Journal of
Risk and Financial Management

MDPI

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Exploring the Intersection of Contemporary Management Accounting Practices and Accounting Information Systems: The Impact on Hotel Performance

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Abstract: Contemporary Management Accounting Practices (MAPs) were developed to address the weaknesses of traditional practices and to meet financial managers' need for accurate and timely information. Consequently, they contribute to optimal decision-making that enhances firms' efficiency and competitiveness, leading to improved organizational performance. Simultaneously, the success of Accounting Information Systems (AIS) is essential, as they improve the quality of information and reporting. In information- and competition-intensive environments such as the hotel industry, AIS user satisfaction, as an indicator of AIS success, can play a decisive role in the effective use of contemporary MAPs. The purpose of this paper is to explore the relationship between contemporary MAPs usage and hotel performance, and to investigate the moderating role of AIS user satisfaction. Using hierarchical multiple regression analysis, the findings indicate that the interaction of contemporary MAPs usage and AIS user satisfaction results in improved hotel performance. This study contributes to the current knowledge by developing a framework of the relationship of Management Accounting and Information Technology, through the lens of Contingency Theory and the Information Systems Success Model of DeLone and McLean. Additionally, the findings provide managerial implications for financial managers and IS developers.

Keywords: Contemporary Management Accounting Practices; Accounting Information Systems; user satisfaction; hotel performance

Citation: Diavastis, Ioannis E. 2024. Exploring the Intersection of Contemporary Management Accounting Practices and Accounting Information Systems: The Impact on Hotel Performance. *Journal of Risk and Financial Management* 17: 516. https://doi.org/10.3390/jrfm17110516

Academic Editors: Youngsik Kwak, Hassan Yazdifar and Davood Askarany

Received: 7 October 2024
Revised: 11 November 2024
Accepted: 15 November 2024
Published: 17 November 2024

1. Introduction

The evolution of Management Accounting Practices (MAPs) has resulted from changes in Information Technology (IT), competition, economic growth, and globalization (Askarany 2003; Waweru et al. 2004; Zainun Tuanmat and Smith 2011). Increased costs and reduced profit margins have compelled firms to adopt sophisticated cost accounting systems and advanced MAPs (Uyar and Kuzey 2016). Numerous studies have pointed out the inadequacy of traditional MAPs (Sulaiman et al. 2004), as the information they provide in terms of timeliness, accuracy, and detail does not meet the requirements of contemporary business management. This limitation has driven the need for innovation in management accounting (Smith et al. 2008). Consequently, the development of contemporary MAPs has transformed the processes of planning, controlling, and decision-making (Joshi et al. 2011), enabling managers to perform more efficiently and effectively. Nevertheless, both traditional and contemporary MAPs are regarded as valuable for managerial purposes (Nuhu et al. 2023).

In a complex and highly competitive business environment such as the Greek hotel industry, contemporary MAPs can help financial managers respond adequately to both internal and external forces (Pollanen and Abdel-Maksoud 2010). Moreover, they can create a competitive advantage for firms, as they provide accurate and timely information regarding their activities, which, in turn, leads to improved decision-making. As a result, their use will contribute to the improvement of organizational performance.

The implementation and usage of MAPs are closely linked to IT systems. Specifically, Information Systems (IS) can facilitate MAPs implementation (Yigitbasioglu 2016). Thus, computerized Accounting Information Systems (AIS), which enable accurate reporting (Samarghandi et al. 2023) and deliver high-quality financial and non-financial information, should be successful in supporting the use of contemporary MAPs. Especially in the hotel industry context, it is crucial for financial managers to be satisfied with the systems' ability to obtain accurate, relevant, and timely information, given the competitive and dynamic environment in which hotels operate. Therefore, AIS success, or similarly, AIS user satisfaction, is considered an important factor when hotel performance is examined (Lo and Darma 2000; Jang et al. 2006; Ham et al. 2005). In conclusion, AIS as "computer-based systems that process financial information and support decision tasks" (Nicolaou 2000, p. 91) should satisfy the needs of their users to a great extent for the effective use of contemporary MAPs.

This study examines the relationship of contemporary MAPs and organizational performance and investigates the moderating effect of AIS success in the Greek hotel industry. It is proposed that contemporary MAPs usage has a positive impact on hotel performance and that AIS user satisfaction, as an indicator of AIS success (Do Céu F. Gaspar Alves 2010), is a moderator in the aforementioned relationship. In this research, contemporary MAPs are examined as a package of practices (Malmi and Brown 2008; Agbejule and Huusko 2011) as they are correlated and act together (Otley 1980; Nuhu et al. 2017). This approach addresses Chenhall's (2003) concern that examining individual elements of Management Control Systems (MCS) in isolation may be misleading.

The conceptual model (Figure 1) was tested using survey data from 141 hotels in Greece. Applying hierarchical multiple regression analysis (MRA), the results suggest that contemporary MAPs usage has a positive and statistically significant effect on hotel performance. Additionally, AIS user satisfaction has a positive but not statistically significant impact. Finally, and most importantly, the findings indicate that the interaction term of contemporary MAPs usage and AIS user satisfaction is positive and significant, underscoring AIS user satisfaction as a strong moderator in the relationship between MAPs usage and hotel performance.

