place in a small sample of firms or were case studies. Furthermore, in Greece there is no empirical evidence about the adoption rate and the benefits derived from traditional and contemporary management accounting practices, as there has been in other countries. Thus, this study responds to the call for research with “greater understanding of both individual practices and macroscopic relationships among practices . . . we found very little of the latter in the extant literature" (Anderson and Lanen, 1999).

Research methodology

Sample characteristics and data collection

A survey was organised covering 146 leading Greek hotel enterprises, according to their sales revenues as well as their net profit, selected from the ICAP's Directory 2003 (Gallup's subsidiary in Greece). Pilot tests were undertaken with a group of managers and management accountants to refine the design and focus of the survey. More specifically, interviews were conducted with six chief accountants who had long experience in cost and management accounting practices, in order to make sure that the questionnaires content was easy to understand. Three of the accountants have had long experience in a hospitality accounting environment. Through this testing, we managed to account for omissions or vagueness in the expressions used to formulate the questions.

In the survey, respondents were asked to indicate whether their business has adopted each management accounting practice and then for those having adopted them, to list the benefits gained over the past three years. Respondents were also asked to rank the degree of emphasis that their business would give to each practice over the next three years.

A covering letter explained the purpose of the study and assured the confidentiality of the information provided. The questionnaire was accompanied with one glossary that explained the terminology of the management accounting tools. A reminder letter was posted three weeks after the initial mail-out. The two mailing efforts resulted in 85 usable responses or a response rate of 58 per cent. Demographic data of the business was obtained and is summarized in Table I. Controls were put in place to avoid the same respondents answering the survey twice. To examine for non-response bias, the responses from the first 20 per cent of returns and those from the last 20 per cent (which included mainly respondents to the second mailing) were compared, to test if responses differed between the two groups. Levels of significance were determined for each item using *t*-tests. No differences were identified, providing some support for the absence of non-responses bias.

The questionnaires were answered by 72 per cent by executives in the financial departments (financial managers) that have firm knowledge of the cost and management accounting information provided and used within their companies. Thus, we believe that the answers are reliable.

Variable measurement

The 30 management accounting practices were classified in five groups according to Abdel-Kader and Luther (2006). These are: cost accounting, budgeting, performance evaluation, decision making and strategic analysis.

Cost accounting

The adoption of cost accounting practices was measured using an instrument developed on this study and based on the literature (Zimmerman, 2000; Garrison. and Noreen, 2003; Bjornenak and Mitchell, 1999; Bjornenak, 1997; Drury *et al.*, 1993; and Lucas, 1997). It comprises four item binary (dichotomous) variables. Past benefits and future emphasis of cost accounting tools were measured with a four item five-point

	N	Per cent
Categories		
5-stars	30	35.3
4-stars	48	56.5
3-stars	7	8.2
Geographical area		
Athens	17	20
Crete	24	28.2
Aegean islands	22	25.9
Ionian islands	12	14.1
Macedonia	6	7.1
Other	4	4.7
No of beds		
Up to 300	6	7.1
300-350	4	4.7
350-500	20	23.5
Over 200	55	64.7
Company management status		
Private company	43	50.6
Member of national chain	27	31.8
Member of multinational chain	15	17.6
Type of hotel		
Resort	34	40
City hotel	51	60
Position of respondent		
Financial manager	72	84.7
General manager	13	15.3
Sales revenue for the year 2005 (€)	Mean	9.848.293
	SD	12.251.470
	Min	3.299.426
	Max	99.576.510

Table I. Demographic data of hotels that participated in the survey

Likert-scaled instrument adopted from Chenhall and Smith (1998a). The scales used to assess benefits were anchored at, no benefit (score 1) to high benefit (score 5) and future emphasis anchored at, no emphasis (score 1) to high emphasis (score 5).

Budgeting

The adoption of budgeting practices was measured using an instrument developed on this study and based on the literature (Hansen and Mowen, 2002; Hilton, 2002; Atkinson *et al.*, 2001; Drury, 2000; and Horngren *et al.*, 2002). It comprises eight item binary (dichotomous) variables. Past benefits and future emphasis on budgeting tools was measured with an eight item five-point Likert-scaled instrument adopted from Chenhall and Smith (1998a). The scales used to assess benefits were anchored at no benefit (score 1) to high benefit (score 5) and future emphasis anchored at, no emphasis (score 1) to high emphasis (score 5).

