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Adoption and impact of marketing performance assessment systems among travel agencies

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Purpose

The purpose of this paper is to assess whether travel agencies that implement comprehensive marketing performance assessment systems (MPASs) enjoy superior overall performance. Drawing on the Knowledge-Based View, we propose and test a model demonstrating that the relationship between MPASs and overall performance is fully mediated by the depth of market-related knowledge absorbed by the travel agency.

Design/methodology/approach

A survey was administered to a sample of Italian travel agencies; 171 complete questionnaires were received. The suggested relationships were assessed using a covariance-based structural equation modeling approach, including the estimation of both the measurement model and the structural model.

Findings

The findings indicate that the implementation of sophisticated MPASs has a significant and positive effect on performance and that this relationship is fully mediated by the depth of market-related knowledge absorbed by the travel agency. In addition, the results highlight that the number of marketing metrics monitored by the travel agency has no effect on its performance.

Research limitations/implications

The specific features of the travel agency sector in Italy include a remarkable level of fragmentation. The cross-sectional design does not permit an assessment of the medium-term effects of the adoption of an MPAS.

Practical implications

Travel agencies selecting proactive marketing strategies can particularly benefit from the adoption of sophisticated MPASs. Suggestions are provided to assist managers in designing their MPAS.

Originality/value

This study enriches the field's knowledge about marketing performance measurement and proactive marketing strategies and indicates that the implementation of well-designed marketing performance assessment systems improves a firm's overall performance. It also explains the knowledge-related processes that produce this positive effect.

Keywords: marketing performance measurement, travel agencies, marketing metrics, performance assessment, tourism.

Research paper

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Introduction

Challenged by growing competition and market saturation, tourism and hospitality firms are increasingly focusing on proactive marketing strategies to reinforce their competitive position (Alonso-Almeida *et al.*, 2015; Alonso-Almeida and Bremser, 2013; Becerra *et al.*, 2013; Kandampully *et al.*, 2015). In particular, both traditional and online travel agencies are taking specific marketing actions to react to the severe structural changes that have affected their sector (Dolnicar and Laesser, 2007; Huang, 2013; Huang *et al.*, 2009; Inversini and Masiero, 2015; Law *et al.*, 2015; Lawton and Weaver, 2009). This sector has reached a mature stage in several developed countries (Avci *et al.*, 2011), and the development of the Internet as a new distribution channel has profoundly changed both the buying habits of tourists and the distribution strategies of tourism and hospitality firms (Alvarez *et al.*, 2007; Law *et al.*, 2004; Law *et al.*, 2015; Lawton and Weaver, 2009).

Travel agencies that focus on proactive marketing strategies enjoy superior customer satisfaction, higher financial results, and a competitive advantage (Avci *et al.*, 2011). The successful implementation of these proactive marketing strategies (Seilov, 2015) requires frequent adjustments of resource allocation across alternative marketing programs to optimize the effectiveness and efficiency of marketing investments and, in turn, improve overall firm performance (Bruni *et al.*, 2014). These strategies are based on the ability to collect real-time measures of marketing performance and to use them to enhance marketing decisions (Bruni *et al.*, 2014; Ozkaya *et al.*, 2015).

Experience-based performance measures have already been adopted in the travel agency sector (Huang, 2008), and some travel agencies are collecting real-time data on the impact of their marketing actions (Almunawar *et al.*, 2013). However, several studies have highlighted that these data are useless if proper mechanisms to factor this information into decision making are not established beforehand (Almunawar *et al.*, 2013; McManus, 2013). Recent research (Frösén *et al.*, 2013; Homburg *et al.*, 2012) suggests that the successful implementation of proactive marketing strategies requires the adoption of a comprehensive Marketing Performance Assessment System (MPAS), which consists of a set of formalized routines and procedures that use the information collected through a set of marketing metrics

to improve the effectiveness and efficiency of marketing investments, with the final purpose of enhancing the firm's performance.

