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Towards the smart tourism destination: Key factors in information source use on the tourist shopping journey

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ABSTRACT

This paper aims to contribute to the knowledge on how the Smart Tourism Destination (STD) might enhance the Tourist Shopping Journey (TSJ) through offering information sources that meet visitors' needs and preferences. The CAN (Cognitive-Affective-Normative) model was employed to explore the antecedents of using information sources for purchases made in destinations. The importance of the cognitive variables performance and effort expectancy in the purchasing process are highlighted: tourists are pragmatic when consulting information sources in destinations. This study contributes to the knowledge of the role of information sources in TSJ behaviour, and can help managers in the development of STD strategies and services. It also opens new research lines by considering the TSJ as a hitherto unexamined holistic process.

1. Introduction

COVID-19 is affecting many aspects of our lives and tourism is being greatly impacted (UNWTO, 2020). In this new context tourism managers need to anticipate and react wisely to overcome the crisis in the sector. Technology, as an interaction point between tourists and destinations, will be a key aspect of the recovery. Therefore, becoming a Smart Tourism Destination (STD), which is an aspiration for any competitive city, will also be a solution for tourism business growth. However, the path towards configurating a STD is not easy; on the contrary, it is very complex and demanding (Femenia-Serra, Neuhofer, & Ivars-Baidal, 2019). It involves many perspectives in terms of models, tools and strategies (Del Vecchio, Mele, Ndou, & Secundo, 2018). Enhancing the tourist experience is the final objective of the STD and, to do so, it must maximise both the destination's competitiveness and consumer satisfaction (Del Vecchio et al., 2018). For this reason destinations must attain a deep understanding of tourists' opinions and expectations in order to adapt devices and services to their needs (Buhalis & Amaranggana, 2015). As a general rule, travellers have concerns about their inexperience with destinations and, wanting to make the most of their stays, they are particularly interested in seeking relevant information. The provision of tourist information is one of the tourism management fields which should be improved when destinations become STDs (Ivars-Baidal, Celdrán-Bernabeu, Mazón, & Perles-Ivars, 2019). Thus, being the main information provider is key for destination management in the efforts to become STDs.

STDs aim to stimulate and facilitate the highest tourist satisfaction and experience. Among the many destination-based activities that shape the tourist experience the growing importance of shopping should be noted. Purchasing is a way of being involved in local culture, which generates shopping-related satisfaction and pleasure (Jin, Moscardo, & Murphy, 2017; Way & Robertson, 2013). Moreover, of the total expenditure that tourists incur on their trips, purchases account for around one third (Wong & Law, 2003; Yu & Littrell, 2003; Yüksel & Yüksel, 2007). This is of real interest for providers as tourist purchases promote employment, contribute to a positive destination image (Heung & Cheng, 2000; Jin et al., 2017; Tosun, Temizkan, Timothy, & Fyall, 2007) and are a great source of income (Albayrak, Caber, & Çömen, 2016; Jin et al., 2017). Given tourists' initial unfamiliarity with the products and services offered at their destinations (Coromina & Camprubí, 2016; Sirakaya & Woodside, 2005), sources of information are key for generating expectations, fostering purchase decision-making and in shaping final satisfaction (Money & Crotts, 2003; Zarezadeh, Benckendorff, & Gretzel, 2019).

Consequently, it is very important to facilitate and control the beginning of the Tourist Shopping Journey (TSJ). To do so it is necessary to identify the factors that influence tourists in their use of information sources in destinations. In addition, the STD should base its strategy on being the preferred shopping information provider in the destination. This is a two-pronged strategy, as once a destination is the main

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information provider it is also the main recipient of tourists' concerns and demands. In this way, a well-developed STD will generate synergies through continuous improvements, which will result in a process capable of remodelling tourism destination management (Ivars-Baidal et al., 2019). Therefore, STDs have the "power" to adapt the content of, and initiate, the TSJ.

With technological advances, and the widespread use of the Internet, the number of information sources available to tourists has significantly increased (Xiang, 2018). In addition to traditional information sources, others have emerged as a result of greater connectivity, mobile applications and social networks (Jiang & Bert, 2014). In this context, STDs must understand the main reasons tourists look for information, so that they might design tourist-centric smart tourism ecosystems (Arenas, Goh, & Urueña, 2019). This understanding will aid the STD information sources to become preferred in the destination.

The proliferation of new technologies, the growth of tourist shopping and destinations' aspirations to become STDs argue that there is clear value in researching these issues (Akalamkam & Mitra, 2018; Cohen, Prayag, & Moital, 2014; Xiang, 2018); but little work has been done in this area and no studies have examined these topics in conjunction. In addition, in the context of COVID-19, which has created a new challenge in the tourist-destination interaction, there is an urgent need for destinations to examine efficient ways to connect with tourists. This study aims to begin to bridge this gap by identifying how STDs can enhance the TSJ through offering information sources that meet visitors' needs and preferences. As far as we know, no previous works have addressed the TSJ; the present study focusses on one of the first stages of the process, thereby opening a new research line. The objective of the study is to determine which factors explain intention to use information sources for purchase decision-making in a destination. The CAN (Cognitive-Affective-Normative) model was used with a sample of tourists in the city of Logroño (Spain), a self-styled Smart City. This three-dimensional model integrates variables used in previous studies which have proved influential in consumer behaviour and technology acceptance. Given the good results it has previously achieved, and its versatility, the present study expands the scope of the model into tourist behaviour.