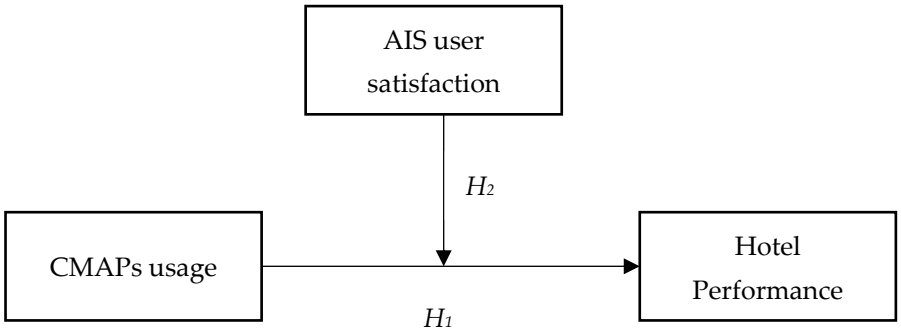

Figure 1. Conceptual model.

The rationale for this research lies in the importance of IT in delivering valuable management accounting information to decision-makers, which, in turn, results in improved organizational performance. Therefore, IT should be included as a moderating factor when MA outcomes are examined (Granlund 2011). This proposition aligns with Contingency Theory and the interaction approach. Examining this relationship is increasingly relevant in the Greek hotel industry, where financial managers demand high-quality MA information to address competition, environmental uncertainty, and product diversity, alongside the industry's substantial contribution to the national economy.

This research makes several contributions. Firstly, it empirically demonstrates the positive synergy of contemporary MAPs usage and AIS user satisfaction on hotel performance. This result expands the literature by emphasizing a critical attribute of IS in

its relationship with MA. Moreover, this study responds to the calls for theoretical and empirical examination of the potential synergy between IT and accounting (Granlund 2011; Maiga 2015), developing a new framework grounded in Contingency Theory and the Information Systems Success Model (DeLone and McLean 1992, 2003). Secondly, the results suggest that using a set of contemporary MAPs to a great extent has a positive effect on hotel performance. This finding contributes to empirical research, as the existing results are limited and questionable (Nuhu et al. 2016). Finally, this study, to the best of the author's knowledge, is the first to investigate the moderating role of AIS user satisfaction in the relationship between contemporary MAPs and organizational performance.

The article is organized as follows: The next section presents a detailed literature review and hypothesis development. This is followed by a discussion of the research methodology. Subsequent sections cover the study's results and conclusions.

2. Literature Review and Hypothesis Development

2.1. Contemporary Management Accounting Practices and the Case of Hotel Industry

Johnson and Kaplan's (1987) criticism regarding the need for more accurate product and service costing and more effective control systems resulted in turning researchers' attention to MA. Since then, numerous innovative MAPs have been developed to address the shortcomings of traditional practices and to meet the needs of managers for high-quality information. MAPs developed up to the 1980s are considered traditional, while those introduced from the 1990s onwards are referred to as contemporary (Sulaiman and Mitchell 2005). Traditional MAPs have been described as inadequate to provide detailed information to meet the demands of modern management (Abdel-Maksoud 2011), especially in relation to activities important to firms (Askarany et al. 2007). On the contrary, contemporary MAPs can overcome these limitations (Nuhu et al. 2016) by providing relevant, accurate, and appropriate information (Johnson and Kaplan 1987) and facilitating a focus on differentiation (Baines and Langfield-Smith 2003).

One of the first studies that applied this classification was Chenhall and Langfield-Smith's (1998) research, which established a framework for subsequent studies. These authors identified the budgets for planning and control, performance indicators such as the Return on Investment and the Cost–Value–Profit analysis as traditional MAPs, whereas they regarded Activity-Based Costing, Activity-Based Management, Benchmarking, and the Balanced Scorecard as contemporary ones. Moreover, Zawawi and Hoque (2010) introduced the term "MA innovations" to refer to contemporary practices such as Activity-Based Costing, Activity-Based Management, Target-Based Costing, Balanced Scorecard, and Time-Driven Activity-Based Costing. Pavlatos and Paggios (2008) further identified practices like full costing, standard costing, traditional budgets, Cost–Value–Profit analysis, and profitability performance measures as traditional MAPs, while classifying Activity-Based Costing, Balanced Scorecard, Target Costing, Target Costing, Value Chain Analysis, and Benchmarking as contemporary MA tools.

The significance of contemporary MAPs in the hotel industry is well documented. In this dynamic and complex environment, hotels must be market-oriented, utilizing information effectively to meet customer needs, and so increase their sales and market share (Wang et al. 2012). Given the intangible nature of the hotel product, the labor- and capital- intensive nature of the industry, the cost structure characterized by high fixed and indirect costs, and the unpredictable demand, hotel financial managers require broad-scope MA information that can be obtained by extensively using contemporary MAPs. In fact, Pires et al. (2023) found that the usage of contemporary MAPs is positively related to the usefulness of broad-scope and timely information.