No study has demonstrated the existence of a relationship between the adoption of a well-designed MPAS and firm performance in the travel agency and tourism sectors or in other fields. Therefore, the purpose of this paper is to investigate whether travel agencies that adopt a sophisticated MPAS enjoy higher overall performance than other travel agencies. More precisely, applying the Knowledge-Based View (KBV) to tourism firms (Okumus, 2013), this study proposes a model in which the impact of MPAS on travel agency performance is fully mediated by the depth of market-related knowledge gained by the travel agency.

Demonstrating the existence of this effect will fill a significant theoretical gap regarding marketing performance measurement and knowledge use among tourism firms. In addition, the findings will provide travel agencies (and other firms) with guidance on how to design their MPASs to improve their overall performance.

In the remainder of the paper, we introduce the theoretical framework and develop our model. We then describe the method, present the results, and highlight the implications and conclusions.

Theoretical framework

Marketing performance measurement has no effect on firm performance if it is not a systematic process (Eusebio *et al.*, 2006) and if the mechanisms to use the collected information to enhance decision-making are not previously established (Järvinen and Karjaluoto, 2015; McManus, 2013). Consequently, recent studies have suggested that firms should adopt an MPAS, which should specify the routines and procedures that support the integration of the information collected into marketing decision-making (Frösén *et al.*, 2013). A well-designed MPAS will enhance the effectiveness and efficiency of a firm's marketing investments via several mechanisms by providing data inputs for planning and decision making, offering timely feedback on marketing strategy implementation, and signaling marketing priorities (Homburg *et al.*, 2012; Morgan *et al.*, 2007).

However, there is still no evidence that adopting a sophisticated MPAS positively influences a firm's overall performance. To close this gap, we suggest a model that adopts a KBV of the firm (Grant, 1996). KBV states that the performance of the firm is related to its ability to absorb and manage knowledge. In particular, acquiring market-related knowledge is fundamental to enhancing the firm's market response capability and, thus, its performance (Cui and Wu, 2015; Jayachandran *et al.*, 2004). In detail, market-related knowledge "is the

knowledge about customers and competitors" necessary to understand target markets and to satisfy these markets better than the competition (Marinova, 2004, p.3).

Drawing on these premises, our model posits that an MPAS will improve a travel agency's performance if it is able to provide the firm with usable in-depth knowledge about the market. In other terms, we posit the existence of a positive relationship between the level of sophistication of the MPAS and the travel agency's performance, and we suggest that this relationship is fully mediated by the depth of market-related knowledge that is allowed by the MPAS.

Model development

To impact firm performance, market-related information should be transformed into relevant and usable knowledge (Ozkaya *et al.*, 2015) via appropriate rules and routines (Grant, 1996). A sophisticated MPAS sets specific procedures and routines to process the information collected through marketing metrics, with the aim of providing decision-makers with managerially actionable knowledge (Frösén *et al.*, 2013).

In detail, a sophisticated MPAS specifies which performance dimensions should be measured, through which indicators and with which frequency; establishes a target level of performance to be met for each indicator; clearly identifies who in the organization is in charge of preparing reports about the monitored indicators; establishes with what frequency and level of detail those reports should be produced; and identifies who is charge of evaluating the results contained in the reports and make the related decisions (Bruni *et al.*, 2014; Frösén *et al.*, 2013; Homburg *et al.*, 2012; O'Sullivan and Abela, 2007). Therefore, we propose the following hypothesis:

H1: An MPAS's level of sophistication positively influences the depth of market-related knowledge gained by the travel agency.

Previous studies about knowledge management in hospitality organizations have shown that the absorbed knowledge has the potential to improve the quality of decision making (Okumus, 2013). More specifically, using market-related knowledge enables a travel agency to respond quickly to early signs of opportunities and changes in customer preferences, thus improving its overall performance (Avci *et al.*, 2011; Chen and Myagmarsuren, 2013; Shah *et al.*, 2015). In addition, knowledge about the effects of specific marketing actions can be used by decision-makers to optimize the performance of their marketing programs, thus improving the

overall performance of the travel agency (Eusebio *et al.*, 2006). Therefore, we posit the following hypothesis:

H2: The depth of market-related knowledge gained by the travel agency positively influences travel agency performance.

