

## **Expanding the Task-Dominant Value Co-creation Narrative: The Role of Consumer Expertise, and Social and Mental Processes**

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# **Expanding the Task-Dominant Value Cocreation Narrative: The Role of Consumer Expertise, and Social and Mental Processes**

## **Abstract**

This research proposes an integral model of cocreation processes before, during and after a trip affecting customer value and anteceded by tourist expertise. Beyond prevailing task-related (coproduction) processes and the more recently contemplated social processes, we consider mental cocreation using the concept of *mental time travel* (forward and backward). Findings from 428 tourist responses reveal the great potential of these novel cocreation forms, showing that imagining a forthcoming trip and remembering the travel afterwards are important affective value drivers, as is interacting with locals and employees. Overall, these play a more prominent role than task-related processes. Likewise, we found that tourist expertise is a major antecedent of cocreation and precursor of value. Managers could encourage tourist cocreation by applying customer education strategies, stimulating activities with high community contact, and using virtual tools to intensify thoughts and memories of past and future travel experiences. Technology may be key in achieving this.

**Keywords:** Value cocreation, travel experience, service-dominant logic, expertise, mental processes.

## 1. Introduction

Although researchers and practitioners focused for a long time on value created by suppliers, recent service literature focuses more on the approach that value is cocreated between consumers and providers (from a micro, dyadic perspective) (e.g., Grönroos 2008; Vargo and Lusch 2004, 2008) and, more widely, other actors (from a meso and macro, networked perspective) (e.g., Maglio and Spohrer 2008; Normann and Ramírez 1993; Vargo and Lusch 2016). The term *cocreation* was coined to emphasize the contribution made by consumers in value creation (e.g., Galvagno and Dalli 2014; Prahalad and Ramaswamy 2004; Vargo and Lusch 2004). In the experiential tourism setting covered by this research, “experience providers” (e.g., for-profit tourism service providers, public institutions, and destinations) are salient when it comes to explaining perceived tourist value. However, consumers (i.e., tourists) are also involved in value cocreation processes (Chathoth et al. 2013; Grisseman and Stokburger-Sauer 2012; Payne, Storbacka, and Frow 2008), to the extent that they are imperative in terms of creating experience value (Prebensen et al. 2013a).

Literature on cocreation in tourism has predominantly focused on task-related, traded cocreation processes performed in relation to suppliers, such as tourists organizing a trip or providing feedback (Chathoth et al. 2014; Chiang and Huang 2015; Xiang, Magnini, and Fesenmaier 2015). This might be because these types of processes directly favor service providers in terms of saving costs (Cabiddu, Lui, and Piccoli 2013; Santos-Vijande, López-Sánchez, and Pascual-Fernández 2018; Tsai 2017). Going beyond this coproduction perspective, recent studies have made efforts to address a wider social context of cocreation, by analyzing tourist-to-tourist interactions (Luo et al. 2019; Rihova et al. 2018) and interactions between tourists and local people (Lin, Chen, and Filieri 2017). Although the contributions of previous studies on the cocreated tourism experience are substantial (Campos et al. 2018), a limited amount of mainstream tourism research has systematically

examined the role of the customer in cocreation (Sugathan and Ranjan 2019). Extant research is, therefore, lacking in several aspects.

Firstly, despite the attempt to cover different views on cocreation, there is still a gap in introducing more mental, individual, and sometimes imaginary cocreation processes, such as tourists imagining and recalling the experience in their minds, which arise in the private sphere and may increase the tourist perceived value of the experience. Moreover, as far as we know, there are no studies that combine the different types of cocreation processes (i.e., coproduction, social interactions, mental processes). Instead, literature about value cocreation is made up of disperse conceptual pieces and unidimensional cocreation measures (Grissmann and Stokburger-Sauer 2015; Prebensen, Kim, and Uysal 2016), which makes it difficult to go beyond limited concepts and indicators.

Secondly, there is little or no insight into the relative salience of different customer cocreation processes as drivers of the value of travel experience as a consequence of the lack of an integral perspective that includes a variety of cocreation processes in the tourism setting and their consequences. Though it is quite accepted that value in tourism experience stems from tourists' individual, social, and commercial lived and imagined experiences, not many studies empirically explore the processes through which such value emerges (Rihova et al. 2018).

Thirdly, studies are needed that consider antecedents of cocreation processes. As suggested by Sugathan and Ranjan (2019, 213), "managers need to understand the drivers of customer cocreation to effectively influence them." In this regard, the role of consumer operant resources has been emphasized in conceptual studies that focus on resource integration (Baron and Harris 2008; Vargo and Akaka 2012; Vargo and Lusch 2008, 2016). However, the number of cross-sectional studies that test the effect of a complete measure of consumer operant resources on value is scarce (Alves, Ferreira, and Fernandes 2016; Barrutia and

Gilsanz 2013; Calver and Page 2013). Their role in explaining tourist participation in value cocreation processes is equally uncertain.

Fourthly, tourism experience should be approached as a multiphase process that begins before the trip and continues after tourists return from their destination (Clawson and Knetsch 1966; Mathis et al. 2016; Neal and Gursoy 2008; Stewart and Vogt 1999; Tung and Ritchie 2011). However, value cocreation has been mostly approached as a narrow, discrete process that occurs in concrete moments, mostly during consumer-provider interactions on-site (during the trip).

Lastly, customer perspectives and quantitative investigations based on longitudinal studies are lacking (Dewnarain, Ramkissoon, and Mavondo 2019; Loureiro, Romero, and Bilro 2019; Zhang et al. 2018).

In this paper we take a step forward towards covering these gaps by developing a systematic and integral consumer-focused model of value cocreation in tourism based on S-D logic, which includes antecedents and outcomes. Building on previous literature, we propose a two-dimensional conceptual classification of cocreation processes in tourism in terms of form (task-related, social, and mental processes) and time (pre-, during, and post-travel processes), which lays the grounds for a contextualized and multidimensional tool to measure cocreation of value. By using this classification, we identify concrete cocreation processes in tourism, including travel organization, information seeking, feedback, interaction with local people, interaction with other tourists and interaction with employees. Beyond the joint perspective of these consumer behaviors, the originality of this paper relies on adopting the concept of mental time travel (MTT) to operationalize mental cocreation processes (forward and backward) for the first time in tourism and cocreation literatures. As far as antecedents and outcomes are concerned, we selected a complete measure of tourist expertise as being representative of consumer operant resources and a multidimensional view of experience

value, respectively. Then, we empirically evaluated the value cocreation processes that have the greatest influence on value and assessed the influence of consumer expertise on them. The application of structural equation modeling on a two-phase survey of tourists (before and after the trip) allowed us to answer the following research questions (RQs):

RQ1. What is the role of tourist operant resources, in the form of expertise, in travel experience value cocreation?

RQ2. What is the role of the various cocreation processes in tourism in terms of explaining the value perceived by tourists from the full travel experience?

We believe that both researchers and practitioners will benefit from this study. The adoption of a customer-based quantitative method will transcend the prevailing goods-dominant view centered on a myopic perspective of providers' interests. Likewise, our paper bridges the gaps between theory and practice by providing new forms of value cocreation (e.g., MTT), and estimating differential effects of various cocreation processes on functional and affective value dimensions. Both could help tourism service providers and destination marketing organizations to accurately improve the service/destination experience. Managers may be focusing on the wrong cocreation processes (e.g., customization of the travel package) and forgetting others that could be more promising (e.g., anticipation of the travel experience). Moreover, considering cocreation before, during and after the core experience at the destination would allow practitioners to gain competitive advantage by discovering opportunities for increasing customer value perception that are not as directly visible (e.g., MTT before traveling).

The remaining structure of the paper is as follows. Section 2 provides a theoretical background where prior literature is reviewed and the basis of value cocreation introduced. Section 3 introduces the integral framework of value cocreation in the tourism experience and explains its elements: crucial antecedents (tourist expertise); cocreation processes, broken

down as task-related, social, and mental processes; and outcomes (perceived value of the experience). Section 4 presents the research model and study hypotheses, divided into four building blocks. Section 5 is devoted to explaining the research methodology. The following two sections (6 and 7) are dedicated to introducing the results obtained and post-hoc analyses. Finally, sections 8 to 11 provide a discussion of the results, theoretical contributions, some of the managerial implications, and limitations and avenues for future research.

## **2. Theoretical background**

Various theoretical perspectives have been considered by authors when studying value cocreation in tourism (e.g., S-D logic, experience economy, network approach, innovation theory, service theory) (Campos et al. 2018). This multiplicity may be the reason for the lack of consensus over the approach and scope of value cocreation, which hinders a systematic and integrative research of the concept. We can find diverse interpretations of value cocreation in tourism literature.

### **2.1. The dominant firm-centric perspective of value cocreation**

Several authors have approached cocreation from a resource-integration perspective (e.g., Ng, Sweeney, and Plewa 2019). Some of them consider customers as an operant resource for firms (Santos-Vijande et al. 2018; Shaw, Bailey, and Williams 2011; Tsai 2017) or mere integrators of destination resources (Chekalina, Fuchs, and Lexhagen 2014), whereas others refer to the customer's input into the development of travel arrangements and travel experiences (Grissemann and Stokburger-Sauer 2012; Prebensen, Vittersø, and Dahl 2013b). Another recurring perspective is that value is cocreated when tourists participate and collaborate in the service delivery process (Hsiao, Lee, and Chen 2015).

While these studies acknowledge the importance of tourists' participation, skills, motivation, and time as resources needed to cocreate customer value more effectively, they tend to view resource integration as ultimately rendering value to the firm. In this context, value cocreation does not go beyond specific interactions between tourists (customers) and service providers and refers to processes that are predominantly initiated and facilitated by the provider (e.g., Loureiro et al. 2019). Overall, these studies address the most basic and primary element of value cocreation, i.e., coproduction, which consists of customers participating in creating the core offer. Coproduction is deliberated, episodic and task-related, and includes, for instance, users assisting in the acquisition of tourism products and services



using the Internet (e.g., buying a hotel room online), the generation of content for other potential customers, the interaction of customers with tourism service providers through social media, and customers engaging in co-innovation (Dewnarain et al. 2019; Dolan, Seo, and Kemper 2019; Loureiro et al. 2019). Likewise, cocreation is usually understood in terms of customization and personalization, such as allowing consumers to codesign their own travel experiences by choosing different destinations, vacation days, types of stay, and activities, or designing hotel rooms that give guests the possibility to change the room color depending on their mood (Sugathan and Ranjan 2019).

