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**Perceived value of buying tourism services through an Online  
Travel Agency**

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*For her*

## **Abstract**

There are several studies in the literature related to the analysis of the perceived value of a product/service for a customer but it wasn't found on the literature evidence of a study that would have analyzed perceived value on the tourism sector considering the online channel. Therefore, this study aims to tackle a gap in the literature regarding the analysis of the new context of the customers when buying a tourism service through an Online Travel agency.

Travel and Tourism is a sector that represents 10,2% of world's GDP and a market valued at 7.6 trillion dollars that employ 292 million people all around the globe. The forecast for the next years is to continue to grow thus, it's important to the academia to understand its evolution having in mind the changes in its context.

In the tourism and travelling sector, travel agencies play a big role. They are responsible to intermediate customers and suppliers maintaining a high level of communication between actors. The Internet can have a big role in this matter because it allows multiple actors to be connected at the same time all around the world making information available almost instantly.

This research uses a quantitative methodology approach based on questionnaires sent to Online Travel Agencies' customers. Data analysis revealed a positive influence of quality of the service and price of the service on the perceived value of a customer of an Online Travel Agency. It was also found a positive impact of perceived value and satisfaction and between satisfaction with Online Travel Agency and loyalty towards the Online Travel Agency. These influences were expected and supported by the existing literature.

**Keywords:** Perceived Value, Satisfaction, Loyalty, Online Travel Agency, Tourism, Internet

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**Table of Contents**

1	Introduction.....	1
1.1	Project background .....	1
	E-Commerce .....	1
	Online Travel Agencies .....	2
1.2	Problem Description .....	2
1.3	Research Questions .....	3
1.4	Report outline.....	3
2	Literature Review .....	4
2.1	Perceived Value .....	4
2.2	Perceived Quality .....	7
2.3	Satisfaction.....	8
2.4	Loyalty .....	8
2.5	Trust .....	9
2.6	Relationships between concepts.....	9
	Perceived Quality and Perceived Value .....	9
	Perceived Value and Satisfaction .....	9
	Satisfaction and Loyalty .....	10
	Trust and Perceived Value.....	10
2.7	Perceived value, satisfaction, trust and loyalty in the context of tourism....	10
3	Problem Characterization and conceptual framework.....	11
3.1	Online travel agency context.....	11
3.2	Online Travel Agencies vs Traditional Travel Agencies.....	13
3.3	Research objectives.....	14
3.4	Conceptual framework and hypotheses .....	14
3.5	Methodology .....	19
3.6	Structural Equation Modelling.....	19
	Data Collection .....	21
	Survey instrument.....	22
4	Results.....	27
4.1	Exploratory Factor Analysis (EFA) .....	27
4.2	Measurement model - Confirmatory Factor Analysis (CFA) .....	30
4.3	Structural Model .....	34
5	Conclusion and future research.....	39
	References .....	41
	Annex .....	45
	A – Survey .....	45
	English version .....	45
	Portuguese Version.....	52
	B – Factorial analysis .....	62

**List of Tables**

Table 1 – List of different approaches to study Perceived Value.....4  
 Table 2 - Summary of hypotheses of investigation ..... 18  
 Table 3 - Fit indices .....21  
 Table 4 - Summary of the scales of the research constructs.....22  
 Table 5 - Sample's Socio-Demographic Information .....25  
 Table 6 - Respondents per OTA .....26  
 Table 7 - KMO and Bartlett's Test .....27  
 Table 8 - Exploratory Factor Analysis (EFA) and reliability (Varimax rotation).....27  
 Table 9 - Exploratory Factor Analysis (EFA) and reliability (Varimax rotation) - Constructs  
     Service variety and Social .....30  
 Table 10 - Reliability estimates and average variance extracted.....31  
 Table 11 - Confirmatory Factor Analysis (CFA) results .....32  
 Table 12 - Indexes of goodness of fit of the models – Measurement model.....34  
 Table 13 - Indexes of goodness of fit of the models – Structural model.....35  
 Table 14 - Indexes of goodness of fit of the models – Test of Structural model .....36  
 Table 15 - Standardized Total Effects .....37  
 Table 16 - Hypotheses Testing .....38