Performance evaluation

The adoption of performance evaluation techniques was measured using an instrument developed on this study and based on the literature (Ittner *et al.*, 1997; Kaplan and Norton, 1996; Shields, 1997; Kaplan and Norton, 1996; Elnathan *et al.*, 1996; and McNair and Leibfried, 1992). It comprises ten item binary variables. Past benefits and future emphasis of budgeting tools were measured with a ten item five-point Likert-scaled instrument adopted from Chenhall and Smith (1998a). The scales used to assess benefits were anchored at no benefit (score 1) to high benefit (score 5) and future emphasis anchored at no emphasis (score 1) to high emphasis (score 5).

Information for decision-making

The adoption of management accounting techniques for short-term decision-making was measured using an instrument based on the literature (Drury, 2000; Hansen and Mowen, 2002; Hilton, 2002; Needls and Crosson, 2002). It comprises three item binary variables. Past benefits and future emphasis of management accounting techniques for short-term decision-making was measured with a three item five-point Likert-scaled instrument adopted from Chenhall and Smith (1998a). The scales used to assess benefits were anchored at no benefit (score 1) to high benefit (score 5) and future emphasis anchored at, no emphasis (score 1) to high emphasis (score 5).

Strategic analysis

The adoption of strategic management accounting techniques was measured using an instrument identified by Guilding *et al.* (2000) and used by Abdel-Kader and Luther (2006). It comprises a five item binary variables. Past benefits and future emphasis of management accounting techniques for short-term decision-making was measured with a five item five-point Likert-scaled instrument adopted from Chenhall and Smith (1998a). The scales used to assess benefits were anchored at no benefit (score 1) to high benefit (score 5) and future emphasis anchored at, no emphasis (score 1) to high emphasis (score 5).

Findings

In Table II, each management accounting practice is ranked in order of the percentage of respondents who indicated their business has adopted their practice. The left portion of Table III, lists items in order of the average benefit derived from using each practice during the past three years, while the right-hand section details the future emphasis. To assist further discussion, the items listed in Table III are in three groups:

(1) high benefit;
(2) moderate benefit; and
(3) low benefit.

based on the ranking of past benefit. The classification scheme is not meant to imply that benefits are either high or low in any absolute sense.

Cost accounting

The findings of the current study, show that the majority (56 per cent) of Greek hotel enterprises use absorption costing, while 37 companies use variable costing. Standard costing has been reported only by a few of the respondents (20 per cent). A contemporary management accounting tool, ABC costing (23.5 per cent), are not particularly used by the Greek hotel sector (Table II). The importance of these methods is examined using the reported benefits received from these techniques. The data reported in Table III indicate that relatively high and moderate benefits are derived

	N	Per cent	Rank
Panel A: cost accounting			
Absorption costing	56	65.9	7
Variable costing	37	43.5	15
Activity based costing (ABC)	20	23.5	23
Standard costing	17	20.0	27
Panel B: budgeting			
Budgeting for planning annual operations	84	98.8	2
Budgeting for controlling cost	78	91.8	4
Budgeting for coordinating activities of the various parts of the organization	68	80.0	5
Budgeting for evaluating the performance of managers	55	64.7	8
Zero budgeting	42	49.4	10
Budgeting for long terms (strategic) plans	19	22.4	24
Flexible budgeting	13	15.3	29
Activity based budgeting (ABB)	12	14.1	30
Panel C: performance evaluation			
Profitability measures (operating profit and revenue growth)	85	100	1
Nonfinancial measures related to customers	54	63.5	9
Nonfinancial measures related to innovations	40	47.1	12
Nonfinancial measures related to employees	39	45.9	13
ROI	25	29.4	18
Residual income	26	30.6	17
EVA	24	28.2	19
Return on sales	22	25.9	21
Balanced scorecard	18	21.2	25
Benchmarking	16	18.8	28
Panel D: Information for decision-making			
Product profitability analysis	80	94.1	3
Customer profitability analysis	60	70.6	6
CVP analysis	36	42.3	16
Panel E: strategic analysis			
Industry analysis	41	48.2	11
Analysis of competitors' strengths and weaknesses	38	44.7	14
Analysis of competitive position	23	27.1	20
Long range forecasting	21	24.7	22
ABM	18	21.2	25

Table II. Relative adoption of management accounting practices

from absorption costing (ranked 7th) and variable costing (ranked 14th), rather than ABC (ranked 24th) and standard costing (ranked 27th).