2. Theoretical foundations

2.1. Smart Tourism Destinations and the need for information sources

The ideal STD should provide a smart experience, which has been defined as a tourism experience mediated by technologies and ameliorated through personalisation, context-awareness and real-time monitoring (Buhalis & Amaranggana, 2015). The innovation and competitiveness of STDs are based on tourism apps (Buhalis & Amaranggana, 2013; Cimbaljević, Stankov, & Pavluković, 2019) which increase tourists' freedom and independence in the development of tourism activities (Jeong & Shin, 2019). Information sources are critical elements in the tourists' overall experience as they can motivate and stimulate the travel experience at the smart destination (Jeong & Shin, 2019; Um & Chung, 2019).

Information sources can be internal or external (Akalamkam & Mitra, 2018; Coromina & Camprubí, 2016; Gursoy & McCleary, 2004). In brief, internal information is stored in one's memory from previous experience, whereas external information is gathered from one's environment in a conscious effort to seek information (Coromina & Camprubí, 2016; Money & Crotts, 2003; Murray, 1991). Unless tourists have previous experience of a destination, external information sources, either offline or online, are their sole option. Today, the channels available to search for information have been increased by the emergence of the Internet (online websites, social networks and chat) and new devices (tablets, mobile phones, wearables, smartwatches and smart televisions) (Akalamkam & Mitra, 2018).

Tourists can feel confused and overloaded by the vast amount of information available online (Zillinger, 2019). This can negatively impact the tourist experience and STDs must become active players in the acquisition, utilisation, supply and sharing of tourism-related information (Um & Chung, 2019). Understanding why tourists use information sources will allow STDs to provide the most suitable technological resources and positively influence the tourist experience. It is also crucial for STDs to have complete control over the information exchange originated by the tourist. This will create a direct link with the tourist, enable personalisation of the touristic experience, increase tourist satisfaction and generate a positive assessment of the destination (Arenas et al., 2019).

2.2. The Tourist Shopping Journey and the search for information

In recent decades, shopping has become one of the most important activities undertaken by tourists (Chen, 2013; Law & Au, 2000; Lloyd, Yip, & Luk, 2011; Yüksel, 2007), helping to make their experience more complete (Albayrak et al., 2016; Chen, 2013; Timothy & Butler, 1995; Tosun et al., 2007). Shopping tourism and tourism shopping, which have distinct definitions, are two separate lines of research in tourism studies (Choi, Heo, & Law, 2016; Jin et al., 2017; Timothy, 2005; Tosun et al., 2007). The most specialised concept in this field is shopping tourism, understood as the activity in which buying is the main motivation for travel, that is, the primary driver of the tourist experience (Choi et al., 2016; Jin et al., 2017; Rabbiosi, 2011; Timothy, 2005; Way & Robertson, 2013). The present study focuses on shopping by tourists, or tourist shopping, a recreational activity in which tourists seek, select and buy goods during their stay in a destination (Jin et al., 2017); it constitutes a secondary, or additional, trip activity (Rabbiosi, 2011).

Through their shopping activities tourists develop the TSJ. The TSJ can be defined as the complete purchasing process of a tourist in a destination. The shopping is carried out on-site, that is, the purchases take place in shops at the destination. The TSJ begins from the moment the tourist develops the intention to shop in the destination and starts seeking for information to identify the available offers. Normally, the last step in the process is the evaluation of the service after leaving the destination.

The search for information is one of the first stages of the purchasing process (Akalamkam & Mitra, 2018; Gursoy & McCleary, 2004). Information search has been defined as "the motivated activation of knowledge stored in memory or acquisition of information from the environment" (Engel, Blackwell, & Miniard, 1995). For first-time tourists, perceived risk is greater due to their unfamiliarity with the shopping environment in a previously-unvisited destination. To reduce the uncertainty of purchasing at destinations tourists make significant efforts to search for information (Coromina & Camprubí, 2016; García-Milon, Juaneda-Ayensa, Olarte-Pascual, & Pelegrín-Borondo, 2019; Xiang, 2018). Many advantages derive from the information search (Gursoy & McCleary, 2004; Jiang & Bert, 2014): it helps the consumer achieve his/her goals, reduces perceived risk and improves purchase decision-making (Jiang & Bert, 2014). In this reasoned and conscious process, the buyer aims to acquire new information and knowledge related to his/her potential behaviours (Akalamkam & Mitra, 2018). It should be emphasised that the acquisition of information is a means to an end, and not an end in itself, as purchasers want to make the best possible choices (Fodness & Murray, 1999; Jiang & Bert, 2014).

