The impact of potential knowledge absorptive capacity on marketing innovation

El impacto de la capacidad de absorción potencial del conocimiento sobre la innovación en marketing

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Abstract

Commercial and marketing resources are available strategies that promote the innovation process if they are also linked to external knowledge sources. The purpose of this article is to analyze the positive or negative effect of the potential absorption capacity of external knowledge (CAP) and each of its dimensions (Acquisition and assimilation) on marketing innovation. The sample used is made up of 134 companies of Colombia, tourism sector (hotels, restaurants and travel agencies) and to test the hypotheses of the study, a structural model was used, using the Smart-PLS program. The results of this study show that the ability to potentially absorb new knowledge in tourism businesses positively influences the results of marketing innovation due to the importance of new information in the adoption of new strategies, promotion, marketing, and sales. of tourism products and / or services, concluding as such, that the potential absorption capacity of external knowledge once acquired and assimilated by individuals emerges significantly to promote results of marketing innovation in the organizational strategies of tourism companies.

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Keywords: : absorptive capacity; external knowledge; innovation in marketing; tourism

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Resumen

Los recursos comerciales y de marketing son estrategias disponibles que promueven el proceso de innovación, si también se vinculan a las fuentes de conocimiento externo. El propósito de este artículo es analizar el efecto positivo o negativo de la capacidad de absorción potencial del conocimiento externo (CAP) y de cada una de sus dimensiones (Adquisición y asimilación) sobre la innovación en marketing. La muestra utilizada está conformada por 134 empresas del sector turístico (hoteles, restaurantes y agencias de viajes) de Colombia, y para contrastar las hipótesis del estudio, se utilizó un modelo estructural, mediante el programa Smart -PLS. Los hallazgos de este estudio muestran que la capacidad absorber potencialmente nuevo conocimiento en las empresas turísticas, influye positivamente sobre los resultados de la innovación en marketing debido a la importancia que ejerce la nueva información en la adopción de nuevas estrategias, de promoción, comercialización y venta de productos y/o servicios turísticos, concluyendo como tal, que la capacidad de absorción potencial del conocimiento externo una vez se adquiere y asimila por los individuos emerge de manera significativa para promover resultados de innovación en marketing en las estrategias organizativas de las empresas turísticas.

Código JEL: Z31, Z33, Z39
Palabras clave: : capacidad de absorción; conocimiento externo; innovación en marketing; industria turística

Introduction

Absorptive capacity is an important dynamic determinant in developing a company's innovation capacity (Cepeda-Carrión, Cegarra-Navarro, & Jimenez-Jimenez, 2012). Thus, the need to perceive market changes and generate innovations due to the capacity to absorb new external knowledge results in a competitive advantage if oriented toward continuous improvement processes involving innovations and differentiation (Engelman, Fracasso, Schmidt, & Zen, 2017). Accordingly, approaches based on dynamic capabilities encourage companies to reconfigure existing organizational knowledge, and the absorptive capacity as an antecedent of this knowledge guides the application of external expertise to enable companies to value, transform, and apply this knowledge (Cohen & Levinthal, 1990).

Thus, some studies show how the processes of knowledge acquisition and utilization influence knowledge management and the competitive performance of companies (Tomas & Wood, 2015) and the importance of the ability to acquire and assimilate new external knowledge in the ability to absorb and leverage information from the environment and use it for innovative purposes (Zhara & George, 2002; Forés & Camisón, 2016), thereby ensuring results in their marketing strategies (Xiong & Bharadwaj, 2011). To this end, it is possible to find some studies on the effects of innovation due to the capacity to absorb knowledge (Nieto and Quevedo, 2005; Arbussà and Coenders, 2007; Grimpe and Sofka, 2009; Murovec and Prodan, 2009; Rothaermel and Alexandre, 2009; Camisón and Forés 2010; Lewin, Massini and Peeters, (2011); Kostopoulos, Papalexandris, Papachroni, Ioannou, Milwood, & Zach, 2016; Zobel,

2017; Engelman et al., 2017), channeling those deployed from marketing innovation strategies (Tzokas, Kim, Akbar, & Al-Dajani, 2015; Najafi-Tavani, Sharifi, & Najafi-Tavani, 2016; Medase & Barasa, 2019).

Tzokas et al. (2015) raise the interaction between a company's absorptive capacity (ACAP) and its technological and customer relationship capabilities to contribute to organizational performance. These authors use structural equation modeling to assess the effects of external knowledge absorption on performance mediated by different marketing capabilities, highlighting the importance of these capabilities for developing innovative business relationship skills. On the other hand, Medase and Barasa (2019) investigate how absorptive capacity and commercialization capabilities are associated with the commercialization of innovative products in manufacturing and service firms.