Budgeting

In our survey, the data presented in Table II indicates that four traditional planning techniques were identified as relatively highly adopted. Moreover, the majority of the Greek hotels use budgets for planning annual operations (98.8 per cent), controlling cost (91.8 per cent), coordinating activities of the various parts of the organization (80 per cent), and evaluating the performance of managers (64.7 per cent). A rather significant proportion uses zero budgets (49.4 per cent). Strategic plans developed with budgets were moderately adapted (22.4 per cent) while results on ABB (14.1 per cent) and flexible budgeting (15.3 per cent) reveal low adoption rates.

	Relative benefits (past three years)			Relative future emphasis (next three years)		
	Mean	SD	Rank	Mean	SD	Rank
High benefit						
Budgeting for planning annual operations	4.65	0.65	1	4.72	0.89	1
Profitability measures (operating profit and revenue growth)	4.58	0.87	2	4.70	0.91	2
Budgeting for controlling cost	4.53	1.01	3	4.68	1.21	3
Product profitability analysis	4.50	1.11	4	4.65	1.09	5
Budgeting for coordinating activities of the various parts of the organization	4.39	1.35	5	4.67	0.98	4
Customer profitability analysis	4.36	1.46	6	4.63	1.26	6
Absorption costing	4.34	1.58	7	3.94	1.38	28
Nonfinancial measures related to customers	4.32	1.43	8	4.58	1.24	8
Budgeting for evaluating the performance of managers	4.31	1.57	9	3.97	1.46	27
Moderate benefit						
Industry analysis	4.19	1.51	10	4.54	1.12	9
Zero budgeting	4.18	1.38	11	4.44	1.24	12
Nonfinancial measures related to innovations	4.16	1.00	12	4.52	1.13	10
Nonfinancial measures related to employees	4.15	1.11	13	4.48	1.16	11
Variable costing	4.13	1.22	14	4.33	0.99	16
Analysis of competitors' strengths and weaknesses	4.11	1.31	15	4.61	0.85	7
CVP analysis	4.10	1.41	16	4.27	1.14	18
ROI	4.01	1.15	17	4.15	0.85	21
Residual income	3.99	0.98	18	4.12	0.78	22
Analysis of competitive position	3.97	1.01	19	4.18	1.17	20
EVA	3.96	0.93	20	4.09	1.24	23
Long range forecasting	3.94	1.01	21	4.07	0.87	24
Budgeting for long terms (strategic) plans	3.92	1.02	22	4.04	0.96	25
Return on sales	3.91	1.00	23	4.01	0.86	26
Low benefit						
Activity based costing (ABC)	3.76	1.01	24	4.40	1.15	13
ABM	3.75	1.02	25	4.38	1.07	14
Balanced scorecard	3.74	0.83	26	4.35	0.96	15
Standard costing	3.71	0.98	27	3.64	0.98	30
Benchmarking	3.69	1.06	28	4.30	1.15	17
Activity based budgeting (ABB)	3.69	0.81	29	4.20	1.17	19
Flexible budgeting	3.65	0.76	30	3.89	0.81	29

Table III.
Past benefits and future emphasis of management accounting practices

Regarding reported benefits in our survey, budgeting for planning annual operations was ranked 1st, controlling cost was ranked 3rd followed by coordinating activities (ranked 5th), and evaluating the performance of managers (ranked 9). Relatively moderate benefits were reported to be derived from strategic plans (ranked 22th) and low benefits for ABB (ranked 29th) and flexible budgeting (ranked 30th). These findings suggest that traditional budgeting practices seem to provide higher benefits, rather than contemporary budgeting tools.