## **2.2. Towards a less myopic view of value cocreation: the social sphere**

The focus on tourist-firm cocreation (mostly understood as coproduction) provides a largely incomplete view of cocreation processes. As Medberg and Heinonen (2014) argue, value cocreation may go beyond interactions between tourists and tourist organizations and, therefore, be invisible to the organization. This important insight has been progressively integrated into the concept of value cocreation in tourism in recent research, which recognizes that social interactions, in the form of tourist-to-residents and tourist-to-tourist interconnections, are key to the tourism experience, and can lead to the cocreation (and sometimes co-destruction) of value (Luo et al. 2019; Nunkoo and Ramkissoon 2016).

The relationship between tourists and the local community has been discussed in a number of studies (e.g., Bertella, Cavicchi, and Bentini 2018; Chen, Cottam, and Lin 2020). However, contrary to our own research, most of these studies adopt a resident (rather than a tourist) perspective, where the impact of tourism on citizens' lives is explored (e.g., Bimonte et al. 2019; Confente and Scarpi 2020; Nunkoo and Ramkissoon 2016). In these studies it is also suggested that the impact of tourism on citizens can affect residents' attitudes towards tourists at destinations, which plays an essential role in providing quality experiences for visitors. Therefore, residents' hospitality is vital for value cocreation to occur. Goodwill and

cooperation from local people will, presumably, enhance tourist's sense of well-being, whereas negative attitudes and hostility can lead to depletion of value (Lin et al. 2017; Ramkissoon 2020; Woosnam et al. 2018). According to Lin et al. (2017), residents that feel happy with their life in general are more willing to interact with tourists, respect tourists more, and provide informational support.

In a social sphere, there have also been attempts to analyze visitor's interactive exchanges with other visitors and their differential impacts on customer responses (Luo et al. 2019; Rihova et al. 2018). Luo et al. (2019) found that perceived harmony and positive customer-to-customer interactions are directly and positively related to service quality, as a result of joint, collaborative, concurrent, and peer-like processes. By contrast, when other consumers (tourists) behave inappropriately, the experience of tourists is impacted adversely.

### **2.3. Beyond the social sphere: mental processes and the individual sphere**

Apart from coproduction and social views, and as an attempt to go a step further, a few studies suggest the need to consider a more encompassing view of value cocreation that includes mental processes. Heinonen, Strandvik, and Voima (2013) argue that value emerges in customers' behavioral and mental processes, when they interpret experiences based on their personal reality. According to some authors, this mental element responds to a more individual dimension of value cocreation that relocates value-creating agency into customers' own lives (McColl-Kennedy et al. 2012), considering not only contextual conditions, but also tourists' previous and current lived and imaginary experiences (Bertella et al. 2018; Helkkula, Kelleher, and Pihlström 2012; Rihova et al. 2018). In this context, cocreation is a broader concept that also involves unconsciousness and has a more continuous profile. Though mentioned often, mental cocreation has been rather neglected in empirical studies. For instance, Payne et al. (2008) provided a vast explanation of the emotional, contextual and symbolic participation of customers in value cocreation, but failed to give any real examples

of such customer processes. For that reason, we need to discuss not only the value generated through mental and invisible actions, but the mechanics behind those processes. MTT, understood as imagining the future trip, or thinking about the travel experience after the trip may be a good start (Prebensen, Woo, and Uysal 2014).

#### **2.4. The “when” of cocreation**

In a parallel scheme to that of value cocreation scope, literature has also discussed the moment in time in which these processes take place (Frías Jamilena, Polo Pena, and Rodríguez Molina 2017). Despite the apparent relevance of the mid-consumption stage, cocreated value also emerges before and after the central experience (Järvi, Kähkönen, and Torvinen 2018; Payne et al. 2008; Zhang et al. 2018). According to Sugathan and Ranjan (2018, 208), “tourism experience occurs in distinct stages: planning the event *at home* with family and friends; experiencing the service and activities *at the destination*; and constructing narratives *after returning*.” This view leads to a conceptualization of value cocreation in three stages: pre-, during, and post-travel.

#### **2.5. A proposal for classifying cocreation processes in tourism**

Based on the synthesis of the literature provided above, we can clearly distinguish two analytical categories, namely form and time, in which to classify the cocreative processes concerned.

Form refers to the means of cocreating value, which can be: (1) task-related processes (widely studied), (2) social processes (studied, but not from a complete cocreative perspective), and (3) mental processes (slightly hinted at). Time refers to the moment of value cocreation, which can be (1) before, (2) during, and (3) after travel.

Building on these two conceptual dimensions, Figure 1 shows a matrix that provides a compilation of specific cocreation processes that come out in the intersection of the mentioned dimensions. This matrix may make it easier to understand value cocreation in

tourist experiences, identify critical cocreation processes in different contexts and fight the heterogeneous nature of cocreation.

[Figure 1]

With minor conceptual exceptions (e.g., Campos et al. 2018; Tommasetti et al. 2017), current literature provides very few attempts at developing conceptual models that capture all the elements of value cocreation discussed in this matrix. Taking Figure 1 into consideration, the next section is aimed at building an integral framework of value cocreation in tourism based on S-D logic, considering the antecedents and outcomes of such processes.

### **3. An integral framework of value cocreation in tourist experiences: incorporation of antecedents and outcomes into cocreation processes**

According to proponents of S-D logic, “it has been becoming clearer over the last several years that the narrative of value cocreation is developing into one of resource-integrating, reciprocal-service providing actors cocreating value through holistic, meaningful experiences” (Vargo and Lusch 2016, 6). We based on these statements and further elaborations on S-D logic (e.g., Payne et al. 2008) to define value cocreation as *an extensive set of processes enabled by a combination of operand and leading operant resources that give rise to value, the inherent and central result of cocreation* (Vargo and Lusch 2004, 2016).

Building on the above premises and concentrating on the perspective of customer-focused S-D logic, we propose a theoretical framework, which is shown in Figure 2. While remaining alert to destination resources, this paper focuses on tourist operant resources, which have been represented in previous studies by tourist expertise (Barrutia and Gilsanz 2013). Tourist expertise is viewed as the antecedent of certain cocreative processes (France, Merrilees, and Miller 2015; Plé 2016). Value cocreation processes are, in turn, understood as resource integration – a set of processes (task-related, social, and mental mechanisms) that transforms available resources into value (Barrutia and Gilsanz 2013). The specific outcome of cocreation in tourist experiences is the perceived value, as evaluated by the tourist (Vargo and Lusch 2008).

[Figure 2]

Details of the elements introduced into the integral framework are provided below: tourist expertise, cocreation processes (broken down as task-related, social, and mental mechanisms), and perceived value of travel experience.

#### **3.1. Tourist expertise**

According to Vargo, Maglio, and Akaka (2008), actors cocreate value effectively based on their own resources and the resources of others. Specifically, actors access, adapt and finally integrate public, private and market-facing resources to cocreate experience value (Baron and Harris 2008; Paredes, Barrutia, and Echebarria 2014; Vargo et al. 2008). S-D logic stresses the role of operant resources as the leading resources in value cocreation, attaching their supremacy to the capacity to enhance human viability, multiply the value of existing resources, and create new ones (Constantin and Lusch 1994; Vargo and Lusch 2004, 2016). In tourism literature, some authors have stressed the relevance of tourist resources (e.g., involvement, time, effort, previous experience, know-how, technology competence) when cocreating their travel-related experiences (Prebensen and Xie 2017; Prebensen et al. 2013b; Rihova et al. 2015). However, little effort has been made to address tourists' operant resources as described in S-D logic (Prebensen et al. 2014; Tsaur, Yen, and Chen 2010). In this research, tourist expertise is used to represent consumer operant resources (Barrutia and Gilsanz 2013). Our choice is based on the view that customer expertise embodies the more profound component of knowledge (Cordell 1997; Dreyfus 2002), thus fitting the concept of operant resources emphasized in S-D logic (Madhavarani and Hunt 2008). According to Alba and Hutchinson (1987), tourist expertise is the ability to perform product-related tasks successfully. Similarly, Dreyfus (2002) suggests that expertise is the final stage of skills acquisition, where the performer is immersed in the world of his or her skillful activity and can see what needs to be achieved and how to achieve it, thanks to a vast repertoire of situational discriminations. In this paper, tourist expertise is approached in a broad sense, including both cognitive structures (beliefs about destination attributes) and cognitive processes (decision rules for acting on those beliefs) required to successfully perform tasks and other mental processes related to vacations (Gursoy and McCleary 2004).

### **3.2. Cocreation processes**

Value cocreation is thought of in terms of processes, including a variety of procedures, tasks, mechanisms, activities, and interactions (Payne et al. 2008) that arise in different situations. The sum of such processes comprises the whole cocreation of the experience value. Based on the matrix provided in section 2, we suggest that travel-related cocreation processes involve tourists carrying out a great variety of task-related behaviors, social interactions and mental processes that occur before, during and after a trip in all the travel-related environments – virtual and physical, on-site and at home (Åkesson, Edvardsson, and Tronvoll 2014; Cova, Dalli, and Zwick 2011; Gummesson and Mele 2010; Kelleher et al. 2019; Neuhofer, Buhalis, and Ladkin 2012; Payne et al. 2008; Prebensen and Xie 2017; Yi and Gong 2013). These specific cocreation processes are presented below broken down as task-related, social, and mental processes.

### **3.2.1. Task-related cocreation processes**

Task-related cocreation processes are understood in this research as cognitive, interactive and conscious customer behaviors that contribute to successfully completing service “production”. These are provider-oriented processes in which tourists participate directly (as part-time employees) in materially producing value (Humphreys and Grayson 2008). These types of processes arise in commercial (traded) firm-customer interactions, and are expected to bring both costs (e.g., time and energy) and benefits for tourists (e.g., better prices and personalization of the experience). Due to the obvious relevance that these processes have for the firm in terms of reducing costs and adapting to customer needs, task-related cocreation processes have been the subject of extensive research (e.g., Grisseemann and Stokburger-Sauer 2012; Santos-Vijande et al. 2018). However, for that very reason, these essential processes (basic consumer activities) cannot be avoided if we want to build an integral model of value cocreation in tourist experiences. In this paper we include three task-related processes: information seeking, travel organization, and feedback.

*Information seeking* is understood as collecting information about the destination and all travel-related services from different sources such as magazines, websites, blogs, and guidebooks, or asking people before traveling. Information acquisition is necessary in tourism to optimize the selection of destination, accommodation, transportation, and activities, as it reduces uncertainty and gives hints of the service status and service requirements (Fodness and Murray 1999; Gursoy and McCleary 2004; Kellogg, Youngdahl, and Bowen 1997).

*Travel organization* consists of customers providing input while preparing their travel arrangements (Grissemann and Stokburger-Sauer 2012). While the “customer provision of input” refers to time, energy and expertise, it has been partially understood as the employment of customer labor in the travel experience development process (Sampson and Froehle 2006). Therefore, tourists contribute to the travel organization process by booking plane tickets, hotel rooms, and destination activities, making direct payments for travel expenses, and customizing travel services (Grissemann and Stokburger-Sauer 2012; Mohd-Any, Winklhofer, and Ennew 2015; Victorino et al. 2005). Nowadays, with advancing technology, tourists are increasingly organizing made-to-measure trips without the intermediation of brick-and-mortar travel agents. When tourists arrange the travel experience, they usually use the features and functionalities of travel websites.

