

The Use of Decision Making Information: A Comparative Exploratory Study of Slovene Hotels

Gordana Ivankovič
Mateja Jerman

The paper aims to identify the use of decision making information, which will be provided by the management accounting system (MAS). The use of MAS information by general managers (GMS) and department managers (DMS) for measuring the performance of hotel enterprises will be investigated. The basis for the analysis is the contingency theory which was adapted to specific circumstances and conditions of the hotel industry. The analysis was performed on the basis of a questionnaire that was previously already used in the case of Australian hotels. The research is conducted on Slovene hotels that have more than 100 rooms. The results are the subject of comparison with the previous five year period. The results demonstrate that GMS actually differ from DMS with respect to their use of MAS information for making decisions. GMS and DMS do not use MAS information with the same frequency. Their satisfaction with MAS information is not equal and, furthermore, they do not use the financial and non-financial performance indicators with the same frequency.

Key Words: decision making information, management accounting system, hotel industry

JEL Classification: M41, M21

Introduction

Concerning the fierce economic conditions, the right decisions that have to be taken on the basis of 'proper' information have never been so important. Information needed for decision making belongs to the domain of the management accounting system (MAS), which has to be appropriately developed and organized. Undoubtedly in the hotel industry MAS differs substantially. Hotel enterprises have unique characteristics

Dr Gordana Ivankovič is an Assistant Professor at the Faculty of Tourism Studies Portorož, University of Primorska, Slovenia.

Mateja Jerman is an Assistant at the Faculty of Management Koper, University of Primorska, Slovenia.

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of their operations, as they bring together many activities that are essential for guest satisfaction. Corresponding particularities are, according to several authors (Medlik 1961; Kotas 1975; Jones and Lockwood 1998; Harris 1992): fixed facilities, direct contact with a guest, volatile customer demand, the level of supply, diversifications, effective operational time, service and consumption, the location, critical human factor, capital intensity and the cost structure. These characteristics strongly differ from the manufacturing industry.

The results of recent research (Mia and Clarke 1999) proved that a positive association between managers' use of MAS information and performance in the manufacturing industry can be identified. On the other hand, similar empirical studies of such a relationship in the hotel industry are lacking. One of these rare studies was performed on Australian hotel enterprises (Mia and Patiar 2001). Their instrument of research was used for the purposes of our research. It was adapted to the specific circumstances of the Slovene hotel industry.

The characteristics of accounting theory in the hotel industry have already been specified by American authors and further tested mainly by American, Britain, Scandinavian and Australian researchers (Geller 1984; Brander Brown and Atkinson 2001; Collier and Gregory 1995).

Recently some efforts were recorded also in Japan, Eastern Europe, Turkey and Greece. But still no one has attempted to upgrade the established standards USALI (System of Accounts for the Lodging Industry) with supplementary non-financial measures and more high-quality measures.

Slovene hotels unfortunately still do not monitor their performance on the basis of USALI, which provides a base for detecting the existing state of performance and moreover renders possible a comparative analysis with international competitors. A step forward towards more efficient strategies and a greater income growth was supported also by ISO (International Organization for Standardization) standards, which are focused not only on financial results, but also on factors that affect the growth. Unfortunately in Slovenia there are still no organized and continuous activities to attain a methodical unity for recording and monitoring the economic categories in the Slovene hotel industry, and to achieve a base for international comparison with entities that report in accordance with USALI. The importance of USALI as internationally comparable standards for the hotel industry was accentuated also by Jankovič (2005).

Development of the Management Accounting System (MAS) in Hotel Enterprises

Typical for the business environment in the hotel industry is a high competitiveness. The latter requires that management continuously adjusts to guests needs that are essential for the good performance of an individual hotel. Many authors emphasise that the hotel industry still does not have a properly developed MAS (Phillips 1999; Mia and Patiar 2001; Banker, Potter, and Srinivasan 2000; Brander-Brown and McDonnell 1995; Kavčič and Ivankovič 2006) that could provide useful information for decision making. A developed MAS is useful in meeting the needs of guests and furthermore in achieving the business objectives (Damonte et al. 1997). Chenhall and Morris (1986), and moreover Mia and Chenhall (1994), state that information of the MAS is required for high-quality decisions and for utilization of comparative advantages (Downie 1997). That is why MAS has to provide information required for management decision taking (Dent 1996; Govindarajan 1984; Mia and Chenhall 1994; Simons 1990). Harris and Brander-Brown (1998) indicate three specific reasons that render it impossible for the MAS researches from the production industry to be applied in the hotel industry:

- the production process can be repeated, as it is consistent with standards and mechanical processes. The extent of food, beverage, and guest accommodations in hotels, on the other hand, depends upon the interaction with guests, which leads to a high variety of operations in the hotel enterprises. A great diversity between guests leads to a variety demand and consequently to great uncertainty in the work environment,
- the quality of personal services for individual guests and the preparation and implementation of services in hotels depends mostly on their employees. Consequently, management in hotels has to control principally the quality of services. On the other hand, the work in production is mechanized and subject to technical quality control,
- the products and services of a single hotel are prompt and nonmaterial. They depend principally on the demand variability. The hotel's services, delivery and consumption are contemporaneous. If the hotel room or the table in the restaurant is not sold daily, the potential for selling it is lost forever. On the other hand, the goods produced can be entered into storage and sold subsequently. Simultaneous

production, delivery and consumption in hotels enables corrective actions. That is why the work of management in hotel enterprises is more integrated, as is reflected also in the higher level of work uncertainty.

Mia (1993) demonstrated a positive relation between the extent of MAS information used by management and the work uncertainty. In more uncertain work circumstances managers use a greater extent of MAS information.

For long-term effective and efficient performance, especially in hotel enterprises, the information related to service quality, introduction of additional supply, entrance on new markets, the maintenance of equipment and the human relations are vital. The development of an adequate MAS has to be primarily grounded on business objectives and business strategies. In continuation, crucial variables (to achieve the goals) have to be identified, i. e. critical success factors (CSF).

Geller (1985a; 1985b; 1985c) was the first to analyze CSF in the hotel industry. On the basis of his findings he additionally formatted MAS for hotels. A performance measurement model of goal-oriented CSF for the hotel industry was evaluated also by Ivankovič (2004). Brotherton and Shaw (1996) linked together CSFs that have to be action-oriented, measurable and manageable with key performance indicators (KPI) and critical performance measures. Furthermore they evidenced the connection between three elements: objectives, CSF and KPI that were in addition a base for a three-dimension model. Croston (1995) on the other hand studied the impact of CSFs on financial performance (as the monetary indicator, gross operating profit per available room was used). He compared 10 hotels in European capitals that were similar in size and quality. Many authors including Geller (1985a; 1985b; 1985c) and Jones (1995) provided evidence that CSFs differentiate even within the same industry and depend on the company's position, i. e. a single hotel. Furthermore he evidenced a gap between information provided by MAS and information that would be actually necessary for different levels of management (arising from CSF). Employees are the most important CSF for the management of major selected hotels (Jones 1995). This was already discovered also by Geller (1984).

Hypothesis Development

Hotels have usually different levels of decision making. Management at each level takes decisions that are within its competence and responsi-

bility. For each level of decision making MAS has to prepare appropriate information, adopting specific intents and decision contents. The satisfaction of management with information provided by MAS is undoubtedly connected with its usefulness. If the information provided by MAS is not timely, the management will not be able to use it, and vice versa if the management is not satisfied with the information provided, the information is not going to be usable. Therefore the satisfaction of management with the information provided by MAS is crucial.

The hotel's operations are oriented towards people, therefore their financial performance depends primarily on the hotel's employees, development of new products and services and, as the most important – guest satisfaction. Hotels' GMS and DMS will be satisfied with MAS only if it will provide primarily information for defining the objectives, and afterwards the information for measuring the achievements (with financial and non-financial measures as well).

MAS in hotels has an important role in preparing information about the effectiveness of product mix, promotional programs, the income from different types of room, groups of target guests and their satisfaction. Additionally the use of MAS renders possible the comparison of the results with the competitors. Timely and useful information and an appropriate cost analysis, different types of products and services, significantly contribute to a better performance and reduction of losses.

The management of hotels performs many activities, where there are no differences between the top management (hotel's GM) and department managers, as both operate in an instability environment and in spite of their hierarchical position they take decisions independently. Therefore we presume that both of them use MAS for decision making in the same extent.