Performance evaluation

The findings in the current study confirm the importance, in Greek hotels, of financial and nonfinancial measures of performance. Table II indicates relatively high adoption rates for profitability measures (100 per cent) for nonfinancial measures related to customers (63.5 per cent), to innovations (47.1 per cent) and to employees (45.9 per cent). The management tools ROI (29.4 per cent), RI (30.6 per cent), EVA (28.2 per cent) and ROS (25.9 per cent) reveal medium adoption rates. Two contemporary management accounting techniques, benchmarking and BSC seem to be used in relatively lower degree (18,8 per cent and 21,2 per cent, respectively) than other performance evaluation techniques.

Profitability measures (ranked 2nd) and nonfinancial measures related to customers (ranked 8th) were important to most of the firms surveyed. Relatively moderate benefits were reported for nonfinancial measures related to innovations (ranked 12th), related to employees (ranked 13th), for ROI (ranked 17th), RI (ranked 18th), EVA (ranked 20th), and ROS (ranked 23th). However, BSC (ranked 26th) and benchmarking (ranked 28th) provided lower benefits.

Information for decision making

The data presented in Table II indicates that product profitability analysis (94.1 per cent) and CPA (70.6 per cent) were identified as relatively highly adopted. The benefits from these techniques are also in the relatively high category (Table III). Thirty six (42.3 per cent) hotels in the survey used cost – volume profit analysis. Respondents rank this tool in the moderate category of benefits (ranked 16th).

Strategic analysis

The evidence from the current study reveals the adoption of industry analysis (48.2 per cent), the analysis of competitors' strengths and weaknesses (44.7 per cent), analysis of competitive position (27.1 per cent) and long range forecasting (24.7 per cent), as relatively moderate. These items were found to provide relatively moderate benefits (ranked 10th, 15th, 19th and 21st, respectively). However, the survey findings identified some recently developed techniques as of relatively low adoption and benefit. The adoption rate of activity based management (ABM) was 21.2 per cent. That tool found to provide low benefits (ranked 25th).

Future emphasis on management accounting practices

To provide an indication of future directions, the survey investigated the emphasis that firms intended to place on each management accounting practice over the next three years. The intended future emphasis for all items is provided on the right-hand side of Table III.

Respondents saw traditional planning techniques to be important in the future. The importance of budgeting for planning annual operation, which received the highest rank for benefits received, was affirmed by its high future emphasis (ranked 1st). Financial measures will continue to be important over the next three years. For example, the importance of budgeting for controlling cost (ranked 3rd) profitability measures (ranked 2nd), product profitability analysis (ranked 5th), and customers profitability analysis (ranked 6th) were the ranking for past benefits. The future emphasis on budgets for coordinating activities of the various parts of the organization had high ranking as for past benefits (ranked 4th). Nonfinancial measures related to customers (ranked 8th), to employees (ranked 11th) and to innovation (ranked 10th) had similar ranking for past benefits (ranked 8th, 13th and 12th).

Respondents indicated that variable costing, cost – volume profit analysis, industry analysis, zero budgeting, budgeting for strategic plans and traditional financial measures (return on investment residual income, EVA and return on sales) will have similar moderate benefits in the future. Flexible budgeting will continue to be in the "low benefit" category.

Table III lists those management accounting techniques that have at least a six-point difference in ranking between the past and future emphasis at a significant level $p \leq 0.15$ (the probability that the observed differences in ranking are not due to random factors was investigated by determining the significance of the difference in the Z score related to past and future emphasis). This highlights those management accounting practices where the degree of emphasis is expected to change.

The areas where respondents indicated they would place relatively greater future emphasis were (ABC, ABM, ABB, and BSC), benchmarking and analysis of competitors' strengths and weaknesses. Areas that were to be given less emphasis in the future included traditional technique of absorption costing Additionally, using budgets for evaluating the performance of managers was reported to be less important in the future.

Are there any statistically significant differences between management accounting techniques adopters and no adopters?