*Feedback* is defined as positive and negative comments, as well as suggestions for product/service improvements (Celuch, Robinson, and Walsh 2015). In this paper, feedback is focused on the solicited or unsolicited voluntary provision of information by customers to employees and providers after the trip. It is usually done through online reviews about the destination and specific service companies, and through surveys that ask for impressions of and improvements to the service. Feedback could be considered as reflecting a rather goods-dominant logic-based perspective because the service provider seems to be the main



beneficiary, thereby improving their service in the long run. However, feedback could revert to improved future services for the consumer or lead to service recovery.

### **3.2.2. Social cocreation processes**

Social construction theories encourage shifting the emphasis away from customers' subjective perceptions to focus on socially constructed value (Berger and Luckmann 1966; Helkkula et al. 2012). Transcending customer-firm interactions, we now look at the social interactions of tourists with others and identify various practices through which tourists cocreate value (Malone, McKechnie, and Tynan 2018). Based on the literature reviewed, we focus on tourist interactions with local people, other tourists, and service employees (e.g., Kastenholz, Carneiro, and Marques 2012; Rihova et al. 2015; Sfandla and Björk 2012).

*Interaction with local people.* Tourism literature has studied the impact of the local population on tourists' travel experiences, not only as a factor in the conservation of a destination and its image, but also as one that affects the on-site experience. When tourists interact with local people (e.g., asking for help, speaking a foreign language, participating in local food tours, buying from local producers), they are cocreating their experience (Binkhorst and Den Dekker 2009; Kastenholz et al. 2012).

*Interaction with other tourists.* Prior studies revealed that most social interactions were with other tourists in the area, including encounters waiting in a line, or visiting an attraction for the first time (Crompton 1979). In these situations, helpfulness, friendliness, cooperation, and a sense of togetherness and belonging may arise between tourists (Rihova et al. 2015): they may teach and help each other, share experiences, talk about the destination, and give advice about what to see, thus making their respective times more enjoyable (Fakharyan et al. 2014; Hsiao et al. 2015; Yang 2016).

*Interaction with service employees.* One of the main contact points for tourists at the destination is contact with service employees. Even though relationships with providers are

generally considered to be task-related interactions, the reality is that other types of interactions (e.g., goodwill, personal connection) may arise between service employees and tourists. For that reason, we define interaction with service employees as the courtesy, friendliness, and respect shown in the contextual interpersonal relationships at the destination between tourists and the multiple service providers, i.e., first-line staff such as hotel receptionists and tour guides (Yi and Gong 2013).

### **3.2.3. Mental cocreation processes**

Following extended ideas on S-D logic, consumers need to perform mental and physical activities for their own benefit (Vargo and Lusch 2004). Therefore, cocreation does not just comprise customers' physical participation, but also other dimensions based on mental and symbolical participation (Prebensen et al. 2016). Mental cocreation processes are viewed in this research as mind-related, emotional, and sometimes unconscious customer behaviors, in which tourists symbolically produce value.

Although there is no systematic knowledge regarding these mental processes, literature on tourism has occasionally mentioned the relevance of imagining the trip before traveling and remembering the experience once back home (Kastenholz et al. 2012; Prebensen and Foss 2011; Tung and Ritchie 2011). Travel memories, memory recall/retrieval, and tourist memory sharing and reminiscing in particular have received a lot of attention in tourism (Kim and Jang 2016; Tung, Cheung, and Law 2018). Mental processes involving anticipation and recall occur before and after travel, respectively, and both are considered of value for the whole travel experience. An interesting difference compared to task-related value cocreation processes is that mental activities have comparatively no costs (e.g., time, effort, money). Imagining and remembering future/past experiences are higher-order mental processes that have been widely analyzed in experimental psychology and neuroscience in terms of MTT (used in a metaphorical way) (Berntsen and Jacobsen 2008; Debus 2014).

MTT is understood as the ability to project oneself backward in time to re-live past experiences, or forward in time to pre-live possible future experiences (Suddendorf and Corballis 1997). MTT is not defined in terms of veracity of the content. Instead, memories of past events and images of future episodes are the products of generative, constructive processes that (re)create mental representations by (re)arranging pieces of information retrieved from memory (D'Argembeau and Van der Linden 2007; Suddendorf and Corballis 2007). Thus, we know about an episode's existence because we can *see* ourselves doing it. People spend a particularly long time talking about their recollections and anticipations when it comes to tourism (Suddendorf and Corballis 2007). Therefore, we can clearly differentiate between two mental cocreation processes: MTT before travel (imagining a future experience) and MTT after travel (remembering a past experience).

*MTT before travel* is defined in this research as the human capacity to mentally project oneself into the anticipated future trip through imagination, daydreams, and fantasies (Wheeler, Stuss, and Tulving 1997). It has sometimes been referred to as episodic future thinking (Atance and O'Neill 2001), which, in our context, might include a visual experience such as of stepping off the plane in the boiling heat, having breakfast in a hotel while looking out to sea, swimming across a lake of crystal-clear water, seeing fascinating animals, and so on.

*MTT after travel* is understood as the human capacity to remember prior events by mentally traveling back in time to re-experience those events (Wheeler et al. 1997). It is also known as episodic memory (e.g., Tulving 1985). For instance, assume that during our last trip we visited a local glazier and saw how a trained craftsman used colored glass to manufacture different pieces of art. When remembering the event back at home, we might have a very detailed visual experience, such as seeing the craftsman welcoming us to his studio, recalling

the artwork on display, remembering what we thought during the event, feeling what we felt, and so forth.

### **3.3. Perceived value of the experience**

Following S-D logic, the outcome of cocreation processes is the formation and emergence of value, broadly understood as the enhancement of customer well-being (Gummerus 2013; Vargo et al. 2008). Recent S-D logic views on value cocreation suggest that value perception is linked to consumer goals (Arnould, Price, and Malshe 2006). It depends not just on provider resources, but also on those of consumers, and it arises not only during the product usage process, but at any point on a customer's journey (Macdonald, Kleinaltenkamp, and Wilson 2016). Therefore, value is understood as "uniquely and phenomenologically determined by the beneficiary" (axiom 4 in Vargo and Lusch 2016, 18). When using the term *phenomenological*, Vargo and Lusch are expressing the idiosyncratic, experiential, contextual, and meaning-laden character of value. Consistently, there is a wide consensus in service literature, and particularly in literature on tourism, that value should be considered as residing in the *(total) experience* rather than in the object of consumption (Holbrook and Hirschman 1982; Pine and Gilmore 1998; Prahalad and Ramaswamy 2004; Verhoef et al. 2009).

Experience value is a holistic concept that has been approached in different ways. This study tries to capture experience value by considering both a rationalistic, evaluative dimension of value (i.e., functional value), and an affective dimension. According to Zeithaml (1988), functional value is understood as a calculative trade-off between benefits and sacrifices related to the consumption object (e.g., safety, room space, comfort, food quality, etc. vs. price paid). Affective value involves the hedonic (e.g., massages or a broad array of dining choices), and symbolic (e.g., social prestige, fitting a social image) aspects of the experience

(Holbrook 1999; Li, Li, and Kambele 2012; Naylor et al. 2008; Sánchez et al. 2006; Sweeney and Soutar 2001).

Our view covers the basic human needs, which have been described as functional, hedonic and symbolic (Park, Jaworski, and MacInnis 1986). The division between functional and affective (hedonic and symbolic) value is because both respond to different systems of processing and control, broadly referred to as *thinking* and *feeling*, respectively (Zajonc 1980). While functional value is cognitive and calculative and involves a comparison between benefits and costs, affective value refers to aspects that are appreciated as an end in themselves (for their own sake, self-justifying) (Holbrook 1999).

#### **4. Research model and hypothesis**

The overall model is shown in Figure 3. The model introduces the research hypotheses related to our research questions (in bold arrows): the relationship between tourist expertise and different cocreation processes (RQ1), and the relationship between different cocreation processes and value outcomes (RQ2). Other relationships will be outlined briefly at the end of this section, due to their tangential connection to this study.

[Figure 3]

Research hypotheses are broadly based on S-D logic and other theories that have informed extant tourism (and service) research, i.e., planned behavior and reasoned action (Madden, Ellen, and Ajzen 1992) and consumer culture theory (Arnould and Thompson 2005).

Furthermore, the way in which cocreation processes affect perceived tourist experience value and depend on tourist expertise, and how they affect and depend on each other, may rest, to a great extent, on the form and time in which they are framed (see Figure 1). For example, using a temporal rationale, cocreation processes before the trip could affect cocreation processes during and after the trip, but not the other way around. However, it will not be classification dimensions (e.g., pre-trip cocreation processes, social cocreation processes) that are examined empirically, but specific cocreation processes (e.g., travel organization, interaction with local people).

##### **4.1. Role of tourist expertise on value cocreation (RQ1)**

Theories addressed to explain human behavior, such as the theories of planned behavior and reasoned action (e.g., Madden et al. 1992) have broadly supported the role of expertise as a necessary antecedent of human behavior, particularly in the case of relatively complex tasks. Similarly, the consumer culture theory (Arnould and Thompson 2005) and the resource-based theory of the customer (Arnould et al. 2006) see customer operant resources (and more specifically, expertise) as salient value cocreation competences that are applied by consumers

in different contexts to meet their goals. This leads us to propose that tourist expertise acts as an antecedent of different cocreation processes before, during and after travel.

#### **4.1.1. Effect of tourist expertise on task-related cocreation processes**

In this paper we propose that experts will be more likely to be involved in task-related cocreation processes than non-experts. According to Lusch, Vargo, and O'Brien (2007), one of the main elements that contributes to coproduction is likely to be expertise. This means that gaining knowledge on a certain product category (e.g., travel) leads expert customers to better assess the contributions that they can/cannot make, in order to perceive lower decision-making risks, evaluate available offerings more effectively, and develop a need to control all service-related aspects (Auh et al. 2007). These cognitive advantages imply that experts are probably more involved in organizing their trips than non-experts, who can be discouraged from these time- and energy-consuming activities due to the additional effort they should devote to it. In reference to information seeking, Gursoy and McCleary (2004) suggested that previous knowledge (e.g., expertise) influences external information searching. However, there are opposing views on the role of expertise in this cocreation behavior (Bettman 1986; Kerstetter and Cho 2004). While some authors maintain that experts possess knowledge and information and have less need for searching it externally, others suggest that the relationship between expertise and information seeking is positive due to the cognitive advantages that experts have. In line with Alba and Hutchinson (1987) and Mitchell and Dacin (1996), we argue that expert tourists are more likely to find lower costs on external searches compared to non-experts, leading them to search for more information. Experts may also have a greater capacity and interest in terms of learning new information and being more aware of potential problems, which are addressed by searching for information. Similarly, previous research shows an inconsistent relationship between expertise and feedback (after-purchase communication) of consumers (Park and Kim 2008). This paper suggests that expert

customers are more intensely and keenly involved in providing feedback and post-purchase responses, i.e., positive and negative comments and evaluations (Söderlund 2002).