We believe that the satisfaction of management with MAS information is closely connected with its usefulness. To that end the following hypotheses were formed:

- H1 *both GMS and DMS (food and beverage managers) use MAS information with the same frequency, and*
- H2 *both of them are satisfied with the timeliness and adequateness of MAS information just the same.*

The development of information needed for performance measurement is an integral part of MAS. The results of the measurement process are defined as the quantification of actions, i. e. effectiveness and effi-

ciency. Measuring the efficiency ladles out factors that the organization employs, services that are offered to their guests, while measuring the effectiveness comprises all kind of claims that guests request, who have already been satisfied (Eccles 1991).

Kaplan and Norton (1992) proved that in today's dynamic business environment organizations have to bring into use different performance measures (financial and non-financial metrics) and take into account also the multiplicative performance ratios. If the hotel's management takes a decision on the basis of the Return on investment ratio (ROI), it can neglect factors that do not have an impact on ROI in the short run, but do still influence long-term business decisions. Decisions taken on the basis of ROI can lead to a greater short-term net income as a result of lower discretionary costs (for example: maintenance costs, costs of training and costs of marketing). Savings related to discretionary costs increase a short-term net income, but on the other hand they have an impact on the lower quality of products and services and consequently on the lower satisfaction of guests, which leads to a worse performance (Schmidgall 1997). Johnson and Kaplan (1987) and Kaplan and Norton (1992; 1993; 1996) have already criticized management that monitors the performance only on the basis of financial indicators, that are from their point of view not only unsuitable, but even harm the survival of a company. Only by taking into account both types of indicators (for example: the customer satisfaction, time of response, team work and productivity, beside the financial one) can we form a consistent accounting system to monitor the company's performance and ensure a more efficacious supervisory system as well. The hotel's operations are oriented towards people and to that end their financial performance depends on the behavior and manners of the hotel's employees, the development of new products and services and – as the most important – guest satisfaction. According to the growing importance of non-monetary measures in today's business environment, the following hypothesis was presumed:

H3 GMS and DMS assign an equal importance to financial and non-financial indicators while they evaluate the hotel's achievements and achievements of their subordinates.

The use of MAS information was measured separately for GM and managers of food and beverage departments with the following parameters:

- frequency of MAS information evaluation (including the analysis

of MAS) for long-term and short-term decisions. The estimation was performed on the basis of instruments that were already used in previous researches (Mia and Patiar 2001; Chenhall and Morris 1986; Mia and Clarke 1999; Simons 1990),

- satisfaction with the timeliness and adequacy of MAS information was estimated separately with instruments of the previously mentioned researches,
- overall assessment of target priorities. These were adjusted according to Kaplan and Norton's Balanced Scorecard – BSC (1992), where target priorities were divided into financial targets (financial performance and achieved plans) and non-financial ones (guest complaints, fluctuation of employees and quality of services).

Research Design and Data Collection

For the purposes of our research, questionnaires were distributed to the management of touristic organizations; i. e. middle-size and large hotels (with at least 100 rooms), equally to the previous research done by Ivankovič (2004).

The research instrument was partially extracted from the Australian research (Mia and Patiar 2001) and adjusted to the specific circumstances of Slovene hotel enterprises. The research from 2008 was an iteration of that performed in 2004 (Ivankovič 2004). Interviews were carried out by postgraduate students of the Faculty of Tourism Studies in Portorož, guided by Ivankovič. The results obtained were processed and interpreted in the Master Thesis of Grandlič et al. (2008) under the supervision of mentor Ivankovič.

Despite the fact that just 26 questionnaires were correctly completed (in 2004 the number rose to 39), these hotels are still similarly geographically disposed, of similar size and there are no significant differences in their quality (the star rating) in comparison with the previous results (Ivankovič 2004). Since this is already the second research, and in spite the fact that in the interim period there were status changes in the hotel enterprises, the results clearly demonstrate the trends in the hotel industry. In the interpretations, we have to consider that this was not a time series of comparable data, but just cut-off data.

In the research from the year 2008, similar questions were formed in comparison with the first distributed questionnaire (2004), despite the fact that the economic situation had changed significantly. This was a

result of ownership transformation, the entrance of Slovenia into the EU, globalization process, international economic circuits, acceptance of the Euro, etc. In today's information society the principal problem is not the assurance of an adequate quantity of information, but mainly the problem of its substantive suitability and not the technical quality (Odar, Kavčič, and Koželj 2009, 72).

On the basis of 26 completed questionnaires the following characteristics were noted. The collected data demonstrate that four star hotels were predominating (53.8%), followed by three star hotels (38.5%) and five star hotels (7.7%). The comparison with the previous research (Ivankovič 2004) demonstrates that the quality of hotels that filled in the questionnaires is very similar.