In turn, Najafi-Tavani et al. (2016) indicate that marketing capabilities are driven by two phenomena in the context of innovation: on the one hand, the commercialization of the new product that involves market research and advertising, and on the other hand, those marketing innovation activities that involve the modification and adaptation of the product to the market, such as changes in the image, packaging, and design, and new lines of distribution, among others.

Thus, some research that analyzes the effect of the absorptive capacity of external knowledge on some types of innovation can be found, specifically in processes (Murovec and Prodan, 2009), technology (Petraite, 2010; Cepeda-Carrion et al., 2012), and in products and services (Stock et al. 2001; Hervas-Oliver & Albors-Garrigos, 2009; Hervas-Oliver, Garrigos, and Gil-Pechuan, 2011; Kostopoulos et al. 2011; Aliasghar, Rose & Chetty, 2019), with research carried out in the industrial sector being even more frequent in terms of application (Aguilar-Olaves, Herrera, & Clemenza, 2012). In contrast, studies in other economic sectors, such as tourism (Cruz, Guerrero, & Miquel, 2018), which necessarily require efforts in marketing for the commercialization of products and the provision of tourism services, are less common. To this end, this research aims to analyze the effect or lack thereof of the potential absorptive capacity of external knowledge on marketing innovation in the tourism sector. Therefore, the study question to be posed is: To what extent does the Potential Absorption Capacity of external knowledge have an effect or lack thereof on innovation in marketing? And, in turn, on each of its aspects of acquisition and assimilation?

Thus, research on the potential absorption capacity of knowledge due to innovations with a commercial/marketing impact is still limited in these areas of knowledge and even more so in tourism. Hence, judgments on such relationships require further attention, as there is no clarity as to how these firms can create competitive advantages in product and service innovation by drawing on external sources of knowledge (Zobel, 2017; Vázquez, Fernández, & Félix, 2017) and improved marketing capabilities (Murray & Kotabe, 2011). Also, the little attention that marketing innovation has received and the lack of empirical studies that investigate the effect of knowledge absorption capabilities on this type of non-

technological innovation should be pointed out (Guerrero-Sánchez, 2017; Zobel, 2017; Vázquez et al., 2017; Cruz, Guerrero, & Miquel, 2018).

This article responds to the calls of the existing literature on the subject. It contributes to it because it presents empirical evidence of the value of this relation, particularly in the Colombian tourism sector, by analyzing whether the potential absorptive capacity of external knowledge has a significant impact or not on innovation in marketing, variables that have been little explored in this sector, applying Structural Equation models. To fulfill the purpose of this study, the development of the article involves, firstly, the empirical background of the variables under study to support the hypotheses based on previous literature; secondly, the methodology used to test the hypotheses of the structural model is presented; subsequently, the results obtained are shown. Finally, the study's findings are stated, and the main conclusions of the research are presented.

Review of literature and hypothesis statement

The capacity to absorb external knowledge and its dimensions (acquisition and assimilation)

The literature not only argues that the absorptive capacity of external knowledge is the ability to recognize, identify, and acquire the value of new knowledge to internalize it in organizational processes and exploit it for commercial purposes (Zhara & George, 2002; Abussa & Coenders, 2007; Ali, Kan, & Sarstedt, 2016) but also proposes a framework for analyzing its components. Zahra and George (2002) strengthened this concept by analyzing each of its components: Potential Absorptive Capacity (PAC) and Realized Absorptive Capacity (CAR); the purpose of the former is to recognize, acquire, and assimilate the real needs of the market to achieve better innovative performance in companies (Eisenhardt & Martin, 2000; Morgan, Vorhiesb, & Mason, 2009; Forés & Camisón, 2016; Zobel, 2017).

For Lewin, Massini, and Peeters (2011), the potential absorptive capacity is a skill that relates to the environment in search of new knowledge once the acquired and assimilated information is valued. In line with the approaches of Zhara and George (2002), acquisition capability is defined as the recognition and understanding of potentially valuable external knowledge that resides outside the organization. Both studies highlight the importance of organizational routines, and from another perspective, the importance of individuals' prior knowledge is also expressed (Cohen & Levinthal, 1990) since the relation of companies with stakeholders makes it possible to obtain new knowledge and better technological capabilities than their rivals or competitors that are less in touch with the topic (Kostopoulos et al., 2011).

On the other hand, Zhara and George (2002) indicate that the capacity to assimilate knowledge is useful to direct processes and routines with the newly acquired knowledge, whether analyzed, processed, interpreted, understood, or internalized, since assimilation is defined as the capacity to store and efficiently manage knowledge (March 1991) and gains value through systematization, processing, process operability, and intuition in decision making, with these two dimensions thus forming the potential absorption capacity of external knowledge.