#### **4.1.2. Effect of tourist expertise on mental cocreation processes**

Despite the surprisingly scarce literature on the capacity to re-experience the past and pre-experience the future (Boyer 2008), brain-imaging studies show that both involve a great amount of overlapping neural activity (Berntsen and Jacobsen 2008). According to Suddendorf and Corballis (2007), MTT requires a constellation of skills, not simply an isolated capacity. Specifically, MTT may involve a range of cognitive abilities such as imagination, self-recognition, semantic memory, recursive thought, and representational theory of mind. Adult humans may fail to successfully anticipate and remember experiences due to a deficiency in any of these components, while young children have a severely limited anticipatory/memory capacity because one or several of these components is not yet fully developed (Suddendorf and Corballis 2007). Therefore, structures and processes by which information is encoded, stored, processed, combined, recombined and retrieved are vital for MTT. Similarly, it is thought that high-level cognitive functions, particularly certain types of memory, are connected to both mentally representing the future and becoming aware of subjective experiences in the past. All of these skills represent dimensions of expertise (cognition, analysis, elaboration, and memory), which means that expertise should be expected to be an antecedent of mental cocreation processes.

In conclusion, when considered together, the above arguments suggest that expert tourists will presumably get more actively involved in carrying out relatively complex practices traditionally performed by professionals, such as organizing a trip, searching for information, and providing feedback. Therefore, they will be more prepared to take on a number of different tourism services, including transportation, accommodation and recreation, and match them in terms of time, budget, and personal desires. The same skills enable the



development of mental elaborations related to pre-experiencing and recalling events, such as travel experiences, which are understood as an amalgam of services, resources, encounters, and feelings. Based on considerations made in subsections 4.1.1 and 4.1.2, we propose the following:

H1. Tourists' expertise will directly and positively affect their level of involvement in relatively complex task-related and mental cocreation processes, including information seeking (H1a), travel organization (H1b), feedback (H1c), MTT before travel (H1d), and MTT after travel (H1e).

#### **4.2. Role of task-related, social, and mental cocreation processes on perceived value of the travel experience (RQ2)**

As active participation in cocreation entails costs in terms of time, effort, and stress (Blut, Heirati, and Schoefer 2019; Heidenreich et al. 2015), tourists must expect some benefits from engaging in those processes (Etgar 2008; Lusch et al. 2007; Nambisan and Baron 2009; Verleye 2015). Sometimes, tourists expect to obtain functional value related to economic benefits (e.g., cheaper tickets, discounts, offers), and service improvement (e.g., personalization, payment facilities, available options). At other times, tourists expect to achieve affective benefits (e.g., personal satisfaction, enjoyment, escape from a routine) (Shaw et al. 2011).

##### **4.2.1. Effect of task-related cocreation processes on functional value**

Task-related processes are those involving customer participation activities to complete products, services or experiences in collaboration with service providers. Engaging in these coproduction activities allows customers to adapt the experience to their needs and wants (customization). It also offers the potential to achieve significant improvements on outcomes and cost savings (Bovaird and Loeffler 2012; Nambisan and Baron 2009). Although task-related processes are not resource-free (time, effort, risk, money), related literature suggests

that they provide opportunities for creating economic value for the customer (Auh et al. 2007; Wu 2017). In the tourism context, it is thought that customization increases the customers' willingness to pay for the service (Tu, Neuhofer, and Viglia 2018), which means that the perceived economic value for tourists is higher for higher levels of cocreation. The rationale behind this statement is that tourists that organize their own trips using direct hiring processes through online platforms instead of relying on tourism professionals may achieve their vacation budget easily and perceive greater comfort in the process, by attaining higher levels of performance for the price paid (Bai et al. 2005; Sugathan and Ranjan 2019). Travel organization and information seeking may, therefore, result in a source of extrinsic economic benefits, obtaining higher quality (consumer's needs are better met) for the same or a lower price (consumer coproduction could lead to cost reduction) (Sugathan and Ranjan 2019). There is also evident to suggest that sharing experiences post trip leads to more positive overall evaluations (Kim and Fesenmaier 2017). Therefore, we propose the following:

H2. Tourists' task-related cocreation processes, in the form of information seeking (H2a), travel organization (H2b), and feedback (H2c), will directly and positively affect their perceived functional value of the travel experience.

#### **4.2.2. Effect of social cocreation processes on affective value**

Value cocreation in a travel context takes place in a social setting. Previous literature suggests that these social interactions influence the tourism experience and stimulate creation of value, fulfilling tourists' social-psychological needs and thus engendering positive feelings and emotions through social discourse (Luo et al. 2018). This kind of value is assumed to be experiential or hedonic (Heinonen and Strandvik 2015; Rihova et al. 2018; Tynan, McKechnie, and Hartley 2014). We focus on the effect of the tourist interaction with (1) local people, (2) other tourists, and (3) service employees on the affective value described.

***Interaction with local people.*** Empirical evidence about the impact of interactions between local people and tourists on the travel experience is scarce in literature. However, some authors argue that in the same way that residents may have their daily lives enriched or degraded by the unending flow of tourists, tourists may likewise have their vacation spoiled or enhanced by residents (Bertella et al. 2018; Confente and Scarpi 2020; Knox 1982). Therefore, the local community plays a vital role at tourism destinations in providing quality experiences for tourists (Woosnam et al. 2018). Drawing on these insights, Carmichael (2006) suggests that attitudes and reactions between local people and tourists directly influence the tourism experience and tourists' well-being. More specifically, Lin et al. (2017) explain that residents support tourists in generating value-in-experience by treating tourists with high esteem, providing tourists with useful information (e.g., transport, attractions, restaurants, hotels), or providing tourists with information on their way of life, traditional culture, and history.

***Interaction with other tourists.*** Several authors address the effect of customer-to-customer interaction on customer value (Gruen, Osmonbekov, and Czaplewski 2006; Heinonen, Jaakkola, and Neganova 2018). In the specific area of tourism, some studies show that there is a positive effect of tourist-to-tourist interactions on value (Rihova et al. 2015) and related constructs, such as satisfaction with vacations (Huang and Hsu 2010), satisfaction with and loyalty to tourism services (Fakharyan et al. 2014; Wu 2007), and destination image (Yang 2016). Specifically, Rihova et al. (2018) suggest that customer-to-customer interactions are a crucial source of social value for visitors, as long as the tourism context can be embedded with feelings of kinship and collaborative (commercial) friendships or become a platform for enacting tribal rituals. Similarly, Luo et al. (2018) show that positive (negative) interactions with other tourists in theme parks are directly, positively (negatively) and significantly related to affective response due to a higher perception of service quality.

***Interaction with service employees.*** Interaction with service employees (e.g., frontline employees, crew members, tour guides) has been studied in service literature as an element of the service encounter that affects experiential value (Chen 2015; Mossberg 2007; Wu and Liang 2009) and related outcomes, such as perceived quality and satisfaction (Bitner, Bernard, and Tetreault 1990; de Ruyter and Wetzels 2000). It has also been found that emotional outcomes associated with extraordinary experiences are embedded in relationships between tourists and tour guides and other service personnel (Arnould and Price 1993). Therefore, we suggest that enjoyable customer-employee interactions based on genuine interests and authentic understanding (e.g., feelings of care, friendliness, personal connection) that exceed their respective roles (i.e., mere transactional exchanges of information) will lead to positive emotional outcomes for customers.

Based on the above considerations, we propose the following relationships:

H3. Tourists' social cocreation processes, in the form of interaction with local people (H3a), interaction with other tourists (H3b), and interaction with service employees (H3c), will directly and positively affect their perceived affective value of the travel experience.

#### **4.2.3. Effect of mental cocreation processes on affective value**

Previous research reveals that customer value emerges from customers' mental and invisible actions, which take place in their personal, individual lives and ecosystems (Heinonen et al. 2013; Medberg and Heinonen 2014). To emphasize the intrinsic and affective aspect of customer perceived value, Helkkula et al. (2012) suggest that this value in the experience can be based on an imaginary event or thought situated in the past, present and future. These imaginary experiences of value may include nostalgic reinterpretations or anticipated experiences. Therefore, it can be concluded that imagining the future and recalling past events both bring present benefits to individuals (Ainslie 2007; Rhue and Lynn 1987). D'Argembeau and Van der Linden (2007) suggest three reasons why humans might attach a

privileged status when mentally traveling backward or forward in time. Firstly, MTT makes it easier to make positive adaptive decisions. Secondly, MTT may be used to regulate affective states (e.g., people occasionally recall the positive events during a trip just to dispel a negative state of mind). Lastly, it helps people to construct and maintain a positive view of themselves, provided that they imagine and recall biased experiences to confirm these positive views.

Furthermore, representations of positive past and future events are associated with a greater feeling of re-experiencing and pre-experiencing compared to representations of negative events. Therefore, it is expected that imagining a future trip and recalling a travel experience will be positively valuable (Baumgartner, Sujan, and Bettman 1992; D'Argembeau and Van der Linden 2007; Rubin and Berntsen 2003), activating emotional circuitry and leading to immediate rewards (Boyer 2008). In the same vein, Ainslie (2007) argues that foresight could be said to fall into hedonic accounts, bringing entertainment and an emotional impact to the consumer. Similarly, Dessalles (2007) argues that remembered episodes are those that are worth telling. Consequently, individuals accrue relevant stories to narrate them in conversations, covering human symbolic needs (e.g., solidarity bonds, social prestige and image, making potentially good allies). Therefore, we propose the following relationships:

H4. Tourists' mental cocreation processes, in the form of MTT before travel (H4a) and MTT after travel (H4b), will directly and positively affect their perceived affective value of the travel experience.

#### **4.3. Links between cocreation forms**

This study focuses on the effect of consumer expertise on value cocreation (RQ1), and the influence of the different cocreation processes on value (RQ2). However, the model proposed is relatively complex and also includes links between cocreation forms. For the sake of

simplicity, these relationships are not presented as formal hypotheses. They are, however, justified below.

Firstly, building on previous research, information seeking is viewed in this study as affecting travel organization (Berger and Dibattista 1992; Chiang, King, and Nguyen 2012). Tourists need a lot of details before planning a trip (e.g., distances, prices, local customs, weather). As organizing a trip is a complex activity, information searching is usually the initial step when planning a holiday (Berger and Dibattista 1992; Chiang et al. 2012).