Empirical studies have shown that hotels primarily use mainly financial ratios, the budgeting for cost control and planning operations, service and customer profitability analysis, and industry and competitors' analysis (Schmidgall et al. 1996; Makrigiannakis and Soteriades 2007; Zounta and Bekiaris 2009; Pavlatos 2010; Uyar and Bilgin 2011; Pavlatos 2015; Faria et al. 2018). Meanwhile, researchers explored the variations in the

adoption and usage rates of traditional and contemporary MAPs in the hotel industry. Pavlatos and Paggios (2008) found that Greek hotels use traditional MAPs at a greater extent. Additionally, based on their results, budgeting for planning, budgeting for cost control, financial ratios, and product profitability analysis have the highest adoption rates, while contemporary MAPs like Benchmarking and Activity-Based Budgeting have low adoption rates. Chand and Dahiya (2010) investigated the use of MAPs in small and medium sized hotels in India. Budgeting for planning, financial ratios, Activity-Based Budgeting and budgeting for control are the most commonly used practices. Meanwhile, Santos et al. (2012) concluded that Portuguese hotels mainly use traditional practices such as Cost–Value–Profit analysis and budgeting. Moreover, Sunarni (2015) found that the use of traditional practices dominates in the hotel industry of Jakarta. Standard costing, budgeting for cost control, financial ratios, Cost–Value–Profit analysis, and competitors' analysis based on strengths and weaknesses are the most used traditional MAPs, while contemporary MAPs such as Activity-Based Costing and the Balanced Scorecard have low adoption rates. Finally, El-Shishini (2017) suggested that traditional MAPs are used to a greater extent in the hotel industry of Bahrain.

In conclusion, despite the known limitations of traditional MAPs and the advantages of contemporary ones mentioned by many authors, research indicates that hotels do not extensively adopt and use contemporary MAPs. This aligns with the assertion that traditional MAPs are prevalent and Lunkes et al.'s (2020) proposition that hotel financial managers tend to prefer traditional practices. Nevertheless, the use of contemporary MAPs remains essential for organizational effectiveness.

2.2. The Relationship Between Contemporary Management Accounting Practices and Organizational Performance

Firm performance and business sustainability depend on the capability of managers to identify, analyze, and respond to the external and internal pressures that are being experienced. Contemporary MAPs enable managers to act effectively in response to these forces (Pollanen and Abdel-Maksoud 2010) by providing timely, accurate, and detailed MA information. Furthermore, their usage can create a comparative advantage by providing precise and direct information regarding a firm's activities, supporting decision-making, and offering insights into managerial effectiveness and task quality (Martinez Ramos 2004). The use of broad-scope MA information from contemporary MAPs improves both managerial (Soobaroyen and Poorundersing 2008) and organizational performance (Chong and Chong 1997).

Due to the diverse departments and market segments involved in hotel operations, MAPs should allow financial managers to evaluate each operation independently (Jagels and Coltman 2004). Furthermore, hotel financial managers have to conduct several activities such as pricing policies, budget reports, and providing information to top management regarding the costs, revenues, and profits (Kotas 1999). Therefore, the high-quality information provided by contemporary MAPs enables financial managers to forecast revenues and costs accurately, and make the right decisions aiming at the maximization of customer satisfaction and a firm's profitability (Burgess 2007).

Empirical research offers mixed findings on the benefits of contemporary MAPs, with some studies reporting low perceived benefits (Hyvönen 2005; Angelakis et al. 2010) and others confirming a positive relationship between individual contemporary MAPs use and firm performance. Notably, research has shown that performance is positively affected by the use of the Balanced Scorecard (Hoque and James 2000; Davis and Albright 2004; Fleming et al. 2009; Malagueño et al. 2018), non-financial performance measures (Baines and Langfield-Smith 2003; Hoque 2004; Upadhaya et al. 2014), Customer Profitability Analysis (Al-Mawali et al. 2012), Benchmarking (Maiga and Jacobs 2004) and Activity-Based Costing (Frey and Gordon 1999; Kennedy and Affleck-Graves 2001; Lea 2007; Maiga and Jacobs 2008; Jänkälä and Silvola 2012; Miryazdi and Jusoh 2015). Furthermore, Nuhu et al. (2016, p. 76) suggested that "the appropriateness of management accounting practices

in achieving organizational outcomes lies in their usage as a package instead of using the practices in isolation", whereas the importance and advantages of information are decreased when the practices are used infrequently (Nuhu et al. 2017). The same authors indicated that the extent of contemporary MAPs usage as a package has a positive impact on firm performance. Additionally, Vărzaru et al. (2022) found a positive relationship between the usage of a set of innovative and contemporary MAPs and organizational performance.

According to the above discussion, a hypothesis was developed as follows:

H_1: *The usage of contemporary MAPs as a package has a positive impact on hotel performance.*

2.3. The Moderating Effect of AIS Success on the Relationship Between Contemporary Management Accounting Practices and Organizational Performance

The relationship between IT and Management Accounting (MA) is well established in the literature. Efendi et al. (2006, p. 117) suggested that "Information Technology plays an important role in modern business, particularly in relation to the accounting function". This link lies in the assumption that IT enables managers to handle MA broad-scope information efficiently, resulting in more timely and effective decision-making (Mia and Winata 2008). Similarly, Orelli et al. (2016) argued that MA innovations depend on IT capabilities.