The potential absorption capacity of external knowledge

Interactions external to companies make it possible to capture knowledge available in the organizational environment and integrate it, through various assimilation mechanisms, into the company's knowledge and innovation dynamics. Such mental processes of knowledge assimilation enable problem-solving and different learning competencies found internally and externally in the organization (Amara, Landry, & Traoré, 2008; Cohen & Levinthal, 1990; Zahra & George, 2002). Therefore, acquiring and assimilating new external knowledge enables the ability to absorb and potentiate knowledge from the environment (Zhara & George, 2002; Forés & Camisón, 2016). Accordingly, the following hypothesis H1 is proposed: The acquisition of external knowledge (CA1) positively affects the assimilation of external knowledge (CA2).

Relation between potential absorptive capacity and marketing innovation

For Astro Spila, Rocca, and Ibarra (2009), innovation is understood as a collective and interactive-oriented process that generates learning externalities, whose various forms and sources interact with each other through effective knowledge management, and which are condensed in problem-solving and improvement of innovation, with its different types being: processes, product, technological, organizational and marketing, and where the latter is relevant to understand the marketability and positioning of organizations.

The relation between absorptive capacity and the company's innovation capacity has been studied by Cepeda-Carrion et al. (2012), who are interested in the interaction of companies with the environment as a source of useful new information that generates competitive advantages and with which entering the market generates innovation. These benefits result in "introducing a new or significantly improved product or service, process, organizational method, or marketing and commercialization method, in the internal practices of the company or its external relations" (Oslo Manual, 2005, p. 56).

Lynskey (2004) points out that, to improve a company's innovative activity, it is not only important to apply internally a set of capabilities trying to achieve this goal but also to remain alert in order to associate them with external sources of knowledge. Thus, the ability of a company to use externally obtained knowledge is perceived through two sequential processes to determine the potential capacity of knowledge. First, there is knowledge acquisition, by recognizing and understanding potentially valuable new knowledge external to the company, and second, assimilation, by examining the new knowledge and discerning that which is valuable in order to obtain innovative results (Cohen & Levinthal, 1990; Lane, Koka, & Pathak, 2006).

Meanwhile, the non-technological factors of innovation that are specifically applicable to tourism include, as part of this, innovation, commercialization, and marketing, which are explained by a series of company characteristics such as dependence on the tour operator, geographical location, and cooperation (Tejada & Moreno, 2013) and in which the latter characteristic of relationship with the environment enables the establishment of the necessary collaborative channels to acquire and assimilate valuable knowledge from the environment. The potential absorptive capacity is a necessary ability to recognize these new value propositions in the market, and where the effects of collaborative innovation networks on innovation capacity are significant only in the presence of absorptive capacity (Najafi-Tavani et al., 2018)

Knowledge acquisition and innovation in marketing

Tidd and Bessant (2018) note that the ability to manage innovations can be enhanced by acquiring new knowledge (technological, regulatory, and marketing) that will be added to the company's knowledge base for use in new or improved products and processes. In the same vein, Matti Tuominen and Saara Hyvönen (2004) state that managerial and technological innovations play an essential role in understanding how competitive superiority is achieved in constantly evolving marketing channels since by creating new knowledge, they generate relations or external links that increase the probability of obtaining information that, when used fruitfully with internal knowledge, produces innovations in companies (Leiponen and CE Helfat, 2009).

Therefore, collaboration with different stakeholders can improve companies' innovation capabilities only if company managers have developed the ability to scan and acquire external knowledge (Najafi-Tavani et al. 2018). Thus, Berkhout et al. (2010) determine that the development and diffusion of innovative new products generally stem from ideas related to understanding potential clients and their marketing needs. Therefore, the following hypothesis is presented. H2: External knowledge acquisition (CA1) affects marketing innovation (INN).

Knowledge assimilation and innovation in marketing

Knowledge assimilation involves developing mental processes that are associated with generating problem-solving skills that allow individuals to creatively find the solution to new contingencies that are available both internally and externally in companies (Amara et al., 2008; Zahra & George, 2002), thus boosting efforts to innovate, by providing existing capabilities of new knowledge and internal capabilities that keep the organization alert to technological advances and the assimilation of new technology developed outside the organization (Aguilar-Olaves, Herrera, & Clemenza, 2012).

Therefore, the introduction of new products or services oriented to marketing strategies, provided by the ability to assimilate, contributes to the success of the company since monitoring the environment in dynamic circumstances enables it to obtain a more competitive position to act on the real needs of the market and, therefore, achieve better performance than rivals (Eisenhardt & Martin, 2000; Morgan et al., 2009). Such changes generate modifications involving the provision of the product or service and new forms of promotion, communication, and marketing in the market. For Cohendet and Meyer-Krahmer (2001) and Astro Spila, Rocca, and Ibarra (2009), codifying knowledge for innovation allows its transformation into an economic good that can be transferred to the market. Given the above, a third proposition can be stated: H3: The assimilation of external knowledge (CA2) affects marketing innovation (INN).