To explain the diversity of management accounting practices researchers have adopted contingency theory to demonstrate how specific aspects of an accounting system are associated with various contextual variables such as size, competition and cost structure (Emmanuel *et al.*, 1990).

Another issue we examined was the extent to which management accounting tools adopters are different from non-adopters. This means that we tried to find whether hotels that adopt each management accounting practice have any characteristics that distinguish them from companies that do not adopt them. More specifically, we looked into a number of variables such as companies' cost structure (indirect cost to total (per cent), hotel size (measured in terms of sales revenue), level of competition (hotels were asked to indicate the price competition that face their company) and the demographic variables of the study (category, geographical area, number of beds, type of hotel, company management status, position of respondent).

According to our data, there are statistically significant differences in cost structure, the level of competition as well as sales revenue, between ABC adopters and non-adopters, ABB 8adopters and non-adopters, ABM adopters and non-adopters, Benchmarking adopters and non-adopters and BSC adopters and non-adopters (Tables IV and V). Hotels that use ABC techniques (ABC, ABM, ABB), benchmarking and BSC have a higher percentage of indirect cost, higher sales revenue, and face higher price competition than those that do not use these management accounting tools.

Moreover, the analysis of the data did not verify that there are other statistically significant differences according to the adoption or not of the rest management accounting tools, as far as it concerns the demographic data, the position of respondents and contingent factors (size, cost structure and level of competition).

Are there any statistically significant differences between the future emphasis on management accounting practice, demographic data and contingent factors?

Furthermore, the data was examined for statistically significant differences, among the hotels that are going to pay more future emphasis compared with those that are going

Table IV. Differences between ABC techniques, benchmarking and BSC adopters and non-adopters

			Mean difference	t-value	Sig.
	ABC				
	ABC non-adopters mean value ($N = 65$)	ABC adopters mean value ($N = 20$)			
Sales revenue 2005 (€ mil)	7.31	13.06	4.68	2.033	0.047
Indirect cost to total (per cent)	44.35	55.30	10.95	7.837	0.001
Level of competition	4.89	5.70	0.81	3.723	0.001
	ABB				
	ABB non-adopters mean value ($N = 73$)	ABB adopters mean value ($N = 12$)			
Sales revenue 2005 (€ mil)	9.06	15.49	6.43	2.718	0.011
Indirect cost to total (per cent)	45.32	56.75	11.43	7.860	0.001
Level of competition	5.00	5.58	0.58	2.262	0.037
	ABM				
	ABM non-adopters mean value ($N = 67$)	ABM adopters mean value ($N = 18$)			
Sales revenue 2005 (€ mil)	8.71	14.64	−5.93	−2.628	0.011
Indirect cost to total (per cent)	44.37	56.44	−12.07	−9.976	0.001
Level of competition	4.91	5.72	−0.81	−3.550	0.002
	Benchmarking				
	Benchmarking non-adopters mean value ($N = 67$)	Benchmarking adopters mean value ($N = 18$)			
Sales revenue 2005 (€ mil)	8.79	12.72	−6.23	−2.656	0.010
Indirect cost to total (per cent)	44.61	56.94	−12.33	−10.054	0.000
Level of competition	4.96	5.63	−0.67	−2.843	0.008
	Balance scorecard				
	BSC non-adopters mean value ($N = 65$)	BSC adopters mean value ($N = 20$)			
Sales revenue 2005 (€ mil)	8.73	14.61	−5.93	−2.628	0.011
Indirect cost to total (per cent)	44.37	56.44	−12.07	−0.976	0.001
Level of competition	4.91	5.72	−0.81	−3.550	0.002

Note: The scale of the level of competition is one, totally disagree; seven, totally agree; in which respondents were asked to indicate the price competition that face their company

Table V. Differences between the level of competition and the future emphasis on ABC techniques and BSC