2.3. Conceptual model

This present study employs the general and extensive CAN (Cognitive-Affective-Normative) model to analyse which factors affect the use of external information sources, both online and offline, to seek for information to buy in a STD. The CAN model has been developed from different theories (Table 1) of individual acceptance in information system and psychology contexts (Ajzen, 1991; Davis, 1989; Fishbein & Ajzen, 1975; Taylor & Todd, 1995a, 1995b; Watson, Clark, &

Table 1
Dimensions of the CAN model.

Dimension	Meaning	Antecedents
Cognitive	The degree to which tourists consider that using information sources to make their buying decisions at destinations will help them improve their performance (performance expectancy) and are easy to use (effort expectancy).	TAM (Davis, 1989) C-TAM-TPB (Taylor & Todd, 1995b) UTAUT (Venkatesh, Morris, Davis, & Davis, 2003)
Affective	The degree to which using information sources in the TSJ evokes certain positive and negative emotions in tourists.	PANAS (Watson et al., 1988)
Normative	The degree to which the tourist perceives that people important to him/her believe that (s)he should consult information sources to purchase at destinations.	TRA (Fishbein & Ajzen, 1975) TPB (Ajzen, 1991) DTPB (Taylor & Todd, 1995a) C-TAM-TPB (Taylor & Todd, 1995b)

Note: TAM (Technology Acceptance Model); C-TAM-TPB (combined TAM and TPB); UTAUT (Unified Theory of Acceptance and Use of Technology); PANAS (Positive Affect Negative Affect Schedule); TRA (Theory of Reasoned Action); TPB (Theory Planned Behaviour); DTPB (Decomposed Theory of Planned Behaviour).

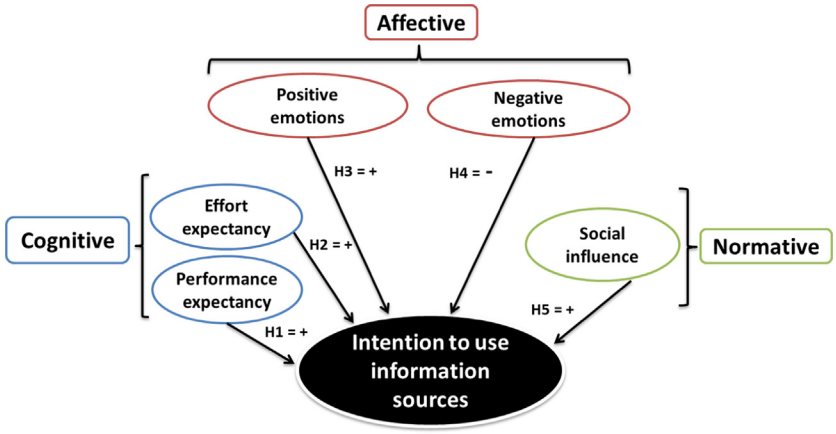

Fig. 1. CAN model explaining the intention to use information sources in the TSJ to make purchase decisions.

Tellegen, 1988). The result is a three-dimensional model combining: 1) the cognitive dimension, composed of performance expectancy and effort expectancy, 2) the normative dimension, measured by social influence, and 3) the affective dimension, an integration of positive and negative emotions. The model has been successfully validated in previous studies (Conner, Reardon, Miller, Salciuviene, & Auruskeviciene, 2017; Olarte, Pelegrín, & Reinares, 2017; Reinares-Lara, Olarte-Pascual, & Pelegrín-Borondo, 2018). In the present study the CAN model has been extended to a new context in order to identify the factors that influence tourists' use of information sources in their purchase decision-making at destinations (Fig. 1). The following subsections describe the model variables and hypotheses.

2.3.1. Influence of the cognitive dimension on intention to use information sources

The cognitive dimension is composed of the variables performance expectancy and effort expectancy. Both variables are considered essential in consumer acceptance and use of information sources. Generally, if consumers perceive that using information sources is advantageous, useful and easy, they will be more motivated to accept and use them (Akalamkam & Mitra, 2018; Gursoy & McCleary, 2004).

Most of the current evidence supports that effort expectancy and performance expectancy are drivers for the use of information sources in the shopping and tourism fields. It has been shown that both variables have a positive impact on the consumer's pre-purchase information search behaviour (Akalamkam & Mitra, 2018; Broilo, Espartel, & Basso, 2016). It has also been demonstrated that effort expectancy and performance expectancy are significant antecedents of the acceptance of online and offline information sources in the tourism field (Coromina & Camprubí, 2016; Mieli & Zillinger, 2020; Sa Vinhas & Bowman, 2019). Taking these important antecedents into account, in respect of information sources and purchase decision-making at destinations, the following hypotheses are proposed:

H1. Performance expectancy positively affects tourists' intention to use information sources.