According to the received questionnaires, the most common are the standard touristic hotels (30.77%), spa hotels (26.92%), city hotels (23.08%), all-inclusive touristic hotels (11.54%) and garni hotels (7.69%). None of the respondents defined the hotel as a congress hotel or a provincial hotel. The structure in the previous analysis was very similar.

Most of the selected data belong to hotels that have up to and including 150 rooms, which represents almost 70% of the total sample. With something above 15% follow the hotels that offer 150–200 rooms. Hotels with more than 200 and less than 250 rooms represent just 3.85%. The largest hotels (more than 250 rooms) achieve just 11.5%. In comparison with the previous research, the share of small hotels (up to and including 150 rooms) and the largest hotels (more than 250 rooms) increased. On the other hand, the share of medium-sized hotels included in the sample decreased.

In the five-year period a visible improvement was notable in the number of business process censuses and the use of internal standards of operations (or hotels that have already implemented ISO standards or other internationally adopted standards) from 56% to 80.7%. The share of hotels that still did not implement any standards diminished by 24.6 percentage points.

Our research additionally examined the demographic background and educational structure of the hotel's management. We found out that on average the oldest are food and beverage managers (45.83%) and the youngest GMS (50%). In the previous period, on average the oldest were room managers (25.6%) and the youngest food and beverage managers (20.5%). Just the same as in the previous period, the male gender predominates; from 61.5% in 2004 to 80.7% in 2008. The females were

the most representative as room managers in both periods – from 80% in 2004 to 87.5% in 2008.

On average most of the hotel managers have a higher-education diploma (in 2004 51.30%, and 46.15% in 2008), but in 2004 a minor share was represented by GMS with a university degree. Room managers have on average at most a secondary education diploma (58.33%), followed by those with a higher-education diploma (25%) and university degree (16.67%). If we compare the results with the previous period, we can conclude that the level of education (on average) is higher for both groups, GMS as well as DMS.

Managers with at least 10 years of work experience are on average most frequently employed as food and beverage managers (91.67%), followed by GMSs (73.08%) and room managers (66.67%).

The largest proportion of male GMS is 30–40 years old (30.77%), followed by those older than 50 years (30.77%). On the other hand the females are much younger, i. e. 30–40 years (19.23%).

Data Analyses and Results

The first hypothesis compares the usage of MAS information among GMS and DMS in the case of short-term and long-term decision making. The results prove that for short-term decisions GMS most commonly use MAS information related to the departments' profitability (4.6), while in the previous period they were focused on information related to selling prices (4.6). On the other hand, department managers most commonly use information about guest satisfaction (4.2), as was evidenced also in the previous research (4.3).

For long-term decision making, most GMSs use information about the departments' profitability and guest satisfaction (4.8). Department managers also use mostly information about guest satisfaction (4.3). The results of the previous research indicated that GMS mostly used information about the departments' profitability (4.7), while DMS mostly used information about guest satisfaction (4.3). The results are very similar to current findings.

More detailed results are presented in tables 1 and 2.

The *t*-test was used to compare the frequency of MAS information used for short-term and long-term decision making. GMS statistically do not differentiate the following information for short-term and long-term decision making (table 1):

- effectiveness of advertising and marketing ($t = -1.806$; $P > 0.05$),

TABLE 1 Use of MAS information for short-term and long-term top manager's decision making

Decisions	(1)	(2)	(3)	(4)	(5)
Effectiveness of advertising and marketing	26	4.12	4.35	-1.806	.083
Selling prices	26	4.42	4.54	-0.901	.376
Reservation system and marketing strategy	26	4.35	4.27	0.464	.646
Guest satisfaction	26	4.77	4.54	2.287	.031
Departments' profitability	26	4.77	4.62	1.690	.103

NOTES Column headings are as follows: (1) *n*, (2) long-term decisions, (3) short-term decisions, (4) *t*-stat., (5) Sig. Adapted from Grandlič et al. 2008.