The majority of studies have focused on the impact of IT on Management Accounting Systems (MAS) and Management Control Systems (MCS). Researchers have examined the relationship between IT usage (Do Céu F. Gaspar Alves 2010), IT tools (Cleary et al. 2022), IT integration (Maiga et al. 2014; Akuma et al. 2024), IT investments (Nixon 1995), IT competency (Spraakman et al. 2015), IS quality (Hadid and Al-Sayed 2021; Papiorek and Hiebl 2024), IT perceived ease of use and usefulness (Gyamera et al. 2023), IS sophistication (Akma Mohd Salleh et al. 2010; Knauer et al. 2020), and MA. Nevertheless, although the importance of IS effectiveness and success in relation to contemporary MAPs has been highlighted in the literature (Grabski et al. 2008; Sangster et al. 2009; Stefanou and Athanasaki 2012), little has been done to examine this relationship.

The Information Systems Success Model (ISSM) (DeLone and McLean 1992, 2003) has been utilized as a tool for exploring IS effectiveness. According to the ISSM, IS benefits are obtained as a result of the use and the user satisfaction of the systems. However, since user perception is regarded as a significant aspect of the IS literature (Chien and Tsaur 2007), user satisfaction has been widely used to measure IS success (Baroudi and Orlikowski 1988; Remenyi and Money 1991; DeLone and McLean 1992; Kettinger and Lee 1994; Longinidis and Gotzamani 2009). Moreover, user satisfaction represents a key determinant of IS success in the hotel industry context (Lo and Darma 2000; Jang et al. 2006), as the human factor should be considered when evaluating IT outcomes in relation to hotel performance (Ham et al. 2005; Kaya and Azaltun 2012).

Although the relationship between IT and MA is a two-way street, research has predominantly focused on its one-way interaction, primarily assuming that integrated IS enable or influence the use of MA (Rom and Rohde 2007). However, they are distinct aspects of a joint and coordinated system (Mancini et al. 2016). Consequently, IT can act as a facilitator, a catalyst, a motivator, and an enabler of MA (Taipaleenmäki and Ikäheimo 2013) by gathering and providing financial information (Ylä-Kujala et al. 2023). In conclusion, in delivering valuable information to decision-makers, it should be included as a moderating factor in models related to MA outcomes (Granlund 2011).

Empirical research underscores the need to investigate the synergy between IT and accounting (Mancini et al. 2016), yet this interaction has been relatively underexplored (Maiga 2015). Gyamera et al. (2023) indicated a significant moderating role of IT in the relationship between MAPs and financial performance. The empirical findings of Eker and Aytaç (2016) suggested that the interaction between the use of ERP systems and the use of advanced MAPs contributes to improved firm performance, both financially and non-financially. Moreover, Maiga et al. (2014) and Maiga (2017) concluded that Activity-Based Costing and IT integration interact positively on financial performance, whereas Diavastis et al. (2016) found that the synergy between Activity-Based Costing and AIS effectiveness

results in enhanced hotel performance. In contrast, Xiao et al. (2011) found that IT usage does not moderate the relationship between MAPs and firm performance.

Based on the arguments presented before, we propose that when the users are highly satisfied with AIS, receiving more accurate, direct, and useful financial and accounting information, and simultaneously use a package of contemporary MAPs to a great extent, enabling accurate cost determination, evaluation of the effectiveness of business processes (Chenhall and Langfield-Smith 1998), and reduction in uncertainty and support in making complex decisions successfully (Patiar and Mia 2008), then enhanced firm performance can be achieved. Therefore, AIS user satisfaction, as a surrogate for AIS success, can be considered a critical enabler of contemporary MAPs effectiveness. Under this assumption, AIS user satisfaction may interact with the usage of a package of contemporary MAPs to positively affect firm performance.

The aforementioned proposition aligns with Contingency Theory, which suggests that specific combinations of context and structure have a positive effect on performance (Gerdin and Greve 2004). Additionally, it follows the interaction approach (Drazin and Van de Ven 1985), which posits that contextual factors can moderate the relationship between MCS and organizational performance (Chenhall 2003).

According to the above discussion, a hypothesis was developed as follows:

H_2: *AIS user satisfaction positively moderates the relationship between the usage of contemporary MAPs as a package and the hotel performance.*

3. Research Methodology

3.1. Sample and Data Collection

The sampling frame comprised of 2508 firms registered in the Hellenic Chamber of Hotels andclassified as three-, four-, and five-star hotels. There are two reasons that justify this choice. First, these hotels are of sufficient size, with adequate financial and human resources to implement and use AIS. Second, they have greater management support, complex structures, and are more innovative, offering a high quality and wide range of services that facilitate the adoption of contemporary MAPs (Makrigiannakis and Soteriades 2007; Lamminmaki 2008; Hiamey and Amenumey 2013). The target respondents for this study were financial executives of Greek hotels.

The questionnaire for the data collection was developed following an extensive literature review. In line with the recommendations of Cooper and Schindler (2003) and Saunders et al. (2012) for pilot testing, the instrument was initially tested by PhD candidates to evaluate wording and time requirements. Subsequently, it was reviewed by academic experts and management accountants, who contributed valuable comments and observations that enhanced the content validity of the questionnaire. After implementing the suggested changes, the instrument was sent to three hotel financial executives to verify the clarity of the guidelines, the measurement scales, and the wording. All comments were taken into account, and the necessary adjustments were incorporated into the final questionnaire.

The research instrument was distributed to the finance and accounting departments of 1000 hotels using a simple random sampling technique to avoid potential bias (Sekaran 2003). A total of 195 completed questionnaires were received over eight months, of which 54 were discarded due to missing values in more than 20% of the questions, in alignment with Gerdin's (2005) recommendations. Thus, the final sample comprised 141 hotels, yielding a net usable response rate of 14.9%, which is considered typical for MA studies (Auzair 2011).