H2. Effort expectancy positively affects tourists' intention to use information sources.

2.3.2. Influence of emotions on intention to use information sources

The tourism literature has studied emotions as they are considered to be an important element in the whole tourist process (Li, Scott, & Walters, 2015). To better understand intention to use information sources in the TSJ, the affective dimension has been added to the cognitive factors. According to componential emotion theory (Pelegrín-Borondo, Juaneda-Ayensa, González-Menorca, & González-Menorca, 2015), the concept of emotion is a set of minimal common traits: the need for a stimulus, the attribution of the cause of the stimulus, a cognitive assessment, a physiological reaction, the existence of feelings of pleasure-displeasure, a qualitative feeling of “uniqueness”, a tendency to action and a short duration process (Ortony & Turner, 1990; Scherer, 2005).

Distinguishing emotions can be simple and intuitive using a dimensional approach (Huang, 2001). The positive affect negative affect schedule (PANAS) (Watson et al., 1988) is one of the most popular dimensional approaches in consumer behaviour research. The present study adapts PANAS to incorporate the affective dimension in the model, measured through negative and positive emotions.

Many studies have shown that emotions can stimulate, stop or change actions (Cohen, Pham, & Andrade, 2006; White & Yu, 2005). In general, anything which produces positive emotions is evaluated favourably (Mano, 2004), whereas anything that produces negative emotions is unfavourably evaluated (Schwarz, 2000). Specifically, in tourism, it has been found that positive emotions have a positive effect

on tourist behaviour and satisfaction (Dedeoğlu, Balıkçıoğlu, & Küçükergin, 2016; Prayag, Hosany, Muskat, & Del Chiappa, 2017), and that negative emotions generate disappointment (Michalkó, Irimiás, & Timothy, 2015). It should be noted that Yeh, Chen, and Liu (2017) demonstrated the strong effect of the moderator role of emotions on the use of new technologies in tourism; and Yüksel (2007) suggested that positive emotions generate rewarding experiences and influence tourists' buying behaviour. Considering these antecedents, the following hypotheses are proposed:

H3. Positive emotions positively affect tourists' intention to use information sources.

H4. Negative emotions negatively affect tourists' intention to use information sources.

2.3.3. Social influence on intention to use information sources

People close to the consumer can affect his/her consciousness and disposition towards sources of information (Erawan, Krairit, & Ba Khang, 2011). Some authors have found that social influence has a positive impact on the use of information sources in retail purchases (Broilo et al., 2016) and in the tourism field (Fodness & Murray, 1999; Hungenberg, Ouyang, & Gray, 2019). In particular, social influence has been recognised as an important variable in offline tourism search behaviour (Mieli & Zillinger, 2020) and in online travel information searches (Gupta, Dogra, & George, 2018). Taking these previous studies into account, the following hypothesis is proposed to explain the tourist's intention to use information sources for purchase decision-making at destinations:

H5. Social influence positively affects the tourist's intention to use information sources.

3. Methodology

3.1. Data collection and sample

Logroño (La Rioja, Spain) was chosen as the location to carry out this research because: it is making various efforts to become a Smart City; it has implemented the Smart Logroño Platform, which stores, connects and manages all the city's information in a smart way; it belongs to the Spanish Smart Cities Network (Ayuntamiento de Logroño, n.d.); because of its interest in developing shopping tourism and the unique and homogeneous shopping district in its historical centre. Moreover, Logroño was officially recognised in 1997 as the first Spanish "City of Commerce" (Medrano, Olarte-Pascual, Pelegrín-Borondo, & Sierra-Murillo, 2016); it was also nominated as the first Commercial City of Europe for 2020 (EFE, n.d.).

The tourist participants were recruited at the entrance to the tourism information office, or on arrival at two hotels, located in the centre of Logroño. This helped us to understand what role the different information sources were going to have on purchase decision-making at the destination. The tourists gave their consent to be interviewed and participate in the study. Before answering the questionnaire (Appendix A), they were provided with information to help them understand the concept that was to be tested.

They were then asked if they intended to make any purchases and, if so, what they were going to buy. The survey was conducted only with tourists who expressed an intention to make purchases in the city of Logroño. The sample consisted of 431 tourists (Table 2).

3.2. Measurement scale

The questions for the survey were developed based on the main antecedents of the CAN model (Ajzen, 1991; Davis, 1989; Watson et al., 1988) adapted for the present study. The measure used was an 11-point Likert-type scale, from 0 (no agreement) to 10 (total agreement). This scale type has increased sensitivity and is closer to the interval level of scaling and normality. In addition, respondents find it easy to understand (Leung, 2011). The variables used are presented in Table 3 and the distribution of the variables are included in Appendix B.