As stated above, we posit that the depth of knowledge about customers and competitors gained by the travel agency fully mediates the effect of the MPAS's level of sophistication on travel agency performance. This statement is consistent with the KBV, which specifies that the performance of a firm is dependent on the absorbed knowledge (Grant, 1996; Wiklund and Shepherd, 2003; Zhou and Li, 2012). Therefore, the adoption of a sophisticated MPAS will not impact travel agency performance directly. Rather, it will impact performance only through its positive effect on absorbed knowledge. Therefore, we suggest the following:

H3: The depth of market-related knowledge gained by the travel agency fully mediates the impact of the MPAS's level of sophistication on travel agency performance.

Method

A cross-sectional design relying on a questionnaire-based survey was used. The questionnaire was structured into two sections. The first section included questions about the demographic characteristics of the travel agencies, covering aspects such as the number of employees, revenue, the use of offline and/or online channels, and the type of customers (consumers and/or business customers). In addition, respondents were given a list of 20 marketing metrics derived from previous studies (Avci *et al.*, 2011; Bruni *et al.*, 2014) and asked to indicate the metrics adopted by their travel agencies. For the selected metrics, participants were also required to report the frequency of measurement (monthly or more frequently; less frequently than once a month but at least once a year; less frequently than once a year).

The second section of the questionnaire included multiple-item measures of the three main constructs (level of sophistication of MPAS, knowledge depth and travel agency's performance). Most of the items used to measure these three constructs (Table 3) were taken from previous studies, with some adaptations to the specific research setting. The level of sophistication of an MPAS was measured using five items (1 = strongly disagree; 7 = strongly agree) adapted from the "brand management system" construct by Lee et al. (2008) and from the "norms" construct by Baumgarth (2010). Knowledge depth was measured by three items

(1 = strongly disagree; 7 = strongly agree) adapted from Zhou and Li (2012). Finally, the three items used for firm performance (1 = very poor; 7 = outstanding) were developed by O'Sullivan and Abela (2007) and have been widely applied in similar studies (e.g., Ozkaya *et al.*, 2015).

In addition, we included three control variables: travel agency size (number of employees), travel agency age (number of years since foundation) and number of metrics included in MPAS (number of metrics measured at least once a year). This choice is in line with several previous studies that have suggested and reported impacts of travel agency size (Johns *et al.*, 2004; Law *et al.*, 2015; Sellers-Rubio and Nicolau-Gonzálbez, 2009) and travel agency age (Almunawar *et al.*, 2013; Seilov, 2015) on the performance of the travel agency. Similarly, it has been argued that the number of metrics monitored by the firm may have an influence on performance (O'Sullivan and Abela, 2007).

The survey was distributed online to a sample of 2,169 travel agencies in Italy. The contact details for the selected agencies were taken from public lists made available by Italian provinces/regions. In Italy, each travel agency must register on a public list managed by its province/region before beginning operations. Geographical sampling was applied based on the most recent available data about the Italian travel agency sector, which indicates that 29.9% of travel agencies are in the Northwest region, 16.5% are in the Northeast region, 24.6% are in the Central region, and 29% are in the South of Italy (Fiavet and EBNT, 2010). Data were collected in September-October 2014. Reminder e-mails were sent to non-respondents two weeks after the first invitation.

A total of 171 usable answers were received, corresponding to a response rate of 7.88%. Similar to Avci et al. (2011), the low response rate may be due to the small dimensions of the travel agencies. In Italy, each travel agency has 4.2 employees on average, among the smallest in the European Union (Fiavet and EBNT, 2010).