Secondly, task-related and social cocreation processes are viewed as affecting MTT before and after the trip. In relation to MTT before, Suddendorf and Corballis (2007) explain the distinction between merely knowing that some event will occur (e.g., the sun will set) and mentally creating an event (e.g., actually experiencing a sunset, with the light gradually fading). In tourism, when a customer mentally travels to the future to imagine the travel experience, these thoughts constitute predominantly visual, sensory imaginations (Berntsen and Jacobsen 2008; Debus 2014). Based on previous experiences, individuals can imagine concrete future events that include some of the particularities of those events (e.g., images, thoughts, ideas, feelings) (Berntsen and Jacobsen 2008; San Martín and Rodríguez del Bosque 2008). Drawing on these insights, we suggest that when tourists are highly involved in planning the details of their trip, and search for information about their destination, the activities they will conduct there, or the hotel where they will stay, they are collecting a large number of images in their minds that will later be retrieved to build the imagined future experience at the destination. By contrast, it will be harder for those individuals who have a low participation in travel organization and information seeking to mentally construct future travel episodes and scenarios.

Meanwhile, MTT to the past is about recollective memories (Debus 2014). When they travel, individuals acquire information through different sensory modalities (e.g., glimpses, sounds)

and register and hold information about various states of the world in their minds. Afterwards, these memories are accessed by appropriate processing using episodic memory. Therefore, when tourists mentally travel back in subjective time to re-experience their personal past, the result is an act of retrieval from episodic memory (Wheeler et al. 1997), a mental journey into the past, where tourists reconstruct the particularities of the completed travel experience (e.g., principal characters involved, actions that took place, the setting, and emotional reactions). Consequently, as suggested by Moscardo (1996), there is a positive association between tourists' interactivity and participation with interpretive effectiveness, due to visitors' greater attention and better recall. Therefore, task-related and social cocreation processes during and after the trip, which involve active participation, interaction and attention, are considered paths to improving the memorability of experiences and the intensity of MTT after travel.

Finally, this study considers a possible effect of MTT before on MTT after the trip. We can find evidence in literature for the continuity of past and future mental time travel. As suggested by Suddendorf and Busby (2003), past and future are both in the same time dimension, and what was the future eventually becomes the past. Therefore, as a generative process, our ability to revisit the past may only be a design feature of our ability to conceive of the future. Marketing academics have also suggested a relationship between imagined and actual (revived) events. This is because consumers have a mental inclination towards validating previous ideas (Grönroos 1984). Therefore, when tourists imagine their prospective trip, they create a number of images in their minds that they will try to confirm when they experience the trip in person. For instance, if tourists believe they are going to a dangerous destination, this may easily increase perceived (and recalled) problems with on-site security. We can, thus, conclude that MTT before a trip will affect MTT after the trip.

#### **4.4. Control variable: Destination-related resources**

According to S-D logic, firms cannot deliver value but can participate in the creation and offering of value propositions (Vargo and Lusch 2008). The tourism experience comprises an amalgam of complex and interrelated services and resources that build the holistic tourism experience proposition, which is perceived (and cocreated) by the beneficiary (i.e., the tourist). There are several resources on destinations to be considered. Some of the activities, resources and capabilities included in previous literature are destination environment (e.g., natural resources); both private (e.g., hotels) and public (e.g., medical) service providers; collective services (e.g., information); tourism infrastructure (e.g., local transport); and environmental management (e.g., culture) (Flagestad and Hope 2001; Horbel 2013; Murphy, Pritchard, and Smith 2000). While we focus on tourist expertise and cocreation forms, we also control for the destination-related resources by establishing a direct link with both functional value and affective value.



## 5. Research methodology

This section includes the specifications related to the data collection process and the measurement of variables.

### 5.1. Data collection

In an attempt to better adapt the survey methodology to the real travel experience cocreation process and mitigating possible common method variance (CMV), we carried out the survey in two stages. The first questionnaire (Q1) was completed just before the trip, and the second questionnaire (Q2) was conducted one month after the return. This method was found to be innovative and an additional contribution because prior survey-based quantitative studies in tourism are predominantly built around a single questionnaire.

In the design of the questionnaires, several precautions were taken to control CMV:

- 1) The scale was improved as much as possible in terms of vocabulary and length (Tourangeau, Rips, and Rasinski 2000);
- 2) the data collection method (online panel) reduced evaluation apprehension; and
- 3) the order of the questions was counterbalanced by providing two different models of the questionnaire (Podsakoff et al. 2003). The impact of the question order on responses was not significant:  $\chi^2 = .398 < \chi^2_{.05}(21) = 32.67$ .

Additionally, Lindell and Whitney's (2001) marker variable post hoc test was performed.

This returned a low correlation between the marker variable implemented and a theoretically unrelated variable from the study, providing sufficient evidence of the absence of CMV.

As far as the sample profile is concerned, a quota sample approach was used in the study. We chose French and Spanish adults for the study. These countries occupy the top two spots in the travel and tourism competitiveness report (World Economic Forum 2019), which means that we could expect to find respondents that have participated in travel-related cocreation processes. France and Spain also differ in terms of economic and cultural characteristics

(Huang and Crotts 2019), which should contribute to the degree of generalizability of our findings. Data were obtained from online panels in the two countries by means of a market research company that helped authors in the process of data collection. Individuals were contacted via e-mail in two different periods: the Easter and summer holidays. The whole process took more than five months, from April to September 2017.

To ensure the reliability of the data, responses were reviewed for the two phases of the survey. Firstly, Q1 was launched simultaneously to all potential respondents. Our targets were individuals who had already planned a leisure trip abroad. They had to answer issues about their travel-related resources and their specific cocreation processes in relation to a forthcoming trip. Using answers from Q1, we estimated individuals' expected day of return. Applying this information, travelers were re-contacted after their trip. We launched Q2 using an individualized, drip approach. Therefore, the participants in Q2 were the same as the ones who completed Q1 correctly, and that had returned from their intended trip. Only those that completed both questionnaires were accepted as valid responses. The total number of completed surveys was 677. We then scrutinized all responses. Firstly, we carried out a review using personal data to ensure interphase reliability and ensure consistency between Q1 and Q2. Gender and age had to match in both questionnaires. We directly rejected inconsistencies in this regard. Secondly, we checked that the destination was the same before and after the trip (i.e., Q1 and Q2 should refer to the same city/country). Any questionnaires that did not fulfill this criterion were not used in the final sample. Finally, controlling for the time spent filling in the survey, we detected and eliminated those individuals that systematically answered surveys without reading the questions properly. The total number of usable responses by the end of the study was 428.

The sample size meets the requirements for covariance-based structural equation modeling (CB-SEM). Firstly, in line with Comrey and Lee (1992), our sample could be graded as 'very

good' in absolute terms and it exceeded most rules of thumb in literature (Anderson and Gerbing 1988; Kyriazos 2018; Tabachnick and Fidell 2013). Secondly, we surpassed the traditional minimum sample size of five times the number of indicators in terms of more accurate respondent-to-item ratio (Astrachan, Patel, and Wanzenried 2014; Gorsuch 1983) and kept to the widely accepted ratio of 5 to 10 participants per item (Tinsley and Tinsley 1987), as used in recent similar studies in tourism (Kang 2020; Ruiz-Alba et al. 2019). Our sample is also above the suggested estimated size based on the ratio of indicators to latent variables proposed by Westland (2010).

## **5.2. Measurement of variables**

Established scales were used when possible to measure model variables. Specific scale wordings are provided in Table 1.

As far as *tourist expertise* is concerned, the proposition introduced by Alba and Hutchinson (1987) and operationalized by Kleiser and Mantel (1994) was adapted to the tourism context by considering four factors: cognitive effort, analysis, elaboration, and memory. Each factor was measured using three items based on prior research (Barrutia and Gilsanz 2013; Gursoy and McCleary 2004; Teichmann 2011).

*Travel organization* was addressed using a scale from Grisseemann and Stokburger-Sauer (2012), which was completed with two additional items derived from Victorino et al. (2005) and Mohd-Any et al. (2015). *Information seeking* was adapted from Yi and Gong (2013). The *feedback* behaviors of tourists after traveling were assessed using three items based on Celuch et al. (2015).

The factors *interaction with local people* and *interaction with other tourists* were developed specifically for this research, based on prior scales and conceptual contributions (Fakharyan et al. 2014; Hsiao et al. 2015; Suntikul and Jachna 2016; Yang 2016; Yi and Gong 2013);

they were measured using four and three items, respectively. To measure *interaction with service employees*, we adapted three items from Yi and Gong (2013).

The lack of antecedents on the consideration of mental cocreation processes led to a self-developed scale to measure *MTT* (both *before* and *after travel*). Four items were established for each dimension using conceptual ideas from Kastenholz et al. (2012) and Prebensen et al. (2014).

Perceived value of the experience was assessed as two independent variables: *functional value* and *affective value*. Functional value was measured by adapting 3 items from the *functional value* dimension of the PERVAL scale (Sweeney and Soutar 2001). Affective value was assessed as a second-order reflective construct made up of two factors: *hedonic value* (4 items) and *symbolic value* (4 items), inspired by Li et al. (2012) and by adapting validated scales (Williams and Soutar 2009).

The control variable *destination-related resources* was measured as a summated scale of the 12 items used to measure it, which were selected based on previous literature on tourism and destinations (e.g., Blazquez-Resino, Molina, and Esteban-Talaya 2015; Enright and Newton 2004; Yoon and Uysal 2005).

Most of our measurements stemmed from previously tested scales. However, we developed four new scales, which was a complex and risky process. We conducted it parsimoniously and took several precautions. Firstly, a preliminary version of the questionnaire was reviewed by 3 experts on the subject and by 12 individuals (tourists) with no previous knowledge of the topic. Results and opinions were used to refine the wording of the questions. Several items were eliminated or modified during the process. Additionally, 69 undergraduate students and 14 postgraduate students were recruited to perform an assessment of an improved version of the questionnaire. A preliminary confirmatory factor analysis (CFA) was

conducted to check the psychometric properties of the new scales. All the items were assessed using a ten-point Likert scale from 0 = “totally disagree” to 10 = “totally agree”.