3.3. Data analysis

Structural equation models were used for the data analysis, specifically, Consistent Partial Least Squares (PLSc-SEM). The PLSc-SEM technique has been recognised as a more appropriate alternative than PLS-SEM for many research scenarios in the information systems field (Aguirre-Urreta & Rönkkö, 2018; Benitez, Henseler, Castillo, & Schuberth, 2020). Specifically, PLSc-SEM is less sensitive to type I and type II errors than PLS-SEM and is applied to models in which all constructs are reflective (Dijkstra & Henseler, 2015), as in the present case. In addition, PLS-SEM tends to skew factor loadings upwards and underestimate the regression coefficients, which does not occur with PLSc-SEM (Aguirre-Urreta & Rönkkö, 2018; Gefen, Rigdon, & Straub, 2011). PLSc-SEM was chosen also because it is less sensitive to violation of assumptions of data normality than are other SEM techniques (Dijkstra & Henseler, 2015). In theory building and evaluation it is vital to estimate the predictive power of explanatory models (Shmueli, Ray, Velasquez Estrada, & Chatla, 2016). In the present study PLS Predict was used (Hair, Ringle, & Sarstedt, 2011; Shmueli et al., 2016). PLS Predict uses training and holdout samples to generate and evaluate predictions from PLS path model estimations.

4. Results

4.1. Evaluation of the measurement model

To evaluate the measurement model (Hair, Ringle, & Sarstedt, 2013) the standardised loadings were assessed to identify if they met the indicator reliability criterion. In concrete terms, it was verified if the items had standardised loadings > 0.70 and t-values > 1.96 (Fig. 2). Although several indicators had loadings below 0.70, only those under 0.60 (PEM3, PEM8 and SI3) were eliminated. This is because flexibility is allowed in this condition, especially when the indicators increase the validity of the content of the factor (Hair et al., 2013); thus, as they had t-values > 1.96, they were retained.

The measurement model was verified in terms of construct reliability (i.e. composite reliability and Cronbach's *alpha*), and convergent and discriminant validity. The composite reliability and Cronbach's *alpha* values were greater than 0.70 (Table 4). The convergent validity of the constructs was confirmed, as the average variance extracted (AVE) was greater or equal in all cases to 0.50 (Table 4). The discriminant validity (Table 5) was also confirmed: the square root of the AVEs of each construct was greater than the inter-construct correlations; as to the HTMT criterion, all the results were below the critical value of 0.85.

4.2. Evaluation of the structural model

The present study calculates the effect of the CAN model factors on tourists' intention to use information sources to make purchase decisions at their destinations (Table 6). The R^2 has a value of 0.5080, indicating that the model explains 50.80% of the variation of intention to use information sources. The Q^2 of the PLS Predict is 0.413. This positive value demonstrates that the model has predictive capacity for intention to use information sources (Hair et al., 2011; Shmueli et al., 2016) and that, to differing degrees, all the variables had an impact on intention to use. The cognitive dimension had the highest effect (performance expectancy being especially important), then the affective, and finally the normative. It should be noted that all the variables had a positive effect, with the exception of negative emotions, that had a

Table 2
Study technical data.

Universe	Individuals over the age of 18
Data collection method	Personal survey
Sampling unit	Tourists with intention to buy in Logroño (Spain)
Sample size	431 individuals
Field work dates	December 2017–March 2018

Sample features	
Gender	Male 40.4%; Female 59.6%
Age	18 to 29 years: 29.5%; 30 to 39 years: 25.3%; 40 to 49 years: 22.2%; 50 or more years: 23%
Net monthly family income	Less than €1000: 9%; €1000 to €1749: 22.3%; €1750 to €2499: 16.2%; €2500 to €3000: 7.4%; More than €3000: 11.4%; No answer: 33.6%;

Table 3
Scales to measure intention to use information sources.

Dimension	Construct	Items	Source
Cognitive	Performance Expectancy, PE	PE1. Using different information sources to make buying decisions at destinations is very useful	Adapted from Davis, 1989; and Venkatesh et al., 2003
		PE2. Using them will increase the probability of buying what I want	
		PE3. Using them allows me to buy faster	
		PE4. Using them improves my purchasing performance	
	Effort Expectancy, EE	EE1. Learning to use them is easy	
		EE2. Using them is clear and understandable	
		EE3. They are easy to use	
		EE4. Using them involves little effort	
Affective	Positive Emotions, PEM	PEM1. When I think about using them I feel interested	Adapted from Watson et al., 1988
		PEM2. I feel excited	
		PEM3. I feel energetic, powerful	
		PEM4. I feel enthusiastic	
		PEM5. I feel proud	
		PEM6. I feel inspired, innovative	
		PEM7. I feel decisive	
		PEM8. I feel attentive	
		PEM9. I feel active	
	Negative Emotions, NEM	NEM1. I feel distressed	
		NEM2. I feel disgusted	
		NEM3. I feel guilty	
		NEM4. I feel scared	
		NEM5. I feel hostile	
		NEM6. I feel irritated	
		NEM7. I feel ashamed	
		NEM8. I feel fearful	
Normative	Social Influence, SI	SI1. People important to me think I should use them	Adapted from Ajzen, 1991 and Taylor & Todd, 1995a, 1995b
		SI2. People who influence me think I should use them	
		SI3. People whose opinions I value would prefer that I use them	
Intention to Use Information Sources, IUIS		IUIS1. I intend to use different information sources to buy in Logroño	
		IUIS2. I will probably use different information sources to buy in Logroño	
		IUIS3. I have decided to use different information sources to buy in Logroño	

negative effect. Therefore, none of the hypotheses are rejected. To validate the multicollinearity of the structural model the variance inflection factors (VIF) were calculated. The VIF values obtained were all less than 1.85, so there are no multicollinearity problems.