TABLE 2 Use of MAS information for short-term and long-term department manager's decision making

Decisions	(1)	(2)	(3)	(4)	(5)
Effectiveness of advertising and marketing	25	3.12	3.22	0.655	.519
Selling prices	25	3.88	3.98	1.414	.170
Reservation system and marketing strategy	25	3.52	3.60	0.723	.476
Guest satisfaction	25	4.26	4.16	-0.816	.422
Departments' profitability	25	3.92	4.10	2.823	.009

NOTES Column headings are as follows: (1) *n*, (2) long-term decisions, (3) short-term decisions, (4) *t*-stat., (5) Sig. Adapted from Grandlič et al. 2008.

- selling prices ($t = -0.901$; $P > 0.05$),
- reservation system and marketing strategies ($t = 0.464$; $P > 0.05$), and
- departments' profitability ($t = 1.690$; $P > 0.05$).

Different use of information for short-term and long-term decisions was evidenced only in the case of information related to guest satisfaction ($t = 2.287$; $P < 0.05$). This information is more commonly used for long-term decisions. The same results were discovered also in the previous research (Ivankovič 2004).

In the case of department managers, the usage of MAS information for short-term and long-term decision making does not significantly differ in the following fields (table 2):

- effectiveness of advertising and marketing ($t = 0.655$; $P > 0.05$),
- selling prices ($t = 1.414$; $P > 0.05$),
- reservation system and marketing strategies ($t = 0.723$; $P > 0.05$),

TABLE 3 Average frequency of MAS information application between GM and DM

Variables	Arithmetic mean		Standard deviation	
	2004	2008	2004	2008
<i>Effectiveness of advertising and marketing</i>				
General managers	4.1	4.24	0.8	0.7
Managers of departments	3.3	3.17	0.8	1.2
<i>Selling prices</i>				
General managers	4.6	4.48	0.6	0.6
Managers of departments	3.8	3.93	0.7	1
<i>Reservation system and marketing strategy</i>				
General managers	3.9	4.31	0.9	0.8
Managers of departments	3.3	3.56	0.8	1
<i>Guest satisfaction</i>				
General managers	4.6	4.66	0.5	0.5
Managers of departments	4.3	4.21	0.7	1
<i>Departments' profitability</i>				
General managers	4.5	4.7	0.6	0.6
Managers of departments	3.7	4.01	0.8	1

NOTES Adapted from Ivankovič 2004 and Grandlič et al. 2008.

- guest satisfaction ($t = -0.816$; $P > 0.05$).

A significant difference can be determined in the case of information related to departments' profitability ($t = 2.823$; $P < 0.05$). This information is more commonly used for short-term decisions. In the previous research (Ivankovič 2004) statistical differences were significant in the case of information related to guest satisfaction.

By comparing the average results of both researches, interesting findings were discovered (details in table 3).

For their decision making GMs most frequently use information about departments' profitability (on average 4.7), while in the previous five-year period the most frequently used was information about the selling prices and guest satisfaction (on average 4.6). Less important was information about the effectiveness of advertising and marketing activity (on average 4.2), while in the previous five-year period less important was information about reservation system and marketing strategies (on average 3.9).

On the other hand, department managers mostly use information

TABLE 4 Use of MAS information for long-term decisions

Variables	(1)	(2)	(3)	(4)	(5)
Effectiveness of advertising and marketing	GM	26	4.12	5.331	.000
	DM	25	3.12		
Selling prices	GM	26	4.42	3.113	.005
	DM	25	3.88		
Reservation system and marketing strategy	GM	26	4.35	4.226	.000
	DM	25	3.52		
Guest satisfaction	GM	26	4.77	3.015	.006
	DM	25	4.26		
Departments' effectiveness	GM	26	4.77	4.212	.000
	DM	25	3.92		

NOTES GM – general managers, DM – department managers. Column headings are as follows: (1) hierarchy, (2) *n*, (3) results, (4) *t*-stat., (5) Sig. Adapted from Grandlič et al. 2008.

about guest satisfaction (in the current research on average 4.2, while in the previous period 4.3). Less important was information about the reservation system, marketing strategies and effectiveness of advertising and marketing (on average 3.3). More detailed results are presented in table 3.

For the purposes of testing the first hypothesis, the *t*-test was used to compare the use of MAS information between GM and department managers in terms of long-term and short-term decisions. The results of the analyses are presented in tables 4 and 5.

On the basis of our results we can reject our first hypothesis and conclude that GMS and department managers do not use MAS information with the same frequency. Significant differences are present for all types of information for both short-term and long-term decisions. GMS actually more frequently use MAS information in comparison with department managers.