## 6. Results

Due to non-normality in our data, which is usual in tourism and social research, robust maximum likelihood (MLR) was used for all the analyses. Firstly, CFA was carried out to provide a confirmatory test of the measurement theory and demonstrate the factor structure of the constructs included in the model (Hair et al. 2010). The measurement scale properties of each construct were checked. Observed indicators that did not load well on their constructs were deleted. After deleting these items, CFA results confirmed the unidimensionality (significant standardized individual parameter estimates above .70), convergent validity (Average Variance Extracted –AVE values above .50), and reliability (Composite Reliability –CR values above .70) of the data (see Table 1). The goodness of fit of the overall model indicated reasonable fit to the data, with  $\chi^2(884) = 1591.132$  ( $p$ -value = .0000), CFI=.942, TLI=.932, RMSEA=.043, and SRMR=.050. The adjusted chi-square also showed an acceptable value for the sample size ( $\chi^2 / df = 1.80 < 3$ ) (Iacobucci 2010; Kline 2004). Discriminant validity was tested using the correlation matrix, where the correlation factors for construct pairs were shown to be lower than the AVE for each variable (see Table 2), except for four pairs of variables (in italics) that refer to the tourist expertise construct. These had yielded similar results in previous research (e.g., Barrutia and Gilsanz 2013). Two additional less strict tests were carried out with these problematic construct pairs to find further evidence for discriminant validity (see Table 3). Firstly, a 95% confidence interval built for the correlated pairs demonstrated that there is not a perfect correlation between the dimensions studied. Secondly, the Wald test performed estimated the possibility of the problematic pairs being sufficiently similar to be able to combine them in a single construct at less than 1%.

Then, we confirmed that the final measurement model of cocreation in tourist experiences exhibited measurement invariance between French and Spanish individuals (Cieciuch et al. 2018; Vanderberg and Lance 2000).

After validating the first-order and second-order dimension structures, the structural equation modeling (SEM) was completed by testing the significance of the relationships between the constructs in the model using Mplus. Table 4 shows the results of the structural model, together with the fit indices. Additional relationships, control effects, and indirect effects between constructs were estimated in addition to the research hypotheses (H1-H4). Most of the hypotheses proposed are supported, but not all. The fit indices obtained are around the recommended limits. The results are considered to be satisfactory and are thoroughly analyzed below.

H1 was supported with respect to the role of consumer expertise on value cocreation processes, except for H1e. Consequently, tourist expertise was found to have a positive and significant influence on task-related cocreation processes (i.e., information seeking, travel organization, and feedback) and MTT before travel, with standardized parameter estimates of .388, .614, .262, and .288, respectively. By contrast, the direct effect of tourist expertise on MTT after travel was not found to be significant, although the total effect of this relationship turned out to be significant (.275,  $p < .01$ ) due to a significant indirect effect.

The data confirm some of our propositions with regard to the effect of different cocreation processes on perceived functional and affective value. As far as H2 is concerned, travel organization was the only task-related cocreation process with a direct significant effect on functional value (.210,  $p < .01$ , H2b supported). Information seeking only had an indirect and marginal effect on perceived functional value (.051,  $p < .05$ ), whereas feedback was not found to be significant at all (H2c not supported).

H3a, H3c, and H4b were supported in terms of the influence of social and mental cocreation processes on the affective value of tourists. Therefore, MTT after travel, interaction with local people, and interaction with service employees were found to have a positive, significant and relatively strong effect on the perceived affective value, with standardized parameter estimates of .377 ( $p < .01$ ), .280 ( $p < .01$ ), and .163 ( $p < .05$ ), respectively. While the direct effect of MTT before travel on affective value (H4a) was not significant, the total effect was significant (.138,  $p < .01$ ). Otherwise, interaction with other tourists did not contribute to affective value (H3b not supported).



## **7. Post-hoc analyses**

In response to some of the non-significant relationships in the model, we followed the recommendations of some of the authors and tested for quadratic effects (Marsh, Wen, and Hau 2006). We examined the quadratic effect of feedback on functional value, which was found to be significant. We also analyzed the quadratic effect of interaction with other tourists on affective value, taking into account that the value perceived by tourists could decrease in the case of tourist overcrowding. However, the results were not significant.

## **8. Discussion**

The empirical study reported here is the first study that provides a comprehensive analysis of the various forms of value cocreation in tourism, their antecedents, and outcomes. Customers are seen as cocreators of the tourism experience before, during and after the trip, where they use expertise (antecedent) to engage in processes and generate value (outcome).

By examining different types of cocreation processes (i.e., task-related, social, and mental), we are able to determine their effect on perceived tourist value dimensions, and, therefore, detect which are the most important cocreation processes in terms of explaining customer value. Overall, the paper expands the task-dominant narrative of value cocreation in service literature, and particularly tourism, unraveling the salient role of tourist expertise, and the relevance of (untraded) social and mental cocreation processes in the perceived value of a travel experience.

### **8.1. Role of expertise on value cocreation (RQ1)**

Our findings indicate that the role of expertise on value cocreation is fundamental. Therefore, we empirically support the main proposition in S-D logic regarding the relevance of consumers' operant resources in value cocreation processes proposed by Vargo and Lusch (2004), which has been conceptually developed but scarcely tested. Specifically, the current study confirms the resource-based view of S-D logic, in that more, better quality resources increase the cocreative capacity of tourists, leading them to participate more often and more actively in cocreation processes. Results show that expert tourists coproduce more than non-experts through task-related cocreation processes; i.e., they look for more travel-related information, they get more involved in organizing their trip, and provide more feedback compared to non-experts. This may happen because experts are familiar with these kinds of activities and know how to perform them well, perceiving more benefits than costs. This paper contributes to controversial literature about the influence of expertise on information

seeking with these results, by providing evidence of a positive effect, as Alba and Hutchinson (1987) did previously. Likewise, this study reveals that experts have advantages in terms of mental time travel (imagining the forthcoming trip and remembering prior experiences). By carrying out these processes, expert tourists (indirectly) perceive higher functional and affective value, which was also suggested by Barrutia and Gilsanz (2013). In conclusion, and corroborating Prebensen et al.'s (2013b) view, this study contributes to emphasizing tourists' resources as influential components in experience value cocreation.

## **8.2. Role of cocreation processes on perceived value (RQ2)**

The indirect effect of tourist expertise on value raises our second research question about the role of different cocreation processes in explaining perceived value of the travel experience. This study shows that the task-related (coproduction) processes traditionally addressed in previous literature might not be as powerful in terms of their effects on value. Tourists involved in organizing their trip perceive higher functional value. As suggested by Sugathan and Ranjan (2019), this may be due to the personalized/customized service obtained from the process, the money saved, and the specific needs and wants they are able to cover. However, information seeking brings functional value to the customer provided that it is used for travel organization, and feedback does not affect customer value at all. In line with Blut et al. (2019) and Dewnarain et al. (2019), we interpret these results to mean that task-related processes involve not only benefits, but also sacrifices in terms of time, energy, money, negative feelings, stress, and opportunity costs, which are not compensated by the perceived benefits of participating in cocreation processes. It seems rational that customer sacrifices may pay off if they are aimed at customizing and/or getting a made-to-measure travel experience, but not when the goal is to generate content for other users and providers. Despite the literature on value cocreation in tourism being predominantly focused on processes related to tourist-provider interactions, this study suggests that the most salient

effect on value comes from the scarcely studied social and mental cocreation processes. Medberg and Heinonen (2014), for instance, claimed that, though invisible to tourist organizations, these cocreation processes substantially increase perceived tourist affective value. Our findings indicate that remembering the trip once at home, interacting with local people, and, to a lesser extent, interacting with service employees at the destination are the processes in which tourists seem to perceive more value. While Arnould and Price (1993) have already associated extraordinary relationships between tourists and tourism personnel with emotional positive outcomes of the experience, the effects of interactions between tourists and residents and the effect of MTT on visitors' value perception are at an early stage.

As far as interactions with locals are concerned, recent studies such as those by Bimonte et al. (2019) and Woosnam et al. (2018) have addressed the relationship between tourists and host communities. However, they focus attention on the effect of tourism on hosts and the local economy, instead of adopting a tourist-based perspective. This paper contributes in this respect: we found that high quality relationships between tourists and local people lead tourists to remember the experience more intensely, which indicates that interaction with local people and their culture seems to be the most memorable travel experience, and also one of the most valuable. This was previously suggested by Kim, Ritchie, and McCormick (2012) and Yin, Poon, and Su (2017).

As far as MTT is concerned, the high effect of remembering the travel experience after the trip may be based on positively biased memories. According to D'Argembeau and Van der Linden (2004), when tourists re-live the tourism experience, they predominantly recall positive events and feelings (more than negative ones), which may be the reason why remembering may turn out to be a positively biased process, thereby increasing perceived value, particularly affective value.

Although results demonstrate that MTT after travel directly increases affective value, the same cannot be said for MTT before travel. This may be because the final value is determined by the real rather than the imagined experience. However, imagining a trip before traveling increases affective value indirectly due to the positive effect of MTT before travel on MTT after travel. In addition, there is a positive and direct relationship between cocreation processes before travel (travel organization and information seeking) and the intensity of MTT before travel. This means that travel organization is of particular help to customers when it comes to engaging in imagining the future experience, probably because it makes imagined experiences more realistic and vivid.

In the experiential context of tourism, affective value could probably be more important than achieving functional value. The alleged superiority of untraded cocreation processes might be because, by engaging in task-related cocreation processes, customers may perceive themselves as part-time workers investing time and effort on carrying out activities that mainly benefit the provider, whereas social and mental processes are free of “charge,” and tourist-initiated. As far as the distinct travel stages are concerned, we demonstrate that pre-trip, on-site and post-trip cocreation processes are all important when it comes to explaining the perceived value of the whole travel experience.

## **9. Theoretical contributions**

Despite substantial literature on value cocreation, after conducting a systematic literature review, Campos et al. (2018) concluded that research has become mired in focusing on provider-driven practices and that the analysis of cocreation settings continues to rely heavily on limited concepts and indicators of the underlying phenomena. We go a step forward towards covering this gap by proposing a tourist-based integral model of value cocreation and testing it empirically. By applying S-D logic on tourism, the paper heeds calls from Vargo and Lusch (2016) to generate more empirical evidence that is germane to the S-D logic research domain in a variety of service contexts.

Furthermore, a complete definition of value cocreation in tourist experiences is provided based on the premises of S-D logic. This definition allowed us to conceptually classify cocreation processes in terms of form and time. We differentiated task-related, social, and mental cocreation processes before, during and after travel, and developed a 3x3 matrix. The two-dimensional matrix provides a better understanding of value cocreation, and a tool to easily identify a variety of consumer cocreation processes and behaviors in other settings. In this research, we selected eight specific context-driven processes of value cocreation, i.e., travel organization, information seeking, mental time travel before travel, interaction with local people, interaction with other visitors, interaction with service employees, feedback, and mental time travel after travel.