Potential absorptive capacity and marketing innovation

Companies can acquire and assimilate new external information through potential absorptive capacity because of new external knowledge (Cohen & Levinthal, 1990; Zhara & George, 2002;), which is also significant in the context of tourism (Williams & Shaw, 2011; King, Breen, & Whitelaw, 2014). Changes are brought about by specialized marketing activities such as communication, sales, product development, pricing, distribution, market differentiation strategies, and analyses and studies on marketing plans (Vorhies, Morgan, & Autry, 2009).

That said, the potential absorptive capacity through the acquisition and assimilation of external knowledge necessitates reliable constructs and appropriate measures (Murovec & Podan, 2009) to strengthen and maintain external relationships with suppliers, clients, and other stakeholders (Todorova & Durisin, 2007). This fosters the newly acquired and assimilated knowledge by improving existing competencies once new information is integrated into operations because of the relationship with the market (Zahra & George, 2002; Aguilar-Olaves, Herrera, & Clemenza, 2012), which is decisive for innovation in marketing.

Thus, the organizational performance of the R&D, manufacturing, and marketing areas contributes to the absorption of potential knowledge from different external sources (Volberda, Foss, & Lyles, 2010). From this point of view, the potential absorptive capacity manifests itself as a process of learning by interaction oriented toward innovation in the service of commercial exploitation (Cohen & Levinthal, 1990; Zahra & George, 2002), and is an important dynamic determinant for developing the innovation capacity of firms (Cepeda-Carrion, Cegarra-Navarro, & Jimenez-Jimenez, 2012).

Therefore, companies must constantly analyze and interpret changing market demands and quickly understand new opportunities to translate them into competitive products and services oriented toward marketing innovation, as Corral de Zubielqui et al. (2016) demonstrate that ACAP has a direct and positive influence on innovation outcomes, which are related to marketing capabilities. This statement gives rise to the following hypothesis. H4: The potential absorptive capacity of external knowledge (CAP) affects marketing innovation (INN).

Due to the above, the research model (Figure 1) represents the relation of the hypotheses of the present study.
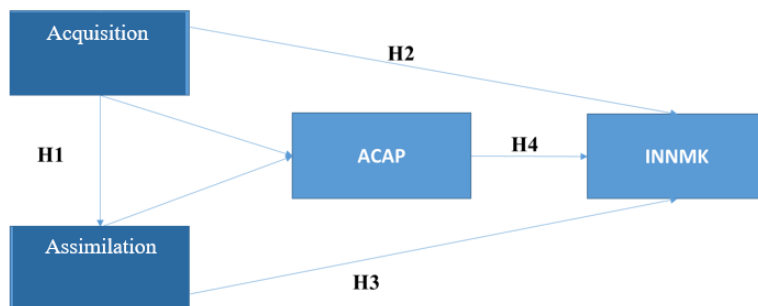

Figure 1. Research model that represents the hypothesis statement of the study.
Source: Created by the author

Methodology

The methodology used in this article measures the impact of the potential absorptive capacity of external knowledge on marketing innovation after analyzing acquisition and assimilation as dimensions that jointly and independently impact the outcomes of marketing innovation in tourism companies.

As for the collection of information after a stratified sampling process, the questionnaire was applied to a population of 1 000 companies, addressing managers and marketing directors of tourism companies from which 134 valid questionnaires were obtained, which meant a representation of hotels and restaurants of 40% and 29% respectively, and 31% for other activities in the sector. The questionnaire included multiple-choice questions to define the profiles of the companies (1-5) relating to criteria such as the size and age of the companies surveyed, and for the variables, 5-point Likert-type scales were used. Finally, the sampling error, taking a finite population, was 8% at a confidence level of 95% (Z=1.96) and for p=q=0.5.

Regarding the survey items, these were adopted from Flatten, Engelen, Zahra, and Brettel (2011), who have an accepted scale in the literature of Knowledge Absorption Capacity, and for the case of potential absorption capacity were measured according to the dimensions of acquisition and assimilation (Table 1, V6-V12). On the other hand, on classifying the types of innovation of the Oslo Manual, innovation in Marketing or commercialization was found by applying the measurement scale of Camisón (2005), as shown in Table 1 (V13-V19). In both cases, the item scales were adapted to the Colombian context according to the results of the pilot test applied.