The second hypothesis testing revealed that GMS are more satisfied with the timeliness of MAS information in comparison with department managers. Just the opposite are the results in the case of information the adequateness. DMS are more satisfied with adequateness of MAS information in comparison with GMS. In the previous research (Ivankovič 2004) GMS were more satisfied in both cases, i. e. timeliness and adequateness of MAS information.

The degree of satisfaction, of GMS, with the timeliness of information,

TABLE 5 Use of MAS information for short-term decisions

Variables	(1)	(2)	(3)	(4)	(5)
Effectiveness of advertising and marketing	GM	26	4.35	4.961	.000
	DP	25	3.22		
Selling prices	GM	26	4.54	3.166	.004
	DP	25	3.98		
Reservation system and marketing strategy	GM	26	4.27	3.183	.004
	DP	25	3.6		
Guest satisfaction	GM	26	4.54	2.295	.031
	DP	25	4.16		
Departments' effectiveness	GM	26	4.62	2.97	.007
	DP	25	4.1		

NOTES GM – general managers, DM – department managers. Column headings are as follows: (1) hierarchy, (2) *n*, (3) results, (4) *t*-stat., (5) Sig. Adapted from Grandlič et al. 2008.

TABLE 6 The satisfaction of management with MAS information

Variables	(1)	<i>n</i>		Results	
		2008	2004	2008	2004
Timeliness of MAS information	GM	26	39	3.58	3.7
	DM	24	39	3.31	3.5
Adequacy of MAS information	GM	26	39	3.58	3.9
	DM	24	39	3.65	3.6

NOTES GM – general managers, DM – department managers. Column headings are as follows: (1) hierarchy. Adapted from Grandlič et al. 2008.

is much higher (on average 4.6) in comparison with the adequateness (on average 3.6). The degree of satisfaction, of GMS, with the timeliness grew substantially in comparison with the previous research (in 2004 the average result was 3.7), while the degree of satisfaction with the adequateness of MAS information decreased (in 2004 on average it attained 3.9).

On the other hand, the satisfaction of department managers with adequateness remained practically the same (average evaluation 3.6) in comparison with timeliness (average estimation 3.3) where there is a minimal decrease. The results are presented in table 6.

The *t*-test was performed to find out if there are any differences in the satisfaction of GMS and department managers with MAS information between the two periods. The results confirm that statistically significant

TABLE 7 The satisfaction with MAS information between GM and DM

Variables	(1)	<i>n</i>		Sig.	
		2008	2004	2008	2004
Timeliness of MAS information	GM	26	39	0.011	.137
	DM	24	39		
Adequacy of MAS information	GM	26	39	0.857	.065
	DM	24	39		

NOTES GM – general managers, DM – department managers. Column headings are as follows: (1) hierarchy. Adapted from Grandlič et al. 2008.

TABLE 8 Importance of financial and non-financial performance measures for GM and DM

Subject	Variables	(1)	(2)	(3)	(4)
General managers	Financial measures	26	4.65	0.733	.47
	Non-financial measures	26	4.52		
Department managers	Financial measures	24	4.19	-1.591	.125
	Non-financial measures	24	4.42		

NOTES GM – general managers, DM – department managers. Column headings are as follows: (1) *n*, (2) results, (3) *t*-stat., (4) Sig. Adapted from Grandlič et al. 2008.

differences are present only in the case of GMS who are more satisfied with the timeliness of MAS information (in the current period).

These results indicate that a difference did arise in the current period. The previous research (Ivankovič 2004) did not ascertain any differences between GMS and DMS (timeliness of information $t = 50$; $P > 0.05$ and information adequacy $t = 1.88$; $P > 0.05$), while the current results demonstrate that the satisfaction with timeliness is higher for GMS.

With the third hypothesis we tested if GMS and DMS assign an equal importance to financial and non-financial indicators in monitoring the hotel's achievements and achievements of subordinates. From the theory it emerges that, for a long run effective performances, both financial and non-financial indicators have to be taken into consideration. We examined the use of financial and non-financial indicators for Slovene hotels. Table 8 exhibits the results obtained.