To assess the external validity and representativeness of the final sample, statistical tests (chi-square tests, independent sample *t*-tests) were conducted to compare responses from early and late respondents (Armstrong and Overton 1977). Specifically, the first 20% of the questionnaires (n = 28) were classified as early respondents, and the last 20% (n = 28) as late respondents. This practice is a common method for empirical surveys in MA (Chenhall and Langfield-Smith 1998; Bedford et al. 2008; Albu and Albu 2012).

No significant differences were found on the respondents' profile or the main research variables, supporting the absence of non-response bias.

3.2. Descriptive Statistics

Table 1 presents the descriptive statistics of the sample respondents. A total of 62.4% reported working as either accountants or assistant accountants. Additionally, 51.7% of the respondents indicated having more than 11 years of work experience, and 85.2% disclosed holding a higher education degree. These figures contribute to the validity of the findings, as the research participants possessed sufficient job experience and expertise to answer the survey questions accurately. Regarding the sample firms, 20.6% of the hotels were classified as large hotels, while 21.3% were members of either domestic or international hotel chains (Table 2).

Table 1. Demographic profiles of respondents.

		Frequency (N)	Percentage (%)
Job Position	Financial Managers	11	7.8
	Internal and Financial Auditors	7	5.0
	Cost Accountants	5	3.5
	Accountants	88	62.4
	Others	30	21.3
Job Experience	1–10 years	68	48.2
	11–20 years	58	41.1
	Over 20 years	15	10.6
Education	Higher School	3	2.1
	Institute of Vocational Training	18	12.8
	Bachelor	97	68.9
	Postgraduate	23	16.3
	PhD	0	0
Gender	Men	89	63.1
	Women	52	36.9
Age	Under 35	25	17.7
	35–44	65	46.1
	45–54	34	24.1
	Over 55	17	12.1

Table 2. Demographic characteristics of hotels.

		Frequency (N)	Percentage (%)
Number of Beds	1–100	6	4.3
	101–150	27	19.1
	151–300	79	56.0
	Over 300	29	20.6
Star Category	5 stars	46	32.6
	4 stars	69	48.9
	3 stars	26	18.4
Management Status	Private firm	111	78.7
	Member of domestic chain	19	13.5
	Member of international chain	11	7.8

3.3. Measurement of Variables

The questionnaire was largely designed by adopting questions from previous studies, with some items adapted to suit the context of AIS and the hotel industry for this research.

3.3.1. Contemporary Management Accounting Practices (CMAP) Usage

In this study, the usage of contemporary MAPs was examined using a 5-point Likert scale ranging from 1 (not used at all) to 5 (used to a great extent), asking the respondents

to indicate the level of usage during the last 3 years. A list of eighteen contemporary MAPs was developed based on the studies of Chenhall and Langfield-Smith (1998), Abdel-Kader and Luther (2006a), Abdel-Kader and Luther (2006b), Pavlatos and Paggios (2008), Angelakis et al. (2010), Ngoc Phi Anh et al. (2011), and Nimtrakoon and Tayles (2015) as follows: Activity-based costing (CMAP1), zero budgeting (CMAP2), budgeting for long-term plans (CMAP3), flexible budgeting (CMAP4), activity-based budgeting (CMAP5), non-financial measures relating to customers (CMAP6), non-financial measures relating to operations and innovations (CMAP7), non-financial measures relating to employees (CMAP8), economic value added (CMAP9), residual income (CMAP10), balanced scorecard (CMAP11), Benchmarking (CMAP12), product profitability analysis (CMAP13), customer profitability analysis (CMAP14), industry analysis (CMAP15), analysis of competitors' strengths and weaknesses (CMAP16), analysis of competitive position (CMAP17), and activity-based management (CMAP18).

3.3.2. Accounting Information Systems User Satisfaction (AISUS)

AIS user satisfaction (AISUS) was measured as a multidimensional construct because a single-item instrument may be unreliable, as it cannot capture whether the user is satisfied with the system's attributes. Therefore, AIS user satisfaction was measured as an overall user's evaluation on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The four items used were adapted from the research of Seddon and Kiew (1996) and Almutairi and Subramanian (2005): "AIS is sufficient to meet my information processing needs" (AISUS1), "AIS is efficient" (AISUS2), "AIS is effective" (AISUS3), and "Overall, I am completely satisfied with the AIS" (AISUS4).

3.3.3. Hotel Performance (HP)

This research used self-reported measures of hotel performance, following related empirical studies. These ratings, used for comparative rather than absolute analysis (Van der Stede et al. 2005), are considered reliable, and any potential leniency bias is not a significant concern (Perera et al. 1997). Questions were designed to collect data on the hotel's performance relative to its competitors over the past 3 years across a range of financial and non-financial indicators, using a 5-point Likert scale from 1 (very low) to 5 (very high). A list of twelve items was developed according to the previous studies of Govindarajan (1988), Gil-Padilla and Espino-Rodríguez (2008), Wang et al. (2012), Köseoglu et al. (2013), McManus (2013), Krumwiede and Charles (2014), and Turner et al. (2017) as follows: Return on Investment (HP1), Return on Equity (HP2), profit after tax (HP3), cash flow from operating activities (HP4), cost control (HP5), market share (HP6), room occupancy (HP7), customer satisfaction (HP8), customer loyalty (HP9), service quality (HP10), development of new services (HP11), and overall performance (HP12).