For the evaluation of the measurement model, it was used as the structural equation model, using the Smart PLS technique, which allowed the study of the reciprocal relations between the variables studied, incorporating the measurement error (Batista-Foguet & Coenders-Gallard, 2000). This technique was chosen taking into account its relevance, by accepting small sample sizes, up to minimums of 100 (Hoyle, 1995), that do not require a normal distribution, as this is a nonparametric statistical technique (Hair et al., 2017; Felipe, Roldan, & Leal., 2017). It must be borne in mind, moreover, that this technique is essentially based on the causal analysis of relatively undeveloped predictive research models (Wold, 1979; Barclay et al., 1995).

For the study's findings, the PLS technique was applied in two phases: the evaluation of the measurement scales and the evaluation of the structural model. Accordingly, individual item reliability, the internal consistency or reliability of the scales, the mean extracted variance, and the discriminant validity were analyzed. Among the available approaches, those suggested by Carmines and Zeller (1979) were applied, according to which an indicator should have a loading equal to or greater than ($\lambda >= 0.707$), which implies that the variance shared between the construct and its indicator is greater than the variance of the error, although the parameters of Chin (1998) were also considered to accept a value ($\lambda >= 0.6$) in the initial assessment treatment of the scales.

Finally, to examine the magnitude and significance of the relations between the different variables raised in the evaluation of the structural hypothesis model, the values ($R2$) and path coefficients (β) were analyzed using the nonparametric bootstrap technical test (Falk & Miller (1992), as well as the

dependent constructs in the Stone-Geisser test (Q2), according to the indications of Hair, Ringle, and Sarstedt, (2011) and Sarstedt, Ringle, and Hair (2017).

Results

Evaluation of the measurement model

For the analysis of the measurement model in the process of debugging the results of the analysis of the individual item reliability, those loadings higher than 0.7 were maintained. However, items lower than 0.6 were eliminated. For all the cases assessed, only one item on the scale that measures the degree of innovation in marketing (V34) was presented. The results revealed that all item loadings on their predicted factor are significant (p<0.01) and that their standardized loadings are greater than 0.6 (Bagozzi & Yi, 1988), with the average of these being greater than 0.7 (Hair, Black, Babin, Anderson, & Tatham, 2005). Therefore, it can be affirmed that the items analyzed show the significance in the individual reliability of the different scales evaluated: Acquisition, Assimilation, and Innovation in marketing (Tables 2 and 3).

Table 1
Indicators and standardized loadings of the scales of Acquisition capacity, Assimilation of external knowledge, and Innovation in marketing

(CA1+ CA2 + INN)		
Indicator	Charge	Value t
Acquisition capacity		
V6 The search for relevant industry information is a daily activity in the company	0.747	8.516
V7 Company management motivates employees to use sources of information within the industry	0.886	36.183
V8 Company management expects employees to handle information beyond the industry.	0.749	12.062
Assimilation capacity		
V9 Within the company, ideas are communicated between departments.	0.716	7.325
V10 Management excels in cross-departmental problem-solving support.	0.872	28.333
V11 In the company, there is a rapid flow of information. For example, if a business unit obtains important information, this is communicated to all the other units or departments of the company	0.680	6.884
V12 Management requires regular interdepartmental meetings to share developments, problems and achievements.	0.862	26.800
Innovation in marketing		
V13 Significant modification of current marketing methods	0.779	17.152
V14 Reduced response time to a client or supplier		
V15 Significant changes in service design	0.824	21.707
V16 Significant changes in the pricing of products/services	0.743	9.666
V17 Introduction of new channels and formats to promote products/services	0.788	18.289
V18 Development and launching of new brands to renew image or position in new markets	0.811	23.585
V19 Renewal of existing brands	0.785	19.679

Source: Created by the author

Scale reliability or internal consistency and convergent validity

For the evaluation of the reliability of the measurement scale, the indicators used were Cronbach's Alpha coefficient (Cronbach, 1951) and the Composite Reliability index (Werts, Linn & Jöreskog, 1974). After the analysis, for all the measurement scales both Cronbach's Alpha coefficients and Composite Reliability indices exceed the accepted critical value of 0.8, as suggested by Nunnally (1978), who recommends a strict value of 0.8 for basic research (Table 2). Thus, it can be affirmed that these scales comply with the internal consistency property of the same.

On the other hand, in this same analysis, the convergent validity of the scales was evaluated, providing the amount of variance that a construct obtained from its indicators, with the amount of variance due to measurement error calculated through the mean-variance extracted (AVE). According to Fornell and Larcker (1981), the AVE value must be greater than 0.5, which guarantees that more than 50% of the variance of the construct is due to the indicators that form it and the constructs measured, whose AVE values were greater than 0.6 (Table 2). Therefore, the indicators assessed represented a single underlying construct, demonstrated through their unidimensionality (Henseler, Ringle, & Sinkovics, 2009).