As can be seen from the table 8 there are no differences in the usage between financial and non-financial performance measures in monitoring the achievements of targets and achievements of subordinates within different hierarchies of hotel management (GM $t = 0.7333$; $P > 0.05$ and

TABLE 9 The importance of financial and non-financial measures between GM and DM

Variables	Subject	(1)	(2)	(3)	(4)
Financial measures	General managers	26	4.4	3.970	.000
	Department managers	24	3.7		
Non-financial measures	General managers	26	4.1	-0.176	.861
	Department managers	24	4.1		

NOTES GM – general managers, DM – department managers. Column headings are as follows: (1) *n*, (2) results, (3) *t*-stat., (4) Sig. Adapted from Grandlič et al. 2008.

department managers $t = -1.591$; $P > 0.05$). In the previous research GMS dedicated more importance to financial measures, therefore a notable improvement can be ascertained. Hotel managers actually pay attention to both measures, i. e. financial and non-financial in the same extent.

Furthermore we examined also the differences in the use of performance measures between GMS and DMS. The results of the analysis reveal that a statistically significant difference exists between GMS and DMS in the use of financial measures. The results demonstrate that GMS devote more attention to financial measures in comparison with DMS (details in table 9).

In comparison with the Australian research (Mia and Patiar 2001), a more notable difference between GMS and DMS in the usage of financial and non-financial performance measures can be determined.

Conclusion

The research demonstrated the advantages and weaknesses of Slovene hotels, the development of MAS and its use at different hierarchic levels of hotel management. Furthermore the comparison with the previous research provides evidence about improvements that were made in the five-year period.

The results of the analysis demonstrate that we can reject the first hypothesis. GMS and DMS do not use MAS information with the same frequency. Significant differences are present for all types of information including short-term and long-term decisions. More detailed analysis demonstrates that both groups generally use the same information for short-term and long-term decisions as in the previous period.

The analysis of satisfaction with MAS information demonstrates that GMS are more satisfied with the timeliness of MAS information, while

no statistically significant differences were ascertained in the case of adequateness. The resulting difference was not present in the previous period.

Both GMS and DMS pay the same attention to financial and non-financial indicators, while a significant difference exists between them. GMS devote more attention to financial indicators in comparison with DMS, notwithstanding the fact that in the case of non-financial indicators the differences are not ascertainable.

The results demonstrate that GMS actually differ from DMS with respect to their use of MAS information for making decisions. The reasons that lead to these results might be connected with the adequateness of existing MAS in hotels. The latter might not supply the necessary information to all managers with the required frequency. The GMS have the power to demand and get required information of their choice when they want. From this point of view further researches have to design MAS mainly for the needs of middle and lower management.

The results will undoubtedly provide useful information for the future development of national touristic guidelines and decision taking on the level of individual hotels. The results furthermore demonstrate the main points of discrepancy between national and foreign best practice. We also suggest that further research approaches analyze the association between managers' use of MAS information and performance. The performance of the hotel industry will be identified by using monetary and non-monetary measures.

References

- Banker, R., G. Potter, and D. Srinivasan. 2000. An empirical investigation of an incentive plan that includes non-financial performance measures. *The Accounting Review* 75 (1): 65–92.
- Brander Brown, J., and B. McDonnell. 1995. The balanced score-card: Short-term guest or long-term resident? *International Journal of Contemporary Hospitality Management* 7 (2–3): 7–11.
- Brander Brown, J., and H. Atkinson. 2001. Rethinking performance measures: Assessing progress in UK hotels. *International Journal of Contemporary Hospitality Management* 13 (3): 128–35.
- Brotherton, B., and J. Shaw. 1996. Towards an identification and classification of critical success factors in UK hotels plc. *International Journal of Contemporary Hospitality Management* 15 (2): 113–35.
- Chenhall, R., and D. Morris. 1986. The impact of structure, environment and interdependence on the perceived usefulness of management accounting systems. *The Accounting Review* 61 (1): 16–35.