3.3.4. Control Variables

To avoid bias driven by other variables dropped from the model, known determinants of hotel performance were controlled for.

Hotel Size (SIZE): The size of a hotel is expected to positively affect hotel performance due to economies of scale (Hua et al. 2020). Firm size was measured by the number of beds (Camisón 2000; Claver-Cortés et al. 2007). The variable was coded as follows: '1' for family hotels (1–100 beds), '2' for small hotels (101–150 beds), '3' for medium-sized hotels (151–300 beds), and '4' for large hotels (more than 300 beds).

Chain (CHAIN): The management status of the hotel was included to ensure that the benefits of a corporate name were not confused with other advantages that a hotel may obtain as a member of a chain (Silva et al. 2017). A dummy variable was used to indicate chain membership, coded as '1' if the hotel belonged to a chain and '0' otherwise, regardless of whether it was a domestic or international chain.

3.4. Data Analysis Techniques

Gerdin and Greve (2004) emphasized that the use of the interaction term in regressions is essential and too common in contingency-based MA research when examining synergies in performance. Therefore, hierarchical MRA was used to investigate the moderating effect in the examined relationship as supported by the interaction fit contingency study (Chenhall and Langfield-Smith 1998; Chenhall 2003). This technique is widely used to study the effects of independent variables and their interactions on a dependent variable, as evidenced in many MA studies (Hyvönen 2007; Agbejule and Jokipii 2009; Etemadi et al. 2009; Maiga et al. 2014; Andersén and Samuelsson 2016; De Harlez and Malagueño 2016; Maiga 2017; Oyewo 2022; Ditkaew 2023; Papiorek and Hiebl 2024). In this analysis, the control variables, main effects, and interaction effect were introduced sequentially.

The following regression models were employed:

$$HP = \alpha_0 + \alpha_1 \text{ SIZE} + \alpha_2 \text{ CHAIN} + \delta \quad (1)$$

$$HP = \gamma_0 + \gamma 1 \text{ SIZE} + \gamma_2 \text{ CHAIN} + \gamma_3 \text{ CMAP} + \gamma_4 \text{ AISUS} + \varepsilon \quad (2)$$

$$HP = \beta_0 + \beta_1 \text{ SIZE} + \beta_2 \text{ CHAIN} + \beta_3 \text{ CMAP} + \beta_4 \text{ AISUS} + \beta_5 (\text{CMAP} \times \text{AISUS}) + \zeta \quad (3)$$

where HP = hotel performance measured by the average of the response items. SIZE = hotel size measured with the use of an ordinal scale; CHAIN = dummy variable which takes '1' if the hotel belongs to a chain and '0' otherwise; CMAP = usage of contemporary MAPs by the average of the response items; AISUS = user satisfaction with AISs measured by the average of the response items; and CMAP × AISUS = interaction term. δ, ε, and ζ are the error terms.

4. Analysis and Results

4.1. Validity and Reliability Analysis

The thorough literature review, the verification of the questionnaire by academics and executives, and the pilot test confirm the content validity of the research tool. The sampling frame, the use of random sampling, and the absence of non-response bias contribute to the external validity of this research. Additionally, factor analysis using principal component analysis (varimax rotation) was conducted to ensure the construct validity of the instrument. The Kaiser–Mayer–Olkin (KMO) test and Bartlett's test of sphericity were used to confirm suitability for factor analysis. The KMO values were higher than 0.50 (Hair et al. 2014) and the results of Bartlett's sphericity test were significant for all multi-item constructs (Table 3).

Table 3. Results of the Kaiser–Meyer–Olkin and Bartlett's test.

	Kaiser–Meyer–Olkin	Bartlett's Test of Sphericity	Sig.
HP	0.953	1851.559	0.000
CMAP	0.806	1216.544	0.000
AISUS	0.853	391.257	0.000

Furthermore, based on the results of the factor analysis (Table 4), four items of the CMAPs usage construct (CMAP4, CMAP9, CMAP10, and CMAP11) were eliminated from the analysis as they did not exhibit loadings higher than 0.50. All factors had eigenvalues greater than 1. The internal consistency was examined using Cronbach's alpha. According to Hair et al. (2014), the lowest acceptable threshold was set at 0.70. In this research, the Cronbach's alpha coefficients for the construct variables ranged from 0.878 to 0.966. Additionally, all items had Corrected Item–Total Correlation (CITC) scores higher than 0.30, and thus remained in the scale. Based on the above validity and reliability analysis, the use of summative scales was warranted.

Table 4. Results of factor and reliability analysis.