Table 2
Reliability and convergent validity

Factor	α of Cronbach's	CRI	AVE
Acquisition capacity (CA1)	0.712	0.838	0.634
Assimilation capacity (CA2)	0.799	0.866	0.620
Innovation in marketing (Inn)	0.879	0.908	0.622

Source: Created by the author

Finally, the discriminant validity of the measurement model was tested, for which Fornell and Larcker (1981) indicate that the variance shared by pairs of constructs is lower than their corresponding AVE (Table 3), with values (AVE) higher than the correlations between the construct and the rest of the constructs. The measurement model results are positive in demonstrating that the measures of the constructs are reliable and valid.

Table 3
Discriminant validity

	Acquisition capacity	Assimilation capacity	Innovation in marketing
Acquisition capacity	0.797		
Assimilation capacity	0.600	0.787	
Innovation in marketing	0.395	0.489	0.789

Below diagonal: correlations between constructs

Diagonal: square root of mean-variance extracted (AVE)
Source: Created by the author

Evaluation of the structural model

For the evaluation of the structural model, the corresponding relations of the hypotheses proposed were analyzed based on the intensity and significance of the path coefficients (β), the explained variance (R^2) of the dependent variables, and their predictive relevance (Q^2). In this sense, the variance explained R^2 expresses whether the amount of variance of the endogenous variables is explained by the constructs that predict them, it being necessary that the R^2 values be greater than 0.10, considering the results 0.67, 0.33 and 0.19 as substantial, moderate, and weak in that order (Chin, 1998). For this case, the values obtained $R^2 = 0.365$ and 0.260 (Table 4) showed a moderate proportion in the model, greater than 0.10 in its R^2 value.

On the other hand, the standardized path coefficients β measure the predictor variables that contribute to the explained variance of the endogenous variables (Falk & Miller, 1992). For this measurement, statistical values $t \geq 1.96$ and P Values ≤ 0.05) were obtained, as shown in Table 8, with the results indicating the existence of the relative strength of the statistical relations between the variables. On the other hand, to measure the predictive significance of the dependent constructs, the Stone-Geisser test (Q^2) was analyzed, which shows that the model and its estimated parameters reproduce the observed values, it being understood that a Q^2 value greater than zero implies values greater than zero; the predictive quality of the model being adequate, these estimates are shown to be stable (Table 4).

Table 4
Results of the structural model: $R^2 \rightarrow Q^2$

Hypothesis	B	Value t (Bootstrap p values)	
AC1 -> AC2	0.604	8.573	0.000
AC1 -> INNMK	0.168	1.483	0.138
AC2 -> INNMK	0.389	3.581	0.000
ACAP -> INNMK	0.510	7.456	0.000
R² ACAP capacity 0.365	Q² ACAP capacity 0.203		
R² innovation in marketing 0.260	Q² innovation marketing 0.139		
***$p < 0.001$ (based on a one-tailed Student's t-distribution (4999))			

Source: Created by the author

Finally, the significance of the relationships to test the hypotheses of the structural model estimated at the t-values indicates that hypotheses H1, H3 and H4 are accepted. Nevertheless, hypothesis

H2 is rejected (Table 5).

Table 5
Results of the structural model hypotheses

	Hypothesis	β	Value t (bootstrap)	CONTRAST
H1	AC1 -> AC2	0.604	8.573***	Accepted
H2	AC1 -> INNMK	0.168	1.483	Rejected
H3	AC2 -> INNMK	0.389	3.851***	Accepted
H4	ACAP -> INNMK	0.510	7.456***	Accepted

***$p < 0.001$ (based on a one-tailed Student's t-distribution (4999))
Source: Created by the author

The results show in Figure 2 that the acquisition capacity is directly combined with knowledge assimilation as dimensions that comprise the potential absorption capacity, where the relationships of these variables show a positive and significant effect (H1=8.573). Thus, the potential absorptive capacity generates positive results for marketing innovation (H4=7.456). Furthermore, it is found that there is a direct effect between the assimilation of external knowledge and innovation (H=3.851). Finally, the only dimension of potential absorptive capacity that does not have a significant impact is external acquisition capacity on marketing innovation (H2= 0.168).
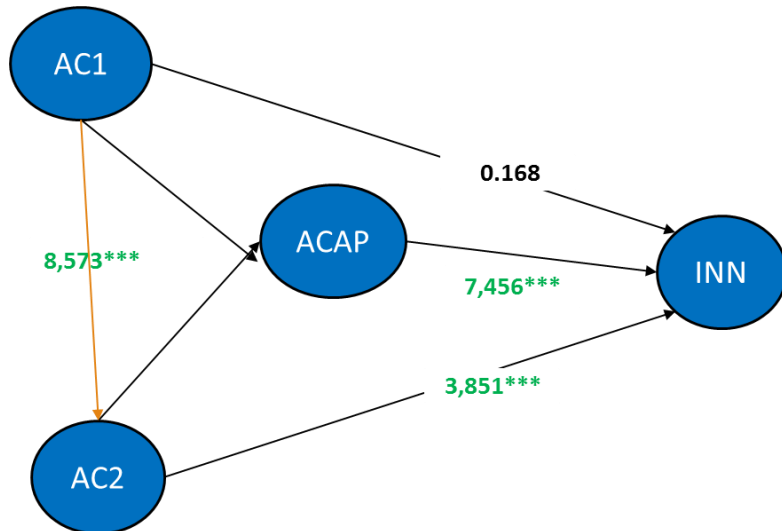