Therefore, this paper addresses mental cocreation processes, in the form of MTT, as a source of value in the tourism experience, in addition to traditional coproduction behaviors and interactional processes. Though several studies in other fields refer to MTT (Ainslie 2007; Baumgartner et al. 1992; D'Argembeau and Van der Linden 2007; Rubin and Berntsen 2003), this is the first investigation that discusses MTT in cocreation and tourism domains. As far as social cocreation processes are concerned, this study contributes to observing the

relevance of other (less visible) types of collaborations that occur in tourism environments besides consumer-firm interactions. These include interaction between tourists and local communities and between tourists themselves. Lastly, ours is the first study that provides a comprehensive analysis of the various forms of value cocreation (i.e., task-related, social, and mental/pre-, during, post-travel) in tourism and tests the important relationships that characterize cocreation. This approach contributes to research insofar as it detects the most important cocreation processes (in terms of customer's functional and affective value dimensions), and it makes it possible to screen the outcomes of the use of customer resources (in the form of tourist expertise), a specific area that has not been well-researched, as suggested by Sugathan and Ranjan (2019).

## **10. Managerial implications**

The analysis of the relationship between tourist expertise, travel-related cocreation processes and customer value offers interesting insights for designing successful strategies for travel-related firms and entities. Our research provides managers with a more comprehensive and consumer-oriented view of value cocreation, where customers are not only considered part-time employees (i.e., coproducers) but also social and mental cocreators of their own value. This approach brings managers new opportunities in terms of getting involved in customers' value cocreation and supporting customers' value outcomes, which could lead to customers having a positive attitude towards the company and shareholder value. As some of these opportunities are not as obvious as coproduction and may sometimes be difficult to devise and implement, providers could have the opportunity of being innovative and unique and thus gain competitive advantage.

More specifically, the findings of the present work suggest that providers and tourism-related entities should encourage tourists' knowledge, because expert tourists indirectly perceive higher value from the experience. As suggested by Cavelzani et al. (2003), this effort in educating their customers could lead to a virtuous circle of higher loyalty and lifetime value. While improving on-site resources is a strategy pursued by most providers, focusing on forms that increase consumer expertise could be a distinctive strategy. Therefore, this study proposes that tourism companies focus on offering tailored support to customer resources and conduct educational programs to ensure that customers master travel-related issues. As an example of possible strategies aimed at improving consumer expertise, consumers could be trained on using online platforms and carrying out relevant searches about the destination, on-site activities, and tourism services. As expertise is, in part, based on repeated use, additional support could consist of developing convenient, enjoyable, and time-saving platforms that make them easy and gratifying to use, including cocreative elements in the



design of interfaces, and sharing different travel organization resources on the same platform. These strategies could be used to encourage tourists to make their own arrangements, plan personalized routes, customize online services, and thus increase perceived functional value from the whole experience. “Training” visitors could involve further insights into local culture and everyday life, potential landmarks to visit, and information to help establish respectful encounters with other communities. The latter could help reduce cultural shocks arising from the different identities and cultural backgrounds of guests, hosts, and other visitors.

In addition to customer education, tourism service managers and destination organizations could encourage friendly relationships between tourists and residents and stimulate activities with a lot of contact with the local community, such as participating in workshops and exhibits where local people teach visitors about local specialties (e.g., gastronomy, art, pottery, painting, dancing, and learning the language). Ramkissoon and Uysal (2018) suggest that these authentic interactions could help to positively affect the tourist experience by fulfilling social and psychological needs.

The salience of tourist interaction with service employees is another managerial implication that emerges from our research. Consequently, companies could motivate employees to cultivate these relationships. Rihova et al. (2018) suggest that social media could be a useful tool to help managers “break the ice” and establish rewarding interactions between travelers and employees before a trip.

Our findings also suggest that interaction enhancement strategies could be combined with approaches related to intensifying mental cocreation. Tourism organizations and destinations could intensify tourists’ thoughts about future trips through strategies based on evocative images, imagination-inspiring speeches, and virtual reality to create pleasurable pre-trip experiences, where the customer is able to mentally visit potential destinations and facilities

in a realistic way, as proposed by Jung and tom Dieck (2017). Technology is equally important when it comes to getting tourists to remember their experiences once at home, by creating digital experiential souvenirs that will vivify past travel experiences. In the current COVID-19 context, MTT may be more important than ever, as interactions between people are extremely limited. If interactions with local people and employees cannot nowadays be a source of differential value due to social distancing, managers could focus on strategies aimed at providing extraordinary pre- and post-travel mental experiences.

The observations above converge in the idea that it is imperative for firms to acknowledge the importance of information technology as a resource for cocreating, and stimulating the engagement of tourists in cocreation activities not only behaviorally, but also at a cognitive (e.g., expertise) and emotional (e.g., interactions and mental time travel) level, as suggested by Loureiro et al. (2019).

## **11. Limitations and directions for future research**

This research is not without limitations. We tried to make our results less dependent on the context by conducting our research in two countries: France and Spain. However, it is difficult to establish the generalizability of the results. Studies in other settings may shed light on this constraint. In addition, this is a cross-sectional study in which causal relationships are suggested. Despite the existing theory supporting our arguments, the nature of the research avoids testing the direction of the relationship, and, therefore, our results are open to debate. Although the two-phase survey method used in the study reduces concerns regarding common method bias, we could have used three questionnaires (before, during and after) instead of two. However, this approach, although possible, is not easy to implement in practice. Despite the limitations above, this research provides a deeper understanding of value cocreation in a travel context.

Further research could address new cocreation processes, and consider additional tourist resources, such as involvement, social capital, or technology. It would also be interesting to include satisfaction and loyalty variables in the model as value outcomes, and unravel the relative importance of functional and affective values in travel-related experiences.

This research used pre-COVID-19 data. Overall, we believe that COVID-19 should not significantly affect the structural relationships between our constructs. The perceptions of tourists in relation to the constructs involved may be different after COVID-19 (e.g., customers may feel that they are more expert due to having used computers more intensively, or less expert due to not having traveled during the pandemic). Despite this, the link between constructs should remain unchanged (e.g., a lower/higher perception of expertise should lead to lower/higher MTT and lower/higher perception of value). However, more research is necessary to confirm or disprove our beliefs.

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Figure 1. Matrix to classify value cocreation processes in tourism, with examples

		Form		
		Task-related processes	Social processes	Mental processes
Time	Before the trip	Customize the packaging of the trip by booking tickets for amenities before traveling.	Ask people for their opinions about the destination.	Imagine the experience before traveling.
	During the trip (on-site)	Clearly explain to the corresponding employee (e.g., hotel) what is wanted and needed at any given time.	Ask local people about places/routes that are off the beaten track and that only locals know well.	Tolerate and put up with service failures.
	After the trip	Take the initiative to propose improvements on services at the destination.	Talk to friends and relatives about the experience at the destination.	Recall the tourist experience shortly after returning home.



Figure 2. Theoretical framework of value cocreation

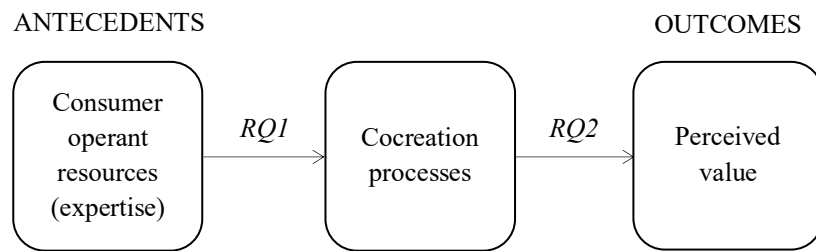


Figure 3. Value cocreation in tourist experiences: Conceptual model and research hypotheses