Given the low response rate, non-response bias was estimated by applying two of the methods suggested by Armstrong and Overton (1977). First, we compared the profile of the sample with the whole population of Italian travel agencies on the following key characteristics: number of employees, revenue, geographical location (Northwest, Northeast, Center or South of Italy). Statistics for the population of Italian travel agencies were gathered from the national report edited by Fiavet (Italian federation of travel intermediaries) and EBNT (Italian organization of tourism operators and employees), which is based on official data about each of the Italian travel agencies (Fiavet and EBNT, 2010). No significant difference was found from the comparison.

Second, an extrapolation test was carried out over the two successive waves of the questionnaire, comparing answers collected before and after the reminder e-mails had been sent. This analysis is based on the assumption that people who responded later decided to respond because of the increased stimulus; thus, they are similar to non-respondents (Armstrong and Overton, 1977). The two groups of respondents were compared on several key variables via χ^2 tests and t-tests. This analysis highlighted no significant differences.

The hypotheses were then tested using covariance-based structural equation modeling, which responded to the priority of reproducing the covariance matrix rather than focusing on explained variance (Hair *et al.*, 2011). Before conducting this analysis, data were screened to assess the absence of extreme collinearity and outliers and to check the assumptions of normality, linearity and homoscedasticity (Kline, 2011). First, to detect collinearity, we ran several multiple regressions, each with a different variable as the dependent variable and the others as the independent variables. For all the regressions, R^2 was smaller than the cutoff of 0.90 (Kline, 2011), suggesting that collinearity was not a serious issue. In addition, the absence of outliers was confirmed by analyzing the value of the Mahalanobis distance (D) for each case. Regarding normality, the highest values for skewness and kurtosis were 1.027 and 1.143, respectively, well below the conservative values of 3 and 8 (Kline, 2011). Therefore, we could conclude that the data were normally distributed. Finally linearity and homoscedasticity were checked and confirmed via the examination of the plot of residuals.

Results

Table 1 provides an overview of the characteristics of the travel agencies included in the sample. In particular, the data demonstrate that the vast majority of agencies are small, with fewer than 5 employees and revenues lower than 1 million Euros per year. Hence, the sampled agencies reflect the average small dimension of Italian travel agencies (Fiavet and EBNT, 2010).

(Insert Table 1 about here)

Table 2 presents the results for the types of marketing metrics adopted by the travel agencies and the frequency of measurement. Following Bruni et al. (2014), the metrics have been divided into three classes depending on the level of performance being measured: customer-level, market-level and financial-level performance. On average, each participating travel agency measured its marketing performance with 7.16 metrics once a month or more

frequently and an additional 5.88 metrics at least once a year but less frequently than once a month.

(Insert Table 2 about here)

Before testing the hypotheses, we evaluated the measurement model (Table 3). The confirmatory factor analysis (CFA) showed a satisfying overall goodness of fit (Bagozzi and Yi, 2012; Kaplan, 2009). In detail, χ^2 (df=40) was equal to 53.28, yielding a value of χ^2/df of 1.33, which is below the threshold of 3 (Kline, 2011). More importantly, the χ^2 was nonsignificant (p=0.07), suggesting that the estimated variance-covariance matrix reproduces the sample variance-covariance matrix. In addition, CFI was 0.99 and GFI was 0.94, well above the suggested cutoffs of 0.93 (Bagozzi and Yi, 2012) and 0.90 (Hu and Bentler, 1999), respectively. Finally, RMSEA was 0.04 (pclose=0.596) and SRMR was 0.03, below the recommended threshold of 0.07 for both (Bagozzi and Yi, 2012).

All the standardized factor loadings were greater than the ideal value of 0.70, highlighting good indicator reliability (Bagozzi and Yi, 2012). Composite reliability values ranged from 0.80 to 0.94, beyond the suggested level of 0.70 (Bagozzi and Yi, 2012). In addition, the average variance extracted (AVE) for each latent construct was greater than 0.50, thus confirming adequate convergent validity (Fornell and Larcker, 1981). Finally, the AVE of each latent construct was higher than the construct's highest squared correlation with any other construct, suggesting that discriminant validity was also met (Fornell and Larcker, 1981). Because the validity of the measurement model was confirmed, we were able to use the corresponding latent variables in the structural model.