Figure 2. PLS analysis results for the conceptual model.
*** = $p < 0.001$ (based on a one-tailed Student's t (4999) distribution)
Source: Created by the author

Discussion

The findings of this research largely support the hypotheses put forward. It was evidenced that the interaction between the abilities to acquire and assimilate knowledge improves innovation in marketing (Medasa & Barrasa, 2019; da Costa et al., 2018). Similarly to these previous studies, these results indicate that the acquisition of external knowledge has a significant effect on the assimilation of external knowledge (H1) since the effect of acquiring knowledge from the environment on the ability to assimilate it responds fundamentally to the interaction of the newly evaluated knowledge. This enables companies to incorporate the knowledge obtained from outside, based on the existing knowledge of the members of the organization (Cohen & Levinthal, 1990) because, as Camisón and Forés (2010) state, individuals, as well as work teams and stakeholders, interact during the absorption processes with the sources of external information, which are useful for companies to innovate.

On the other hand, regarding the results for H2, it is evident that the dimension of potential knowledge absorption capacity that has no significant impact on innovation in marketing is the capacity to acquire external knowledge. This could be indirectly influenced by the design and implementation of strategic plans already established in tourism companies and by the particulary characteristics of this type of sector since a large part of the information comes from external sources (sector trade association reports, state data, university research, private sector reports, etcetera). On the other hand, in the case of information on tourists, its transitory nature could limit the identification of the real needs of visitors and the actions of the companies with the innovative changes to be conceived). and in the case of tourist information, its transitory nature could limit the identification of visitors' real needs and the companies' actions in the face of the innovative changes to be conceived. To this end, the results of this study are consistent with those recently obtained by Milwood and Zach (2016), who found that the non-significant relation between innovation orientation and external knowledge acquisition suggests that openness is not a prerequisite for "going out" and finding new knowledge, but rather, a precursor to understanding how new knowledge can be useful for companies.

The results found concerning the positive relation between knowledge assimilation and innovation in marketing are explained by the immediacy in service delivery caused by the previous relational competencies of the members and the adequate appropriation of the new knowledge that is perceived as useful for the companies' strategies. As the findings of Milwood and Zach (2016) indicated, the potential absorptive capacity is largely revealed by assimilation, so learning how new knowledge fits into the organization involves knowing the structures, organizational routines, culture, organizational purposes, and strategies for the proper use of new knowledge. Therefore, newly developed tourism services must be driven by the internalization of new knowledge and by identifying and appropriating

those needs that respond directly to the generation of value in the provision of tourism services.

Regarding the last findings, H4 showed a significant relationship between Potential Absorptive Capacity and marketing innovation since, as in other studies, the trend is that a high degree of ACAP is positively related to developing more effective products (Stock et al., 2001). The results of marketing innovation have direct effects, such as increased sales of tourism products, new service-offering strategies, and better reputation and positioning of the portfolio of products and services, as well as the repetition of the visitor's experience at the destination in the medium and long term, generating client satisfaction and loyalty.

Conclusions

Potential absorptive capacity can be defined as those abilities that companies must focus on in the environment by appropriating new knowledge from stakeholders and nurturing their organizational capabilities in assertive actions with market impact.

Firstly, evaluating the structural model allowed the validation of three of the four hypotheses. It was shown that the acquisition of external knowledge significantly affects its assimilation, understanding this relationship as a sequential condition necessary to appropriate the sources of information from the stakeholders. This triggering in the tourism sector makes it possible to recognize new marketing and sales channels for the product or service that will generate new market value opportunities.

On the other hand, the capacity to potentially absorb new knowledge in tourism companies positively influences the results of innovation in marketing due to the importance of the new information provided by tourists, competitors, trade associations, and governmental entities, and at the same time, the adoption of this information in the strategies of promotion, commercialization, and sale of tourism products and services.