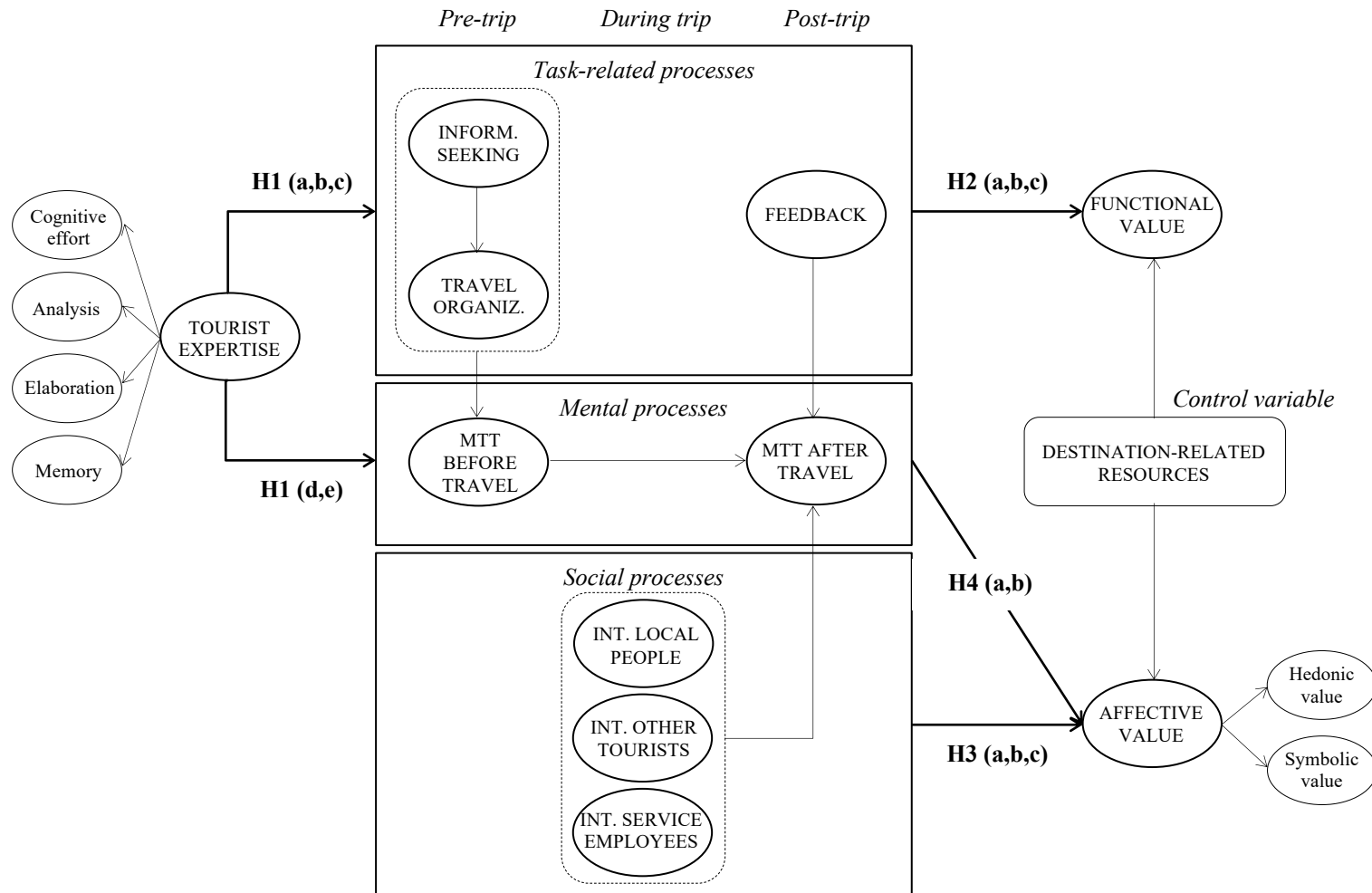


Table 1. Unidimensionality, convergent validity and reliability assessment

Constructs and items	Standardized Loading	AVE	CR
<b>Cognitive effort</b>		.757	.903
I can easily differentiate holiday destinations based on the attractions on offer (destinations, accommodation, transportation, etc.)	.902***		
If I am given a list of vacation services (destinations, accommodation, transportation, etc.), I can easily group those services that offer similar attractions	.833***		
I can easily understand everything that is related to travel	.874***		
<b>Analysis</b>		.668	.798
I enjoy learning about holiday trips	.707***		
I search for the latest useful information to organize a trip	.914***		
I keep up to date on what is related to travel destinations and services	Deleted		
<b>Elaboration</b>		.724	.887
I consider myself knowledgeable on organizing holidays	.882***		
My knowledge on travel organization helps me to understand information about the services offered	.818***		
I use my knowledge on travel organization to take the best decisions when booking holidays (choose destination, accommodation, transportation, etc.)	.852***		
<b>Memory</b>		.722	.886
I can easily remember travel-related issues	.878***		
I can remember almost all the existing brands booked for my trips (hotels, airlines, etc.)	.804***		
I remember different aspects about my holiday trips	.865***		
<b>Information seeking</b>		.644	.844
I have asked others for information about my destination and services available there	.789***		
I have searched for information about my forthcoming trip	.845***		
I have paid attention to what others think about my travel	.771***		
<b>Travel organization</b>		.644	.900
I have been actively involved in the packaging of my trip	.826***		
I have used my experience from previous trips to arrange this trip	Deleted		
The ideas on how to arrange this trip were predominantly suggested by myself	.719***		
I have spent a considerable amount of time arranging this trip	.751***		
I have planned my trip based on my own needs and wants	.888***		
I have been interested in the details of the trip	.816***		
<b>Mental time travel before</b>		.700	.874
I think about my forthcoming trip	.882***		
I talk about my forthcoming trip	.786***		
I have imagined what the coming experience will be like	.838***		
I have got away from my daily routine by thinking about my forthcoming trip	Deleted		
<b>Interaction with local people</b>		.839	.940
My relationship with local people was friendly	.900***		
The relationship with locals during the trip was polite	.931***		
My relationship with the residents at the destination was positive	.917***		
I had an enriching relationship with local people	Deleted		
<b>Interaction with other tourists</b>		.817	.931
I interacted frequently with other tourists	.856***		
I received advice and/or instructions from other tourists regularly	.921***		
I repeatedly talked with other tourists about what I knew about the destination	.933***		
<b>Interaction with service employees</b>		.909	.968

My relationship with service employees at the destination was friendly – transportation, accommodation, restoration, tourist bureaus, guided tours, etc.	.955***		
My relationship with service employees at the destination was polite	.961***		
My relationship with service employees at the destination was courteous	.944***		
<b>Feedback</b>		.670	.858
I provided my opinion to service providers (travel agency, accommodation, transportation, tourist guides, etc.) about their products and services through surveys	.804***		
I shared my thoughts and feelings about the trip (positive or negative) with the service providers	.919***		
I took time to provide helpful suggestions to the service providers hired at the destination	.721***		
<b>Mental time travel after</b>		.813	.928
After travel, I have often thought about my experience	.943***		
I have often talked about my travel experience	.947***		
I have got away from my daily routine by thinking about my travel experience	.808***		
After travel, I have considered what the experience meant in my life	Deleted		
<b>Functional value</b>		.785	.916
The tourism experience was reasonably priced	.860***		
The tourism experience had a good return for money	.961***		
The tourism experience was good for the price paid	.832***		
<b>Hedonic value</b>		.819	.931
The tourism experience gave me feelings of well being	.865***		
The tourism experience was exciting	.916***		
The tourism experience made me elated	.933***		
The tourism experience made me feel happy	Deleted		
<b>Symbolic value</b>		.602	.819
The tourism experience gave me social approval from others	.838***		
The tourism experience made me feel more accepted by friends, family, colleagues, etc.	.710***		
The tourism experience contributed to give a good impression on other people	.774***		
The tourism experience improved the way others perceive me	Deleted		
<b>Expertise</b> <i>Second-order construct (reflective)</i>		.856	.960
Cognitive effort	.921***		
Analysis	.947***		
Elaboration	.967***		
Memory	.862***		
<b>Affective value</b> <i>Second-order construct (reflective)</i>		.692	.816
Hedonic value	.919***		
Symbolic value	.734***		

Note: AVE: Average Variance Extracted; CR: Composite Reliability; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ .

Table 2. Correlation matrix for discriminant validity

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 COG	<b>.870</b>														
2 ANA	.863	<b>.817</b>													
3 ELA	.910	.934	<b>.851</b>												
4 MEM	.782	.819	.829	<b>.850</b>											
5 INF	.312	.425	.332	.339	<b>.802</b>										
6 ORG	.615	.686	.682	.637	.475	<b>.802</b>									
7 MTTB	.655	.654	.598	.672	.544	.746	<b>.836</b>								
8 LOC	.450	.454	.413	.426	.187	.357	.429	<b>.916</b>							
9 TOU	.150	.217	.204	.185	.381	.148	.198	.215	<b>.904</b>						
10 EMP	.435	.428	.386	.364	.135	.285	.389	.682	.127	<b>.953</b>					
11 FEE	.201	.280	.243	.192	.370	.220	.260	.209	.454	.267	<b>.819</b>				
12 MTTA	.494	.518	.461	.519	.341	.431	.546	.669	.204	.559	.287	<b>.902</b>			
13 FUV	.373	.365	.358	.387	.183	.324	.387	.466	.211	.396	.149	.442	<b>.886</b>		
14 HEV	.450	.420	.398	.444	.265	.365	.479	.758	.209	.642	.238	.751	.594	<b>.905</b>	
15 SYV	.339	.398	.341	.399	.394	.351	.448	.542	.452	.484	.325	.593	.463	.687	<b>.776</b>

Note: Correlations between construct pairs are shown below the diagonal. The square root of the AVE for each construct is shown on the diagonal.

COG=Cognitive effort; ANA=Analysis; ELA=Elaboration; MEM=Memory; INF=Information seeking; ORG=Travel organization; MTTB=Mental time travel before travel; LOC=Interaction with local people; TOU=Interaction with other tourists; EMP=Interaction with service employees; FEE=Feedback; MTTA= Mental time travel after travel; FUV=Functional value; HEV=Hedonic value; SYV=Symbolic value.

Table 3. Further evidence for discriminant validity

	<b>Correlation</b>	<b>Standard error</b>	<b>Confidence interval (95%)</b>	<b>Wald test of <math>\chi^2</math> differences (d.f.=1)</b>
<b>COG-ANA</b>	.863	.030	[.803, .923]	20.910 ( <i>p</i> -value=.0000)
<b>COG-ELA</b>	.910	.028	[.854, .966]	10.264 ( <i>p</i> -value=.0014)
<b>ELA-ANA</b>	.934	.025	[.884, .984]	6.766 ( <i>p</i> -value=.0093)
<b>ANA-MEM</b>	.819	.037	[.745, .893]	23.590 ( <i>p</i> -value=.0000)

Note: Confidence interval is calculated as Correlation  $\pm$  2\*Standard error. COG=Cognitive effort; ANA=Analysis; ELA=Elaboration; MEM=Memory

Table 4. Structural model estimations

Hypothesis	Std. load.	Est./S.E.	p-value	Hypothesis testing
H1a. Expertise→Information seeking	.388***	5.245	.000	Supported
H1b. Expertise→Travel organization	.614***	9.326	.000	Supported
H1c. Expertise→Feedback	.262***	4.488	.000	Supported
H1d. Expertise→MTT before travel	.288**	2.515	.012	Supported
H1e. Expertise→MTT after travel	.091 (n.s.)	1.366	.172	Not supported
H2a. Information seeking→Functional value	-.042 (n.s.)	-.864	.388	Not supported
H2b. Travel organization→Functional value	.210***	3.487	.000	Supported
H2c. Feedback→Functional value	-.016 (n.s.)	-.296	.767	Not supported
H3a. Interaction with local people→Affective value	.280***	3.457	.001	Supported
H3b. Interaction with other tourists→Affective value	.052 (n.s.)	1.244	.214	Not supported
H3c. Interaction with service employees→Affective value	.163**	2.208	.027	Supported
H4a. MTT before travel→Affective value	.047 (n.s.)	1.133	.257	Not supported
H4b. MTT after travel→Affective value	.377***	5.777	.000	Supported
Information seeking→Travel organization	.241***	3.105	.002	
Information seeking→MTT before travel	.234***	3.239	.001	
Travel organization→MTT before travel	.434***	3.752	.000	
MTT before travel→MTT after travel	.240***	3.595	.000	
Interaction with local people→MTT after travel	.453***	6.127	.000	
Interaction with other tourists→MTT after travel	-.002 (n.s.)	-.055	.956	
Interaction with service employees→MTT after travel	.114*	1.877	.061	
Feedback→MTT after travel	.074 (n.s.)	1.639	.101	
Destination-related resources→Functional value	.461***	7.831	.000	
Destination-related resources→Affective value	.233***	3.571	.000	
<b>Total effects</b>	<b>Total</b>		<b>Total indirect</b>	
Expertise→Travel organization	.707***		.093***	
Expertise→MTT before travel	.685***		.397***	
Expertise→MTT after travel	.275***		.184***	
Expertise→Functional value		.128***		
Expertise→Affective value		.136***		
Information seeking→MTT before travel	.339***		.105**	
Information seeking→MTT after travel		.081**		
Information seeking→Functional value	-.009 (n.s.)		.051**	
Information seeking→Affective value		.047**		
Travel organization→MTT after travel		.104**		
Travel organization→Affective value		.060**		
Feedback→Affective value		.028 (n.s.)		
Interaction with local people→Affective value	.451***		.171***	
Interaction with other tourists→Affective value	.051 (n.s.)		-.001 (n.s.)	
Interaction with service employees→Affective value	.206***		.043*	
MTT before travel→Affective value	.138***		.091***	
<b>Fit indexes (robust)</b>	$\chi^2=1912.779$ ; d.f.=995;			
	CFI=.926; TLI=.919;			
	RMSEA=.046; SRMR=.077			

Note: Std. load.=Standardized loadings; Est./S.E.=Estimates/standard errors. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ , n.s.=not significant.