(Insert Table 3 about here)

We first estimated a model including only the hypothesized structural effects (Model 1 in Table 4 and Fig. 1). The resulting model fit was particularly good. Chi-square (df=41) was 54.35 and, more importantly, nonsignificant (p>0.05). Moreover, the value of χ^2/df was 1.32, which is well below the recommended threshold of 3 (Kline, 2011). CFI and GFI were 0.99 and 0.94, respectively, above the required levels of 0.93 (Bagozzi and Yi, 2012) and 0.90 (Hu and Bentler, 1999). In addition, the values of RMSEA (0.04) and SRMR (0.05) were below the suggested cutoff of 0.07 (Bagozzi and Yi, 2012).

The results show that the MPAS's level of sophistication positively influences the depth of knowledge gained by the travel agency (β=0.312, p<0.01). Therefore, hypothesis 1 is supported. In addition, the depth of market-related knowledge gained by the travel agency has a positive impact on travel agency performance (β=0.336, p<0.01). Therefore, hypothesis 2 is also supported.

We then tested the significance of the indirect effect of the level of sophistication of the MPAS on performance via a Sobel test and obtained a value of 2.54 (p<0.05), which is greater than the cutoff of 1.96 (Kline, 2011; Sobel, 1987). Therefore, it is possible to conclude that the indirect effect of the level of sophistication of the MPAS on performance is significant. In addition, to verify the existence of full mediation, we ran a Chi-square difference test comparing the fully mediated model and the partially mediated model. The results show that adding a direct relation between the MPAS' level of sophistication and performance does not significantly improve the original model ($\Delta\chi^2(1)=1.07$, p>0.10). Therefore, the depth of market-related knowledge gained by the travel agency fully mediates the impact of the MPAS's level of sophistication on travel agency performance, which supports hypothesis 3.

The model was re-estimated by controlling each of the two hypothesized structural effects for size, age and number of metrics. The estimations (Model 2 in Table 4) show that none of the control variables has a significant effect. Hence, the size and the age of the travel agency and the number of metrics included in its MPAS do no influence either knowledge depth or the firm's performance. Moreover, when adding the control variables, the model fit worsened. In detail, while χ^2 ((df=71)=150.78; p<0.01) and CFI (0.95) were acceptable, GFI (0.89), RMSEA (0.08) and SRMR (0.11) were below the required minimum levels (Bagozzi and Yi, 2012; Hu and Bentler, 1999). Therefore, Model 1 was preferred over Model 2.

(Insert Table 4 about here)

(Insert Figure 1 about here)

Discussion

Theoretical implications

The results of this study enhance the literature in several different ways.

First, these findings contribute to enrich previous studies (Avci *et al.*, 2011) that have demonstrated that travel agencies that act as prospectors, i.e., those that are flexible and proactive, enjoy a higher level of performance. In particular, this study shows that the adoption of sophisticated MPASs allows travel agencies to absorb real-time market-related knowledge, with a positive effect on overall performance. Hence, this research also enriches Huang's (2013) barriers-advantage model describing travel agency performance. In particular, by developing a sophisticated MPAS, a travel agency can reduce the impact of one of the most relevant external barriers identified by Huang – the lack of an understanding of market needs – and establish a sustainable competitive advantage. Moreover, the results of this analysis complement those of other recent studies (Law *et al.*, 2015) suggesting that small travel agencies may suffer in the current scenario. We determined that the size of a travel agency will not have a direct impact on its performance if it adopts a well-designed MPAS.

Second, this research contributes to extending available knowledge on marketing performance measurement among tourism firms. Previous studies in this field have focused on either measuring the performance of specific marketing programs (e.g., Cassia *et al.*, 2015) or providing overviews of the marketing metrics used by tourism firms and of related current practices, emphasizing the importance of measuring marketing performance (Bruni *et al.*, 2014; Eusebio *et al.*, 2006). However, the available research has not provided empirical evidence that measuring marketing performance has a positive effect on a firm's overall performance. This analysis closes this gap by describing the conditions (i.e., the adoption of a sophisticated MPAS) and processes (i.e., knowledge absorption) that allow this positive effect to occur.