			Mean difference	*t*-value	Sig.
		ABC			
	ABC less emphasis mean value ($N = 47$)	ABC more emphasis mean value ($N = 38$)			
Level of competition	4.94	5.68	−0.75	−3.108	0.003
		ABB			
	ABB less emphasis mean value ($N = 48$)	ABC more emphasis mean value ($N = 37$)			
Level of competition	4.93	5.70	0.77	3.178	0.002
		ABM			
	ABM less emphasis mean value ($N = 52$)	ABM more emphasis mean value ($N = 33$)			
Level of competition	4.90	5.85	−0.94	−3.826	0.001
		Balance scorecard			
	BSC less emphasis mean value ($N = 45$)	BSC more emphasis mean value ($N = 40$)			
Level of competition	5.00	5.62	−0.62	−2.530	0.013

Note: The scale of the level of competition is one, totally disagree; seven, totally agree; in which respondents were asked to indicate the price competition that face their company to pay no or less emphasis for the next three years in all management accounting practices that the study concluded. These were examined in terms of the demographic data and the contingent variables, which were introduced above (in the former paragraph). Hotels are classified in two groups based on the answers that they gave in relation to the future emphasis that they are expected to give in every management accounting technique. The cut off point was the medium of each variable.

The analysis of the data reveals that hotels intending to give more emphasis in the ABC techniques (ABC, ABM, ABB) as well as in the BSC for the next three years, state that they face higher price competition compared to those that are going to give lower emphasis in these techniques. This analysis did not show that there are any other statistically significant differences.

Conclusions and discussion

The central aim of this study was to report on the relative adoption and benefits obtained from both traditional and more recently developed management accounting practices in large hotel enterprises in Greece. The analysis of the survey data from 85 leading Greek hotel enterprises indicates that the adoption rates for many recently developed practices are very satisfactory, while overall traditional management accounting techniques were found to be more widely adopted than recently developed tools.

Almost all Greek hotels use traditional budgets for planning annual operations, for controlling cost and for coordinating activities of the various parts of the hotels. Half of the companies that participated in the survey use zero based budgets. These findings are in line with the results of similar surveys (Jones, 1998; De Franco, 1997; Schmidgall *et al.*, 1996). It is argued that zero based budgeting is more accurate and leads to all costs having to be justified and avoids budget allocations purely on the basis that "it was needed in the past, so will be needed in the future".

On the contrary, very few hotels develop flexible budgets. This low use of flexible budgeting is supported by the findings of Collier and Gregory (1995). They believe the this is due to the relatively high fixed cost base of the hotel sector. It is possible there is little to be gained in using flexible budgeting within hotels; the technique is of best use in high variable cost situations. Clearly, this reasoning for the lack of use of flexible budgeting is logical, given the nature of costs, but more research is needed to confirm the situation. Very few hotels develop budgets for strategic plans, a conclusion that confirms the findings of the survey conducted by Schmidgall *et al.* (1996) for the Scandinavian hotel sector, unlike US hotels that prepare budgets for five or more years.

The survey results demonstrate that the majority of hotels use traditional financial measures (profitability measures) for performance evaluation. This conclusion is also in line with the findings of similar surveys by Mia and Patier (2001), Atkinson and Brown (2001) and Haktanir and Harris (2005). Nevertheless, the adoption of traditional nonfinancial measures (related to customers, to innovation, to employees) is considered satisfactory. We ascertain that while the traditional financial measures continue to have a significant position for performance evaluation, hotels are starting to use nonfinancial measures, as noted in previous research.

Two of ten hotels in Greece have adopted the balanced scorecard and benchmarking. When balance scorecard and benchmarking were cross-tabulated, we found that the majority of hotels that have adopted BSC use benchmarking. Dugdale and Lyne (2004) noted that whilst the importance of the BSC had increased over the last five years, the importance of benchmarking had also increased over the same period, identifying approaches such as BSC being used "in addition to" balance benchmarking.

Another important finding of our research is that traditional absorption costing is the most used cost accounting technique followed by variable costing, which use is statistically significant related to the use of CVP analysis that has been adopted by less than half hotels of our survey. The high rate of traditional absorption costing can be justified by the fact that this method is required by Greek legislation for the preparation of the annual published financial statements. Variable costing is mainly used for short-term decision-making. Hotels use standard cost accounting less frequently than other cost accounting techniques, confirming the Brignall (1997) findings that standard cost accounting is more appropriate for manufacturing industries.