	Factor Loadings	Item–Total Correlation	Cronbach's Alpha
HP	0.782–0.908	0.743–0.884	0.966
CMAP	0.378–0.877	0.418–0.638	0.878
AISUS	0.887–0.912	0.678–0.767	0.916

4.2. Correlations

Table 5 reports the Pearson correlation matrix and descriptive statistics of the variables. Hotel performance (HP) has a positive relationship with the usage of contemporary MAPs (CMAP) (r = 0.469, $p \leq 0.01$) and with AIS user satisfaction (AISUS) (r = 0.416, $p \leq 0.01$). Additionally, HP is positively correlated with all control variables. Contemporary MAPs usage (CMAP) is positively and significantly correlated with AIS user satisfaction (AISUS), supporting the suggested relationship between effective IS and innovative MAPs. Moreover, CHAIN is positively and significantly correlated with CMAP (r = 0.170, $p \leq 0.05$). This finding suggests that hotels belonging to chains have adequate human resources (Pavlatos and Paggios 2009), provide relevant training (Jarvis et al. 1998), and are equipped with the necessary IS (Siguaw et al. 2000) to implement and use contemporary MAPs.

Table 5. Correlations, means and standard deviations for the variables.

	HP	CMAP	AISUS	SIZE	CHAIN
HP	1				
CMAP	0.469 **	1			
AISUS	0.416 **	0.644 **	1		
SIZE	0.231 **	0.138	0.116	1	
CHAIN	0.141	0.170 *	0.165 *	0.211 *	1
Mean	3.171	2.826	3.615	2.929	0.213
Std. Dev.	0.744	0.592	0.872	0.753	0.411

* and ** indicate significance at 5% and 1% levels, respectively.

According to the descriptive statistics of the main variables, the mean value of CMAP is 2.826. This result indicates that the extent of contemporary MAPs usage in the Greek hotel industry is moderate, aligning with Hussain et al. (1998), who argue that service sector firms do not extensively use contemporary practices. Moreover, hotel financial and accounting executives are quite satisfied with AIS, as the mean value of AISUS is 3.615.

4.3. Regression Results

An interaction effect should be examined through the traditional MRA approach (Cronbach 1987). Before applying regression analysis, it is recommended that continuous variables comprising the cross-product term be mean-centered. This transformation mitigates the problem of multicollinearity (Jaccard et al. 1990) without affecting the value and the significance of the regression coefficients (Maiga et al. 2014). Therefore, in this study, the continuous variables CMAP and AISUS were mean-centered.

The assumptions of MRA were validated prior to application. In this regard, scatter plots of the residuals against the estimated values were reviewed to verify the assumptions of linearity and homoscedasticity. Based on this examination, no violation of the assumptions was found. In terms of normality, the asymmetry and kurtosis coefficients were reviewed, and the results indicate that the assumption of normality is satisfied. For the absence of autocorrelation, the Durbin–Watson (D-W) statistic test yielded a value of 2.094, supporting the hypothesis of independence of the observations. Finally, the multicollinearity among the independent variables was assessed using the variance inflation factor (VIF) and tolerance (TOL) indicators. Based on the results, no multicollinearity problem was found, as the TOL values were above 0.10 and VIF values were below 10 (Hair et al. 2014). In conclusion, all the required assumptions of MRA are satisfied.

The results of the hierarchical MRA are presented in Table 6. Equation (1) reports the regression results of the control variables on hotel performance. Hotel size has a statistically significant and positive impact on hotel performance ($\alpha_1 = 0.208$, $p = 0.014$), while hotel management status does not affect it significantly ($\alpha_2 = 0.208$, $p = 0.014$). In Equation (2), contemporary MAPs usage has a positive ($\gamma_3 = 0.407$) and statistically significant ($p = 0.001 < 0.01$) effect on hotel performance. Therefore, H_1 is accepted. However, AIS user satisfaction has a positive but not statistically significant impact ($\gamma_4 = 0.159$; $p = 0.055$). In Equation (3), the interaction term of contemporary MAPs usage and AIS user satisfaction affects hotel performance positively and significantly ($\beta_5 = 0.317$, $p = 0.005$). Thus, H_2 is accepted. Moreover, the introduction of the interaction term increased the model's explanatory value (F change = 7.483, $p = 0.007 < 0.01$). The explained variance of the model is 30.8%, which is increased by 3.8% compared to the main effects model, with a significant F-value (F = 11.996, $p = 0.000$). These findings confirm the moderating role of AIS user satisfaction in the relationship between contemporary MAPs usage and hotel performance.

Table 6. Regression results for Hotel Performance.

	Equation (1)		**Equation (2)**		**Equation (3)**	
	a	***p*-Value**	**γ**	***p*-Value**	**β**	***p*-Value**
Constant	2.523	0.000	0.975	0.000	0.770	0.022
SIZE	0.208	0.014	0.159	0.035	0.164	0.026
CHAIN	0.175	0.253	0.039	0.778	−0.012	0.932
CMAP			0.407	0.001	0.422	0.001
AISUS			0.159	0.055	0.173	0.033
CMAP × AIUS					0.317	0.007
R^2	0.062		0.269		0.308	
Adj. R^2	0.049		0.248		0.282	
ΔR^2			0.207		0.038	
F	4.591		12.527		11.996	
***p*-value**	0.012		0.000		0.000	

5. Conclusions

The effectiveness of contemporary MAPs and the synergy of MA and IT have been well documented in the literature. However, limited attention has been given to the role of IT/IS success within this relationship. This study aims to address this research gap by investigating the impact of contemporary MAPs usage in hotel performance and examining the moderating role of AIS success in terms of AIS user satisfaction. The Greek hotel industry was selected as the research context since it contributes significantly to the growth of the national economy, both in terms of Gross Domestic Product (GDP) and employment, as well as its highly competitive, seasonal, and service-diverse environment, which is both labor- (Villar et al. 2012) and information-intensive (Law and Jogaratnam 2005; Huh et al. 2009). Thus, exploring the aforementioned research issues contributes to the existing MA and IS literature within the hotel industry context.