Third, findings from this research contribute to the growing number of studies about knowledge management in tourism organizations in general (Okumus, 2013) and in travel agencies in particular (Yiu and Law, 2015) by providing empirical evidence (Hallin and Marnburg, 2008). Specifically, the mediating role of knowledge depth found in this analysis confirms that knowledge is a fundamental source of a firm's competitive advantage. In addition, the results indicate that a well-designed MPAS facilitates the creation of valuable knowledge, thus improving a firm's overall performance. Hence, establishing formal rules, policies and processes (such as those included in an MPAS) is crucial for successful knowledge management (Okumus, 2013). Hence, the findings of this study also corroborate other analyses by highlighting the importance for tourism firms of focusing on competitive intelligence, i.e. setting up a set of activities for "gathering, analyzing, and disseminating of data, information, or knowledge" (Köseoglu *et al.,* 2016, p. 162).

Finally, as encouraged by Morosan et al. (2014), the results of this hospitality marketing research can be extended to mainstream marketing literature. Available studies in the marketing field have sought a direct effect of the type and number of adopted metrics on firm performance and obtained mixed results (e.g., Frösén *et al.*, 2013; Katsikeas *et al.*, 2016). Our study explains previously inconclusive results by demonstrating that collected data improve firm performance only if the firm has specific previously established rules and routines to factor data into decision-making. Therefore, it is not surprising that a significant direct effect of the type and the number of metrics on firm performance did not emerge in previous research. However, the importance of carefully selecting the most effective marketing metrics should not be neglected. In fact, the selection of marketing metrics represents one of the building blocks of a successful MPAS.

Managerial implications

The results of this study provide managers of travel agencies (as well as other tourism firms) with insights about both the practical benefits of adopting sophisticated MPASs and the design of MPASs.

Adopting a sophisticated MPAS can improve a travel agency's performance by enabling the absorption of usable market-related knowledge. In particular, a well-designed MPAS is fundamental for travel agencies that are selecting proactive marketing strategies to focus on anticipating and quickly adapting to market changes. These strategies require significant marketing investments, and the knowledge provided by an MPAS enables the real-time optimization of the effectiveness and efficiency of marketing resources to improve overall firm performance.

Managers should also be aware that designing a successful MPAS is more complex than just deciding the type and number of metrics to monitor. Designing a sophisticated MPAS requires establishing rules and routines for analyzing and reporting data about the performance of the travel agency's marketing activities. In addition, the people in charge of evaluating the trends highlighted by the marketing indicators and the target level of performance for each indicator should be clearly identified. In particular, the results of this study also warn managers that adopting a higher number of marketing metrics will not necessarily improve the overall performance of the travel agency if routines and procedures to analyze and manage the collected information are not formalized through an MPAS.

The results also highlight that the metrics included in a MPAS and the frequency of monitoring are firm-specific. Each travel agency should develop its own MPAS based on its

resources, competencies and routines in absorbing knowledge. This study indicates that travel agency performance is not directly dependent on agency size. Both small-sized and medium/large-sized travel agencies may enjoy superior performance if they develop their own successful MPASs.

Conclusions and limitations

While previous studies have suggested that measuring firm performance should be a priority for travel agencies, this paper provides empirical evidence that travel agencies that adopt a sophisticated system to measure and monitor their marketing results enjoy higher overall performance. In particular, this research demonstrates that this effect is fully mediated by the level of market-related knowledge absorbed by the travel agency through the adopted MPAS. Therefore, this research also provides further evidence of the effectiveness of the knowledge management framework in explaining how travel agencies establish their competitive advantage. Overall, this study emphasizes that the adoption of a sophisticated MPAS is integral to the implementation of successful proactive marketing strategies because it facilitates the real-time optimization of marketing decisions. Finally, setting up well-designed MPAS may require significant efforts to establish a marketing-performance-oriented culture in the firm.