**List of Figures**

Figure 1 - Evolution of web.....2  
 Figure 2 - eDreams Google Ad..... 11  
 Figure 3 - Example of Expedia user rating (extracted from Expedia)..... 12  
 Figure 4 – Model of analysis ..... 15  
 Figure 5 - Structure Model .....37

**List of abbreviations**

1. OTA – Online Travel Agency
2. GDP – Gross Domestic Product
3. W3C – World Wide Web Consortium
4. WoM – Word of Mouth
5. SEM – Structural Equation Modelling
6. EFA – Exploratory Factor Analysis
7. CFA – Confirmatory Factor Analysis
8. CR – Construct Reliability
9. AVE – Average Variance Extracted
10. DF – degrees of freedom
11. CFI – Comparative Fit Index
12. NNFI – Non-Normed Fit Index
13. TLI - Tucker-Lewis Index
14. NFI – Normed Fit Index
15. RMSEA – Root Mean Square Error of Approximation
16. SRMR – Standardized Root Mean Square Residual

## 1 Introduction

According to World Travel & Tourism Council's 2017 annual research in conjunction with Oxford Economics (WTTC, 2017), Travel and Tourism's total contribution to world GDP continue to grow as it has been growing for the past 6 years. This is a sector that represents 10,2% of world's GDP and a market valued at 7.6 trillion dollars that employ 292 million people all around the globe. The forecast for the next 10 years it's to continue growing and reach a total contribution of 11.7 trillion dollars by the year of 2027. Thus, it's quite important for actors in this sector to understand its evolution, especially in a world where internet is more and more relevant for societies and where the relationship between customers and companies is changing.

In the tourism and travelling sector, travel agencies play a big role. They are responsible to intermediate customers and suppliers maintaining a high level of communication between actors. Information concerning suppliers offers, clients desires to buy, economic conditions, and transactions between parts must be exchanged as fast as possible (Gustafson, 2012). The Internet can have a big role in this matter because it allows multiple actors to be connected at the same time all around the world making information available almost instantly.

The present study draws on the evolution tourism is having, aiming to contribute with knowledge for the actors in the area.

### 1.1 Project background

#### ***E-Commerce***

Electronic commerce (e-commerce) may be broadly defined as “the use of computer networks to improve organizational performance” (Watson *et al.*, 2008, p. 8). These authors identify some possible gains from using e-commerce as increasing profitability, gaining market share, improving customer service, and delivering products faster. Also, E-commerce is not just ordering something from an online catalogue, it includes the different aspects of the electronic interactions with the organization stakeholders (Watson *et al.*, 2008). Its roots exist even before the appraisal of the world wide web. Before 1990 the only way for services to communicate was through rigid mechanisms, i.e., “to engage in business activities digitally, the channel of communication had to be negotiated”, which made relations to be basically one-to-one and with low possibility of scaling up (Chu *et al.*, 2007).

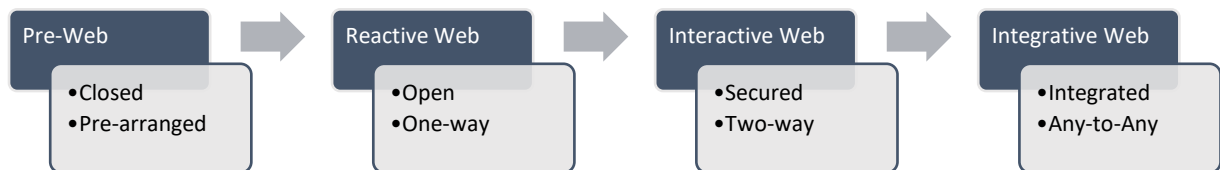
After 1990 and with the rise of the world wide web, a new era for e-commerce came to the world. As Chu *et al.* (2007) call it, it was the *Reactive web era* where world wide web became actually an effective channel for businesses to reach customers. It was an upgrade from one closed system to an open system but there were some still constraints: businesses would only react to requests and security was an issue.