- Collier, P., and A. Gregory. 1995. *Management accounting in hotel groups*. London: Chartered Institute of Management Accountants.
- Croston, F. J. 1995. Hotel profitability: Critical success factors. In *Accounting and finance for the international hospitality industry*, ed. P. J. Harris, 295–314. Oxford: Butterworth Heinemann.
- Damonte, L., P. Rompf, R. Bahl, and D. Domke. 1997. Brand affiliation and property size effects on measures of performance in lodgings industry. *Hospitality Research Journal* 20 (3): 1–16.
- Dent, J. 1996. Global competition: Challenges for management accounting and control. *Management Accounting Research* 7 (2): 247–69.
- Downie, N. J. 1997. The use of accounting information in hotel marketing decisions. *International Journal of Hospitality Management* 16 (3): 305–12.
- Eccles, R. G. 1991. The performance measurement manifesto. *Harvard Business Review* 69 (1–2): 131–7.
- Geller, A. N. 1984. *Executive information needs in hotel companies*. Houston, TX: Peat, Marwick, Mitchell & Co.
- . 1985a. Tracking the critical success factors for hotel companies. *Cornell Hotel and Restaurant Administration Quarterly* 25 (4): 76–81.
- . 1985b. The current state of hotel information systems. *Cornell Hotel and Restaurant Administration Quarterly* 26 (1): 14–17.
- . 1985c. How to improve your information system. *Cornell Hotel and Restaurant Administration Quarterly* 26 (2): 19–27.
- Govindarajan, V. 1984. Appropriateness of accounting data in performance evaluation: An empirical examination of environment uncertainty as an intervening variable. *Accounting Organization and Society* 9 (2): 125–36.
- Grandlič, M., J. Mestnik Hrast, and V. Jereb. 2008. Merjenje uspešnosti poslovanja v hotelirstvu. Ma. thes., Univerza na Primorskem.
- Harris, P. J. 1992. *Profit planning*. Oxford: Butterworth-Heinemann.
- Harris, P. J., and J. Brander-Brown. 1998. Research and development in hospitality accounting and financial management. *International Journal of Hospitality Management* 17 (2): 161–81.
- Ivankovič, G. 2004. Računovodsko merjenje uspešnosti poslovanja v hotelirstvu. PhD diss., Univerza v Ljubljani.
- Jankovič, S. 2005. Nedostaci računovodstvenog evidentiranja poslovnog rezultata u hotelskoj industriji. *Tourism and Hospitality Management* 11 (1): 35–46.
- Johnson, T. H., and R. S. Kaplan. 1987. *Relevance lost: The rise and fall of management accounting*. Boston, MA: Harvard Business School Press.
- Jones, T. A. 1995. Identify managers information needs in hotel companies. In *Accounting and finance for the international hospitality industry*, ed. P. J. Harris, 163–82. Oxford: Butterworth-Heinemann.

- Jones, T. A., and A. Lockwood. 1998. Operations management research in the hospitality industry. *International Journal of Hospitality Management* 17 (2): 183–202.
- Kaplan, R. S., and D. P. Norton. 1992. The balanced scorecard: Measures that drive performance. *Harvard Business Review* 70 (1): 71–9.
- . 1993. Putting the balanced scorecard to work. *Harvard Business Review* 71 (5): 134–42.
- . 1996. Linking the balanced scorecard to strategy. *California Management Review* 39 (1): 53–79.
- Kavčič, S., and G. Ivankovič. 2006. The impact of management accounting systems on performance: An exploratory study of hotels in Slovenia. In *Promises and perils in hospitality and tourism management*, ed. S. K. Dixit, 237–60. New Delhi: Aman.
- Kotas, R. 1975. *Market orientation in the hotel and catering industry*. London: Survey University Press.
- Medlik, S. 1961. *The British hotel and catering industry: An economic and statistical study*. London: Pitman.
- Mia, L. 1993. The role of MAS information in organizations: An empirical investigation. *British Accounting Review* 25:269–85.
- Mia, L., and R. Chenhall. 1994. The usefulness of MAS functional differentiation and management effectiveness. *Accounting, Organization and Society* 19 (1): 1–13.
- Mia, L., and B. Clarke. 1999. Market competition, management accounting systems and business unit performance. *Management Accounting Research* 10 (2): 137–58.
- Mia, L. and A. Patiar. 2001. The use of management accounting systems in hotels: An exploratory study. *International Journal of Hospitality Management* 20 (2): 111–28.
- Odar, M., S. Kavčič, and S. Koželj. 2009. Organiziranost računovodstva v slovenskih podjetjih. *Revizor* 9 (4): 63–81.
- Phillips, P. A. 1999. Hotel performance and competitive advantage: A contingency approach. *International Journal of Contemporary Hospitality Management* 11 (7): 359–65.
- Schmidgall, R. S. 1997. *Hospitality industry managerial accounting*. 4th ed. Lansing, MI: Education Institute of American Hotel and Motel Association.
- Simons, R. 1990. The role of management control systems in creating competitive advantage: New perspective. *Accounting, Organizations and Society* 15 (1–2): 127–43.