The use of ABC in the hospitality industry in Greece is considered very satisfactory. This research reports higher adoption rates than presented in previous studies in the lodging industry (Tai, 2000). Our findings confirm the increasing pace of ABC adoption in Greece in recent years (Cohen *et al.*, 2005). When the use of ABC was cross-tabulated, we found that the majority of hotels that have adopted ABC use (CPA). This conclusion confirms the findings that appear in the literature (Noone and Griffin, 1997; 1999; Dunn and Brooks, 1990). We conclude the same results when ABC and ABB where cross-tabulated. It may be that hotels start implementing ABC and then use the activities analysis performed during ABC implementation to prepare their budgets.

Strategic management accounting tools have a less adoption rate than the other cost accounting techniques. However, industry analysis and analysis of competitors' strengths and weaknesses were used more than the recently developed strategic management accounting practices (e.g. ABM). These practices reflect the increased competitive and regulatory pressures faced by hotels. The widespread adoption of strategic management accounting is consistent with the open and relatively homogeneous nature of the hotel industry and the high degree of competitiveness among the hotel groups in the market. These findings do not oppose those of the Collier and Gregory (1995) survey, which concluded that strategic management accounting is being increasingly used in UK hotel groups.

The survey results demonstrate that hotels which have adopted more recent management accounting practices, such as activity based costing techniques (ABC, ABB, ABM, BSC) and benchmarking, face a higher percentage of indirect costs, higher sales revenue, and higher price competition than those that do not adopt them. This conclusion confirms the findings that appear in the management accounting literature, that size, level of competition and cost structure distinguish ABC adopters and non-adopters (Bjornenak,1997) and BSC adopters and non-adopters (Hoque and James, 2000). Hoque and James (2000) found that that there is a positive relationship between size of the organisation and BSC usage. Thus, the bigger the company, the more practical it is to use BSC to support their strategic decision-making.

Based on our findings, many hotels intended to place greater emphasis on these newer techniques in the future, particularly in activity based costing techniques (ABC, ABB, and ABM). The results of the survey showed that hotels face a high proportion of indirect costs. This may be a reason why hotels are giving lower emphasis in traditional costing systems and more emphasis on the ABC systems that provide information which can be used effectively for the decision-making, budgeting and performance evaluation. Moreover, hotels intend to place greater emphasis on BSC and benchmarking. It has been suggested that the use of the BSC leads to improved financial performance compared to traditional financial performance measures (Davis and Albright, 2004). On the contrary, traditional management accounting tools, such as absorption costing and budgeting for evaluating the performance of managers are to be given limited emphasis in the future. The trend is consistent with commentators who have predicted a decreasing use of traditional techniques (Johnson, 1992; Kaplan, 1994).

Another important finding is hotels that are planning to pay more attention to recently developed management accounting tools in the future, such as activity based costing techniques (ABC, ABB, ABM) and BSC, face a higher level of competition compared to the hotels facing less competition. This conclusion is also in line with Khandwalla (1972) and Mia and Clarke (1999), who report that output market competition is associated with greater use of management controls and more recently developed management accounting practices.

Several limitations of this study should be mentioned. First, the study examined a large array of items and as with all surveys, it is possible that respondents may have misinterpreted some items. This probability is considered limited as care was taken to ensure that the questionnaires were answered by individuals with knowledge of the hotel's accounting and management practices. Secondly, as the sample selected was not random, the findings of this study should be interpreted as relating to the largest hotels, not to the general population of hotel enterprises. Since, size may be associated with the availability of resources to experiment with new accounting techniques, it is likely that the sample included a greater proportion of hotels employing new management accounting practices than the total population of hotels. Finally, in this survey, current practices regarding capital investment decisions were not examined.

The study, contributes to current knowledge in cost and management accounting practices in the hospitality industry and also in cost and management accounting practices in Greece. In future, the findings of this survey could be compared to management accounting practices in the lodging industry in other countries. Future studies should examine specific factors as to why hotels are not adopting newly developed management accounting tools. The relatively limited benefits associated with new management accounting techniques raises the question of the conditions necessary to effective implement these tools. Finally, the dependence between traditional and new management accounting techniques needs further investigation.

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