After the *Reactive web era*, the *Interactive web era* (Chu *et al.*, 2007) emerged to provide more capabilities to businesses. What was before a one-way browsing relationship between users and businesses upgraded now to a two-way commercial relationship. Personalization and new

shopping environments came to define a new secure market for customers. Online brokering also emerged and new ways to match sellers and buyers flourished in this new era.

As the evolution continued to happen, *Interactive web era* gave place to the *Integrative web era* (Chu *et al.*, 2007). This new era is defined by the interoperability where websites are also used for the management of e-business processes. Having this integration of systems, websites made possible to improve collaboration, establish strategic alliances and one-stop business services.

**Figure 1 - Evolution of web**



Source: adapted from Chu *et al.* (2007)

### **Online Travel Agencies**

The evolution of tourism delivery system experienced a radical change with the evolution of internet (structure) and with the evolution of the web. As the network evolved and the tools built on top of it also evolved, communication between suppliers and consumers became easier and faster (Kracht & Wang, 2010).

On 1995, Internet Travel Network appeared as the first online agent in an attempt to disintermediate the traditional travel agents (Kracht & Wang, 2010), then on 1996 Travelocity and Expedia from Microsoft also came to the market establishing a new way for customers to search for touristic opportunities. Lastminute.com appeared on the market on 1998 selling airline seats and hotel rooms that would likely go unsold and, during 2000 and 2004 took the opportunity to buy other companies from the market like Dégriftour. On 2005, Travelocity bought Lastminute.com.

These companies confirmed the evolution that internet and the rise of the web brought to an industry that was managed solely by traditional travel agencies. The fact that consumers could make their own search and buy services online, contributed to disintermediate the relationship between consumers and tourism services providers.

## **1.2 Problem Description**

The evolution of the internet and consequently the e-commerce changed the service context in the tourism and travel sector. The relationship between customers and service providers knows today a new reality where customers have now easy access to information and technology, therefore, making them more prepared and informed than ever. The fact that is possible to easily

contact in real time with service providers and other customers affect the relationship creating pressure for service providers to rethink the way they interact with customers (Kracht & Wang, 2010). This new context is then relevant for analysis in the sense that is crucial for the involved actors to understand the impact of the changes, especially the impact on the perceived value of customers.

There are several studies in the literature related to the analysis of the perceived value of a product/service for a customer: on one hand there are more generic approaches like the ones from Dodds and Monroe (1985), Monroe and Chapman (1987), Zeithaml (1988) and more recently Jillian C Sweeney and Soutar (2001) among other authors; on the other hand there are the studies from Wakefield and Barnes (1996), Murphy *et al.* (2000), Oh (2003) or Williams and Soutar (2009) which focused their studies to understand value in the tourism sector.

Although there are already several studies about perceived value in a broader sense or even in a more specific approach to the tourism sector, it wasn't found on the literature evidence of a study that would have analyzed perceived value on the tourism sector considering the online channel. Therefore, this study aims to tackle a gap in the literature regarding the analysis of the new context of the customers when buying a tourism service through an Online Travel agency.

### **1.3 Research Questions**

This study addresses a set of questions aiming to better understand the impact of online travel agencies on customers choices of tourism services.

The research questions for the study are:

1. Understand the factors behind the perceived value of buying tourism services through online travel agencies.
2. Understand how the perceived website quality influences the perceived value of buying tourism services through online travel agencies.
3. Explore the impact of perceived value on customer's satisfaction and loyalty with online travel agencies.

### **1.4 Report outline**

The study is organized in as follows. In chapter 2 the relevant literature related to the topics under study will be reviewed. Then chapter 3 will provide a better description of the context of online travel agencies and the most relevant concepts. Also, it will provide a deeper clarification of the research objectives. Chapter 4 describes the methodology followed in the study. Then, chapter 5 presents the study results. The final chapter presents the conclusions and future research.