5. Discussion

Tourists are consumers who, unlike local buyers, have little initial knowledge about what is on offer at destinations. Information in this new technological age is outside the supplier's control; and it is crucial for the TSJ as it is the interconnection between the tourist and the destination, and it can encourage or discourage tourist purchase intention. The present study aims to advance knowledge about the tourist's information search in the new context of Smart Tourist Destinations, and to help them adapt their apps and their resources to meet the tourist's needs.

To address this objective this study identifies the antecedents of tourists' buying behaviour, focusing on one of the first stages of the TSJ: the search for information in the STD, a crucial element in shaping the tourist's subsequent behaviour (Coromina & Camprubí, 2016; Gursoy & McCleary, 2004; Sirakaya & Woodside, 2005). This work identifies the factors that influence the tourist's intention to use information sources to make purchase decisions at a destination. The three-dimensional CAN model showed that the cognitive dimension has the highest effect on intention to use, and that performance expectancy is more influential than effort expectancy. Second is the emotional dimension, with positive emotions being more influential than negative. Social influence is the least influential variable, but it is, nevertheless, significant.

The results obtained for the cognitive dimension are consistent with previous literature; it has been shown to be a significant antecedent of the use of information sources in touristic activities (Coromina & Camprubí, 2016; Mieli & Zillinger, 2020) and in the shopping pre-purchase stage (Akalamkam & Mitra, 2018; Broilo et al., 2016; Frasquet, Mollá, & Ruiz, 2015). On the one hand, tourists will consult information sources to shop at their destinations if they help to improve their purchasing performance and they make a useful contribution. It is therefore important that destinations and businesses develop and control the information that enables tourists to understand the up-to-date commercial offer and how to access it quickly and, thus, create a more efficient purchasing process. On the other hand, another important