It was found that acquisition alone does not generate innovation, as the results indicated that knowledge acquisition is not a consequence of innovation in tourism companies, as was shown by the results of González-Para Campo and Hurtado Ayala (2014). The non-acquisition of external knowledge can be understood because companies' strategies are oriented to satisfy the needs of their customers in a specific market segment and to improve efficiency considering previous knowledge, with the use of external information resources being irrelevant in this case if there is no appropriation of them. Thus, if management guidelines do not encourage the acquisition of external knowledge through activities involving the search for, management, and use of information among employees and organizational units, it is not likely that they will gain access to new knowledge that will result in significant improvements or innovation for this type of company.

Therefore, generating competitiveness of tourist destinations, once interactions between stakeholders are established, by acquiring and assimilating new external knowledge, enables the efficient combination of company strategies with the requirements of the market, generating innovations in marketing, thus defining how to obtain these types of outcomes that also generate value for clients.

Finally, relevant implications can be drawn from the results obtained about marketing innovation activities, where the potential absorptive capacity has the greatest impact. It should be noted that marketing activities are linked to marketing, promotion, and sales strategies to service the tourism industry's activities. Its staff should be comprised of qualified personnel whose communication and customer service skills and abilities enable the acquisition of relevant information. Therefore, the use of all digital and technological tools (software, APP, social networks, virtual platforms, web pages, video-influencers, etcetera) broadens the interaction with stakeholders and promotes the use of new sources of information, establishing the necessary relationship to identify, acquire, and assimilate new resources in useful knowledge, which generate new value propositions in the market.

The study's limitations and future lines of research indicate the need for further research on the topic from a qualitative approach through the analysis of case studies that identify what type of stakeholders generate more opportunities to innovate and what type of non-technological innovations promote better performance and business competitiveness of tourism companies.

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Annex

From the University of Valencia (Spain), in collaboration with the Lumen Gentium-Unicatólica University Foundation and with the support of tourism associations such as COTELCO, we are carrying out a study on the impact of the potential absorption capacity of knowledge on innovation in the marketing of companies in the Colombian tourism sector. We kindly invite you to participate in such an important process with an impact both for the country and for the rollout of further studies in parallel with Spain.

For this purpose, we ask the owner of the associated companies, the manager, or the person in charge of coordinating marketing management to give us 10 minutes of their time to answer the questions online.

Next, a series of questions are asked for which there are no right or wrong answers. The appropriate answer is the one that best describes the current state of your organization. We thank you in advance for your time and collaboration.

COMPANY DETAILS: V1-V5

V1 How many years has your company been in operation?	Less than 5 years	1
	Between 5 -10 years	2
	Between 10- 20 years	3
	More than 20 years	4

V2 Total number of full-time permanent employees?	1	1-10	
	2	11-50	
	3	51-200	
	4	More than 200	

V3 Type of company?	1	Hotels	
	2	Restaurants	
	3	Travel Agency	
	5	Other. Which one?	

V4 Association to which you belong?

1	Acodres	
2	Anato	
3	Asotelca	
4	Cotelco	
5	Other. Which one?	

V5. City

1   Cali
2   Bogotá
3   Medellín
4   Barranquilla
5   Cúcuta
6   Others

POTENTIAL ABSORPTION CAPACITY (CA V6-V12)

Please specify to what extent the following statements enable your company to use external resources for knowledge acquisition by obtaining information from personal networks, clients, suppliers, competitors, consultants and other stakeholders:

1. Strongly disagree, 2. Disagree, 3. Indifferent, 4 Agree, and 5 Strongly agree.

		1	2	3	4	5
V6	The search for relevant industry information is a daily activity in the company					
V7	Company management motivates employees to use sources of information within the industry					
V8	Company management expects employees to handle information beyond the industry.					

Indicate to what extent the following statements fit the communication structure for knowledge assimilation in your company:

		1	2	3	4	5
V9	Within the company, ideas are communicated between departments.					
V10	Management excels in cross-departmental problem-solving support.					
V11	In the company, there is a rapid flow of information. For example, if a business unit obtains important information, this is communicated to all the other units or departments of the company					
V12	Management requires regular interdepartmental meetings to share developments, problems and achievements.					

INNOVATION (INNMK V13-V19)

Please indicate the extent to which the following elements have been introduced in new sales or distribution channels.

1. Strongly disagree, 2. Disagree, 3. Indifferent, 4 Agree, and 5 Strongly agree.

		1	2	3	4	5
V13	Significant modification of current marketing methods					
V14	Reduced response time to a client or supplier					
V15	Significant changes in service design					
V16	Significant changes in the pricing of products/services					
V17	Introduction of new channels and formats to promote products/services					
V18	Development and launching of new brands to renew image or position in new markets					
V19	Renewal of existing brands					

V20. Does your company have a specific Innovation department?
1- YES
2- NO