## 2 Literature Review

The literature review covers customers perceived value, quality, satisfaction, and loyalty, presenting these concepts definitions, its antecedents, and the relationships found in previous studies among them.

### 2.1 Perceived Value

Perceived value is an important topic for relationship marketing and has been conceptualized using two major approaches (Sanchez *et al.*, 2006). One approach explained by Ravald and Grönroos (1996) among others, conceptualizes perceived value as one construct that is composed of two parts: one part representing the benefits received and other representing the sacrifices made. As Jillian C Sweeney and Soutar (2001) say, this tradeoff analysis between “give” and “get” establishes a perceived value as a conceptualization of value-for-money.

The second approach, however, conceptualizes perceived value as a multidimensional construct. This approach has the advantage to tackle some of the problems of the first approach, for instance, the excessive concentration on the economic utility. The multidimensional approach also includes another important factor for the analysis, it includes an understanding of the role played by feelings in buying and consumption habits (Sanchez *et al.*, 2006). This is also supported by Havlena and Holbrook (1986), that says that tourism purchasing behaviour is affected by feelings and emotions.

One important matter that also should be considered while trying to define perceived value, is that perceived value is also experienced after consumption (Gardial *et al.*, 1994), therefore is necessary to include emotional reactions that the consumer generated.

This understanding of the requirement of consumer behaviour analysis supports the multidimensional approach for analyzing perceived value. The first approach had only a partial view of perceived value focused in a more cognitive and rational approach to the matter, on the other hand, multidimensional approach adds the customer behaviour analysis in the sense that takes into consideration not only the cognitive and rational systems but also the affective (Sanchez *et al.*, 2006). Table 1 shows the evolution of the multidimensional approach to explain perceived value.

**Table 1 – List of different approaches to studying Perceived Value**

<b>Author</b>	<b>Dimensions</b>
<i>Dodds and Monroe (1985)</i>	<ul style="list-style-type: none"> <li>• Perceived Quality</li> <li>• Sacrifice</li> </ul>
<i>Monroe and Chapman (1987)</i>	<ul style="list-style-type: none"> <li>• Acquisition value</li> <li>• Transaction value</li> </ul>
<i>Zeithaml (1988)</i>	<ul style="list-style-type: none"> <li>• High-Level Abstractions</li> <li>• Perceived Quality</li> <li>• Perceived Sacrifice</li> <li>• Intrinsic Attributes</li> <li>• Extrinsic Attributes</li> </ul>

<i>Bolton and Drew (1991)</i>	<ul style="list-style-type: none"> <li>• Service Quality</li> <li>• Sacrifice</li> <li>• Customer Characteristics</li> </ul>
<i>Dodds et al. (1991)</i>	<ul style="list-style-type: none"> <li>• Perceived Quality</li> <li>• Perceived Sacrifice</li> </ul>
<i>Sheth et al. (1991)</i>	<ul style="list-style-type: none"> <li>• Conditional Value</li> <li>• Epistemic Value</li> <li>• Emotional Value</li> <li>• Functional Value</li> <li>• Social Value</li> </ul>
<i>Li et al. (1994)</i>	<ul style="list-style-type: none"> <li>• Expected Price</li> <li>• Perceived Price</li> <li>• Perceived Quality</li> </ul>
<i>Fornell et al. (1996)</i>	<ul style="list-style-type: none"> <li>• Perceived Quality</li> <li>• Customer Expectations</li> </ul>
<i>Wakefield and Barnes (1996)</i>	<ul style="list-style-type: none"> <li>• Perceived Quality of service environment</li> <li>• Loyalty to service provider</li> </ul>
<i>De Ruyter et al. (1997)</i>	<ul style="list-style-type: none"> <li>• Emotional</li> <li>• Practical</li> <li>• Logical</li> </ul>
<i>Grönroos (1997)</i>	<ul style="list-style-type: none"> <li>• Core solution</li> <li>• Additional services</li> <li>• Price</li> <li>• Relationship Costs</li> </ul>
<i>Grewal, Krishnan, et al. (1998)</i>	<ul style="list-style-type: none"> <li>• Internal Reference Price</li> <li>• Perceived Brand Quality</li> </ul>
<i>Grewal, Monroe, et al. (1998)</i>	<ul style="list-style-type: none"> <li>• Perceived Quality</li> <li>• Advertised Selling Price</li> </ul>
<i>Sirohi et al. (1998)</i>	<ul style="list-style-type: none"> <li>• Service Quality</li> <li>• Perceived Relative Price</li> <li>• Merchandise Quality Perceptions</li> <li>• Sales Promo Perceptions</li> </ul>
<i>Oh (1999)</i>	<ul style="list-style-type: none"> <li>• Perceived Price</li> <li>• Perceived Service Quality</li> <li>• Perceptions</li> </ul>
<i>Julian C Sweeney et al. (1999)</i>	<ul style="list-style-type: none"> <li>• Functional Service Quality</li> <li>• Technical Service Quality</li> <li>• Perceived Product Quality</li> <li>• Perceived Relative Price</li> <li>• Perceived Performance</li> </ul>