Although this study has focused on the travel agency sector, its findings may be generalized to other industries where – similar to the travel agency sector – high levels of market uncertainty urge firms to adopt proactive marketing strategies. However, caution is needed in extending the results to other sectors because the setting of this research has some specific characteristics. In particular, the travel agency sector in Italy is characterized by a high level of fragmentation and small average size.

Some other limitations of this study should be mentioned. First, participants provided their own assessments of their travel agency's performance. Although this practice is consistent with previous studies (Avci *et al.*, 2011), replicating this analysis with objective measures of travel agency performance may be fruitful. Similarly self-reported measures were used for the other constructs, thus potentially limiting the external validity of the results of this study. Second, while the choice of the cross-sectional design provided strong evidence of the suggested relationships, a longitudinal approach would have provided a more comprehensive overview of the medium-term effects of the adoption of an MPAS. These limitations represent opportunities for new studies. Future research may also compare how different travel agencies designed their MPASs by considering specific routines, rules and organizational processes

and their effectiveness. Moreover, it would be fruitful to replicate this study in other countries and in other hospitality and tourism sectors, thus enriching the model with country- and industry-specific aspects. Finally, this study has focused on the collection and application of market-related knowledge. Therefore, future studies should examine the impact of alternative knowledge-sharing mechanisms within the travel agency.

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Table 1 – Descriptive statistics of the sample

	Frequencies (n = 171)
Number of employees	
1 to 5	121 (70.7%)
6 to 10	21 (12.3%)
11 to 20	16 (9.6%)
21 to 50	6 (3.5%)
More than 50	7 (3.9%)
Revenues (2013)	
<€250,000	51 (29.7%)
€250,000-€500,000	44 (25.8%)
€500,001-€1,000,000	39 (22.8%)
€1,000,001-€2,500,000	21 (12.3%)
€2,500,001-€5,000,000	8 (4.7%)
>€5,000,000	8 (4.7%)
Customers	
100% BtoC	34 (19.9%)
Predominantly BtoC	111 (64.9%)
Predominantly BtoB	24 (14%)
100% BtoB	2 (1.2%)
Role of the respondent	
Marketing manager	19 (11.1%)
Sales manager	35 (20.5%)
Brand manager	9 (5.3%)
Revenue manager	5 (2.9%)
Travel agency director	98 (57.3%)
Other roles	5 (2.9%)
Type of business	
Pure travel agency	51 (29.7%)
Travel agency and tour operator	120 (70.3%)
Sales channels used by the agency	
Offline	100 (58.5%)
Offline and Online	71 (41.5%)