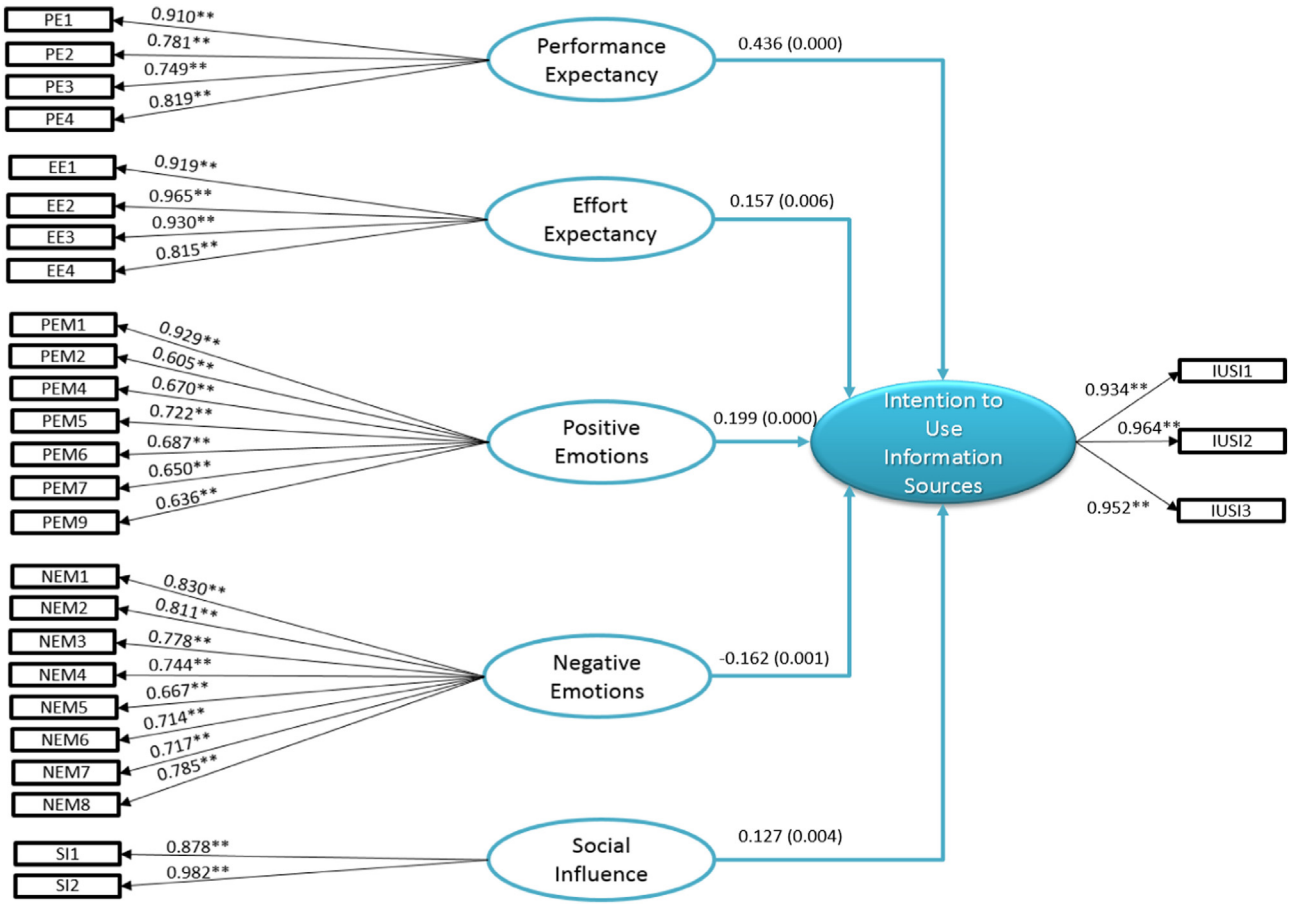

Fig. 2. Results of the measurement and structural model: Path coefficients (*t*-values).

Table 4
Construct reliability and convergent validity.

Construct	Composite reliability	Cronbach's *alpha*	Average variance extracted (AVE)
Performance Expectancy (PE)	0.889	0.891	0.667
Effort Expectancy (EE)	0.950	0.948	0.826
Positive Emotions (PEM)	0.873	0.881	0.500
Negative Emotions (NEM)	0.915	0.916	0.574
Social Influence (SI)	0.929	0.926	0.868
Intention to use Information Sources (IUIS)	0.965	0.965	0.902

Table 5
Discriminant validity.

Construct	PE	EE	PEM	NEM	SI	IUIS
PE	**0.817**	0.606	0.319	0.066	0.377	0.644
EE	0.609	**0.909**	0.322	0.181	0.232	0.550
PEM	0.339	0.340	**0.707**	0.429	0.253	0.350
NEM	−0.015	−0.182	0.402	**0.757**	0.057	0.114
SI	0.376	0.230	0.265	0.039	**0.932**	0.374
IUIS	0.649	0.549	0.369	−0.112	0.373	**0.950**

Note: The values on the main diagonal are the square roots of the AVEs. Below the diagonal are the inter-construct correlations. Above the diagonal are the HTMT ratios.

element is the ease of use of the information sources: to encourage tourists to use them the sources must be intuitive and involve minimum effort (Michalkó et al., 2015; Sa Vinhas & Bowman, 2019).

Table 6
Effects of the endogenous variables.

	R^2	Q^2	Direct effects	*p*-value
Intention to use Information Sources (IUIS)	50.80%	0.413		
H1: Performance Expectancy ➔ (+) IUIS			0.436	< 0.000
H2: Effort Expectancy ➔ (+) IUIS			0.157	0.005
H3: Positive Emotions ➔ (+) IUIS			0.199	< 0.000
H4: Negative Emotions ➔ (-) IUIS			−0.162	0.001
H5: Social Influence ➔ (+) IUIS			0.127	0.004

The results obtained for the affective dimension support the proposition that the effect of positive emotions on intention to use information sources is important; this has been shown in other studies into tourism (Dedeoğlu et al., 2016; Prayag et al., 2017). Negative emotions were also shown, albeit to a lesser extent, to have a negative effect on intention to use information sources, a finding in line with previous works in the general field of tourism (Michalkó et al., 2015).

It was observed that, with regard to the normative dimension, tourists considered the opinions of others when consulting information sources. However, this is the least important factor in the first stage of the purchasing process. Thus, while it has been shown that it is an important variable in the use of information sources in retail purchases (Broilo et al., 2016) and in the tourism field (Fodness & Murray, 1999; Hungenberg et al., 2019), it is less so in the process of searching for information when shopping in a destination. This could be explained by the lack of familiarity among the family and friends of the tourist of the commercial offer at the destination. This outcome could also result

because the process of searching for information is not a social activity and, thus, utilitarian motivations are prioritised. This outcome illustrates how the limited time available to tourists at destinations induces them to use it efficiently.

The information search is one of the first stages of the TSJ. It is important mainly because the information sources consulted are the tourist's first contact with the shopping destination and can facilitate and contribute positively to purchase intention. Furthermore, understanding intention to use information sources is important in fulfilling tourists' information needs, for developing effective communication strategies in a context where being a STD is clearly a major competitive advantage (Buhalis & Amaranggana, 2013; Cimbaljević et al., 2019), and a possible solution for the growth of the tourism sector after the COVID-19 crisis.