Data from 141 Greek hotels rated as three-, four-, and five-star establishments were analyzed. The descriptive statistics reveal a moderate level of contemporary MAPs usage in Greek hotels, consistent with findings from prior research in the hotel industry (Pavlatos and Paggios 2008; Chand and Dahiya 2010; Santos et al. 2012; El-Shishini 2017). Moreover, this result supports the notion that service firms do not use contemporary MAPs extensively, despite the known limitations of traditional systems (Hussain et al. 1998). Therefore, although the need for high-quality management accounting information is well recognized, this study suggests that certain barriers to the widespread adoption and use of contemporary MAPs persist.

According to the results of hierarchical MRA, the direct effect of contemporary MAPs usage on hotel performance is positive and significant. This result implies that accurate and timely MA information from contemporary MAPs enhances hotel performance in both

financial and non-financial terms. Moreover, it also confirms the relevant literature and is consistent with the results of previous studies (Nuhu et al. 2017; Vărzaru et al. 2022). Additionally, the positive but insignificant relationship between AIS user satisfaction and hotel performance suggests a lack of direct effect, indicating that AIS usage may serve as a mediator in this relationship, aligning with the ISSM framework. Similar findings were reported in the studies of Gelderman (1998) and Diavastis et al. (2016).

Critically, this study's findings propose that the interaction of contemporary MAPs usage and AIS user satisfaction has a significant positive impact on hotel performance. This outcome aligns with Contingency Theory and the interaction approach, which propose that MCS and contextual factors may be combined to affect performance. Consequently, when financial managers receive detailed, timely, and relevant MA information through innovative and sophisticated MAPs, and at the same time are satisfied with the AIS, they can achieve better operational control and make improved managerial decisions, leading to enhanced hotel performance.

In summary, this study confirms that the extensive usage of contemporary MAPs contributes to better organizational performance and highlights the importance of using and evaluating MAPs as an integrated set of practices. Moreover, the intersection of MA and IT and its positive implications on firm performance are confirmed, indicating a strong two-way relationship that affects organizational efficiency. Finally, the findings emphasize that among other IS attributes, such as usage, integration, investments and sophistication, ease of use, and usefulness, user satisfaction is a key driver in achieving the effective use of MAPs.

This study extends the prior literature in several ways. The investigation of contemporary MAPs usage by Greek hotels fills a gap in empirical research, since there is a shortage of studies that have examined MAPs in the hotel industry (Campos et al. 2022). By examining the usage of contemporary MAPs as a package of practices, this study addresses concerns raised by Chenhall (2003) who stated that analyzing isolated MCS elements can be misleading. Moreover, the research results confirm the assertion that the extended use of contemporary MAPs leads to improved firm performance. Therefore, this study contributes empirically to this research stream, addressing the concerns of Nuhu et al. (2016) about questionable results. Additionally, this study contributes to MA research by examining the intersection of IT and MA (Arnold and Sutton 2001; Zawawi and Hoque 2010), particularly in the hotel industry (Park and Jang 2014). Hierarchical MRA results show that AIS user satisfaction, as a surrogate of AIS success, is an essential enabler of contemporary MAPs usage, reinforcing its importance when evaluating MA outcomes. Finally, this study develops a new research framework combining Contingency Theory through the interaction approach and the IS Success Model of DeLone and McLean (1992, 2003). Therefore, new research opportunities are created by mixing theories and methods from these fields.

The empirical findings of this study provide valuable insights for financial managers and IT executives, particularly within the hotel industry context. Based on these findings, financial managers are encouraged to implement a comprehensive set of contemporary and sophisticated MAPs and ensure their satisfaction with the AIS, especially in terms of information quality. By doing so, they can leverage accurate and useful MA information to support effective and efficient decision-making. Furthermore, the results suggest that financial managers and AIS developers should collaborate to maximize user satisfaction with the system. Under these conditions, the use of contemporary MAPs will be more effective, leading to better managerial and organizational performance.

6. Limitations and Further Research

This research is not free of limitations. To minimize cross-industry bias, this study focuses solely on the hotel industry. This choice was made to increase the internal validity of the analysis of the results (Ax and Greve 2017). Moreover, while the sample size is sufficient for MRA and the response rate is considered satisfactory for MA research, these

findings should be generalized cautiously beyond the hotel sector. Future research is encouraged to test this model in other high-competition and high-information-demand industries to validate its generalizability.

The use of subjective data to assess hotel performance may suggest another limitation of this study. Although subjective measures are regarded as reliable (Abernethy and Guthrie 1994; Perera et al. 1997), combining objective and subjective measures could strengthen the reliability and validity of the results. Furthermore, the research sample was a barrier for the application of more advanced statistical techniques such as Structural Equation Modeling (SEM) since it requires a sample of at least 200 observations (Hoe 2008). Finally, the application of DeLone and McLean's ISSM in MA research could guide further exploration into IT–accounting synergy.

Funding: This research received no external funding.

Data Availability Statement: The data presented in this study are available on request from the corresponding author.

Conflicts of Interest: The authors declare no conflicts of interest.

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