Table 2 – Marketing metrics adopted by the travel agencies

Level of Analysis	Object being measured	Metric	Adopted			Not Adopted
			Measured once a month (or more often)	*Measured at least once a year (and less than monthly)*	*Measured less frequently*	
Customer level	**Attitude**	Customer satisfaction (index)	128 (74.9%)	31 (18.1%)	10 (5.8%)	2 (1.2%)
		Brand reputation	114 (66.7%)	38 (22.2%)	17 (9.9%)	2 (1.2%)
		Brand awareness	56 (32.7%)	56 (32.7%)	35 (20.6%)	24 (14%)
	Behavior	Customer loyalty	96 (56.1%)	60 (35.1%)	8 (4.7%)	7 (4.1%)
		Number of customers	85 (49.8%)	50 (29.2%)	24 (14%)	12 (7%)
		Number of new customers	83 (48.5%)	52 (30.4%)	21 (12.3%)	15 (8.8%)
		Average booking value	61 (35.7%)	63 (36.8%)	24 (14%)	23 (13.5%)
		Number of complaints	58 (33.9%)	48 (28.1%)	38 (22.2%)	27 (15.8%)
		Conversion rate	41 (24%)	52 (30.4%)	41 (24%)	37 (21.6%)
Market level	**Competitive performance**	Market share	22 (12.9%)	56 (32.7%)	39 (22.8%)	54 (31.6%)
Firm financial Level	**Output/Input ratios**	Cost per booking	53 (31%)	51 (29.8%)	35 (20.5%)	32 (18.7%)
		Cost of customer acquisition	31 (18.1%)	43 (25.1%)	44 (25.8%)	53 (31%)
	Financial indicators	Revenues	94 (55%)	54 (31.6%)	17 (9.9%)	6 (3.5%)
		Commissions from suppliers (other than tour operators)	84 (49.1%)	52 (30.4%)	22 (12.9%)	13 (7.6%)
		Commissions from tour operators	83 (48.5%)	46 (26.9%)	23 (13.5%)	19 (11.1%)
		Contribution margin	42 (24.6%)	54 (31.6%)	37 (21.6%)	38 (22.2%)
		Return on sales (avg. % of operating profit margin)	35 (20.5%)	53 (31%)	35 (20.5%)	48 (28%)
		Return on investment (ROI)	26 (15.2%)	49 (28.7%)	40 (23.4%)	56 (32.7%)
		Return on marketing investments (ROMI)	22 (12.9%)	48 (28.1%)	44 (25.7%)	57 (33.3%)
		Customer lifetime value (CLV)	19 (11.1%)	49 (28.7%)	40 (23.4%)	63 (36.8%)

Table 3 – The measurement model

Construct	Item	Mean	S.D.	C.R.	Factor Loading
Level of sophistication of MPAS (AVE: 0.77; C.R.: 0.94)	*In our travel agency we have:*				
	MPAS_1 – A target level of performance to be met for each indicator	3.65	1.87	13.45	0.80
	MPAS_2 – A routine reporting system for all marketing activities	3.75	1.92	17.34	0.92
	MPAS_3 – A detailed analysis for each marketing activity	3.63	1.88	19.19	0.97
	MPAS_4 – One or more persons who are in charge of producing reports about the trends of the major marketing indicators	3.30	2.00	35.44	0.85
	MPAS_5 – One or more persons who are in charge of evaluating the trends of the major marketing indicators	3.32	2.02	/	0.86
Knowledge depth (AVE: 0.57; C.R.: 0.80)	Kn_1 – We have in-depth knowledge about our market	5.23	1.44	8.53	0.75
	Kn_2 – We have updated knowledge about market trends	5.39	1.34	8.70	0.78
	Kn_3 – Our knowledge of our customers is thorough	5.39	1.37	/	0.74
Performance (AVE: 0.81; C.R.: 0.93)	*Please indicate your firm's performance over the last year relative to all other competitors in the primary market that you serve:*				
	Per_1 – Sales growth	4.55	1.47	15.30	0.99
	Per_2 – Market share	4.66	1.44	14.44	0.91
	Per_3 – Profitability	4.43	1.51	/	0.80

Table 4 – The structural models

	Model 1 (final model)			Model 2		
	Unst. Coeff.	SE	Std. Coeff.	Unst. Coeff.	SE	Std. Coeff.
Hypotheses						
MPAS→Knowledge	0.183**	0.051	0.312	0.233**	0.052	0.385
Knowledge→Performance	0.478**	0.123	0.336	0.465**	0.118	0.338
Controls						
Size→Knowledge				-0.055	0.059	-0.074
Size→Performance				-0.107	0.075	-0.105
Number of metrics→Knowledge				-0.033	0.018	-0.148
Number of metrics→Performance				0.035	0.023	0.116
Age→Knowledge				-0.005	0.007	-0.057
Age→Performance				-0.010	0.010	-0.076
Model fit						
χ^2	54.35, df=41, p>0.05			150.78, df=71, p<0.01		
RMSEA	0.04 [0.00-0.07], pclose>0.05			0.08 [0.06-0.09], pclose<0.01		
CFI	0.99			0.95		
GFI	0.94			0.89		
SRMR	0.05			0.11		

* *p<0.01.

Fig. 1 – The final model