6. Conclusions

This research has important implications for tourism destinations as it sheds new light on a scarcely-studied issue and represents a starting point for further research. The present study is the first to analyse the factors that trigger the use of sources of information in tourist on-site shopping. In fact, the present study introduces a never-before studied process in tourist behaviour, the TSJ. Furthermore, the study represents a new perspective in the development of STDs. It highlights also the importance of information technologies in the development of the tourist-centric smart experience.

The findings obtained suggest that sources of information must, primarily, be useful and practical in order to facilitate subsequent shopping. Less important, but also influential, is that they must evoke positive emotions, such as pride and enthusiasm, and they must be easy to use and not involve great effort on the part of the tourist. These results lead us to conclude that tourists have a preference for sources of information that prioritise practical utility in the TSJ and can help destinations develop suitable apps and technological resources to initiate TSJs.

6.1. Theoretical implications

The CAN (Cognitive-Affective-Normative) model, which has previously been employed in different contexts, such as technological implants (Pelegrín-Borondo, Reinares-Lara, & Olarte-Pascual, 2017) and new beverages (Olarte et al., 2017), was tested satisfactorily in the novel context of shopping tourist behaviour. By combining the cognitive variables performance and effort expectancy with social norms and the affective dimension, measured through positive and negative emotions, the variables that affect intention to use information sources in the tourist shopping process were identified. Thus, as it explains 50.8% of the endogenous variable intention to use, the CAN model was successfully extended into this new context. In consequence, this theoretical implication helps to advance the development of general consumer behaviour models. In addition, although emotions are well recognised as triggers for consumer behaviour, the affective dimension has no antecedents in information search literature, and the present study begins to bridge this gap by examining it in the tourism field.

Finally, this paper introduces a new concept in the shopping tourism field, the Tourist Shopping Journey, which we define as the complete purchasing process followed by the tourist in a destination. It begins from the moment (s)he develops the intention to shop in the destination and starts to identify the local product offerings. Normally, the last step of the process is the final post-visit evaluation of the service. This opens a new window of opportunity for STD managers to offer an information service. From the very beginning of the TSJ tourist-STD links could be developed to promote direct interaction that would create a mutually beneficial relationship.

6.2. Practical contributions

Hitherto, no studies have been undertaken into the antecedents that explain why and when tourists use sources of information in the TSJ in a STD. This study proposes three sets of practical contributions to explain this behaviour.

The first set of practical implications relates to the cognitive dimension. The results showed that tourists who want to shop on-site will value information only if it is useful in their decision-making and if it can be accessed intuitively and very quickly. Consumers will dedicate only a limited amount of time to consult the various information sources and want to make the most of them. STD managers and content generators must be aware that tourists are mainly utilitarian in their use of information sources for shopping in destinations. Providing utility and convenience will both encourage tourists to use information sources controlled by tourism providers and initiate the purchasing process.

The second set of practical implications relates to the affective dimension. Positive emotions, such as pride, enthusiasm and excitement, encourage greater use of information sources and a predisposition to continue with the purchasing process. However, negative emotions, such as disgust, fear and guilt, must be avoided because of their negative effect on the use of information sources. Based on these results, information managers might test their technological resources and apps to measure their emotional impact on tourists with shopping intentions in a destination, to ensure that positive emotions are evoked, and negative emotions suppressed.

The third set of practical implications relates to social influence. Tourists can be affected by people who influence them when consulting information sources; however, in the specific case of shopping in a destination, others' opinions and recommendations are less important than other factors. This suggests it would preferable to highlight and invest in utility, efficiency and positive user experiences than in promotional campaigns with influencers and opinion leaders.

7. Limitations and future research lines

The location where the research was carried out, and the non-differentiation between product and information-source types are among the main limitations of the study. Future studies might go into more detail on some of the more interesting aspects of the present study, such as the main information sources used by tourists; and they might also consider the product categories they plan to purchase. In addition, the research could be extended to other destinations to corroborate, or otherwise, the results.

The present study does not examine the interesting issue of tourists' previous knowledge of destinations. Intention to use information sources might be affected by the number of times the tourist has visited the destination. Another issue not considered was cultural distance. Tourists faced with novel cultural contexts need more information to make appropriate decisions. It seems that risk levels increase with cultural and geographical distance. In future studies it would be interesting to examine cultural distance and previous visits, to analyse whether these affect the results.

A further progression would be to link, in the TSJ, intention to use with the effective use of information sources, and to tie this in with the latter phases of the purchase process. Future studies might complement the research by conducting tourist departure surveys to obtain results about their actual behaviour and needs.

The present study also opens a new research line on the TSJ. This holistic process needs further study to address its stages and characteristics in depth. Moreover, the post COVID-19 situation will need more tourism-based research focussing on contactless technologies and solutions for tourism interactions.

Declaration of Competing Interest

None.

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Appendix. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.tmp.2020.100730.

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