<i>Cronin et al. (2000)</i>	<ul style="list-style-type: none"> <li>• Sacrifice</li> <li>• Service Quality</li> </ul>
<i>Murphy et al. (2000)</i>	<ul style="list-style-type: none"> <li>• Environment</li> <li>• Infrastructure</li> <li>• Quality</li> </ul>
<i>Oh (2000)</i>	<ul style="list-style-type: none"> <li>• Price</li> <li>• Price Fairness</li> <li>• Perceived Quality</li> </ul>
<i>Teas and Agarwal (2000)</i>	<ul style="list-style-type: none"> <li>• Perceived Quality</li> <li>• Perceived Sacrifice</li> </ul>
<i>Jillian C Sweeney and Soutar (2001)</i>	<ul style="list-style-type: none"> <li>• Emotional Value</li> <li>• Social Value</li> <li>• Functional Value (Price/Value for money)</li> <li>• Functional Value (Performance/ Quality)</li> </ul>
<i>Oh (2003)</i>	<ul style="list-style-type: none"> <li>• Perceived Quality</li> <li>• Perceived Price</li> </ul>
<i>Williams and Soutar (2009)</i>	<ul style="list-style-type: none"> <li>• Emotional Value</li> <li>• Functional Value</li> <li>• Intentions</li> <li>• Satisfaction</li> <li>• Social Value</li> <li>• Novelty Value</li> <li>• Value for money</li> </ul>

As it's possible to understand from Table 1, there is no unanimous definition across the different authors but the understanding perceived value is crucial for the practitioners in the sector. In the services marketing literature, perceived value is seen as one key element to gain a competitive edge as also as an important factor in strategic management, therefore contributing to the increase in the number of studies developed in the past years (Boksberger & Melsen, 2011).

Even though is considered very relevant to be studied, perceived value research faces some issues. The fact that there is a lack of consensus on the definition and the concept of perceived value, perceived value is then one of the most misused concepts in social sciences and in services marketing literature, which eventually resulted in inconsistent and incommensurable empirical measures. Plus, although there are some approaches that dominate the literature, they are subject to criticism. And finally, there is also a controversial discussion regarding the interdependence of perceived value from concepts such as service quality as customer satisfaction (Boksberger & Melsen, 2011).

## 2.2 Perceived Quality

A broader definition of quality is superiority or excellence, i.e., when someone says that something has quality is then saying that it was something superior to its substitutes. Therefore, service perceived quality can be defined as the consumer's judgment about a service's overall excellence (Zeithaml, 1988).

Usually, due to the characteristics of a service, the involvement of a customer it's high during the production and consumption process. This enables the customer to notice and evaluate a lot of resources and activities. It will be the confrontation of the customer's expectations of a service and the perceived service received that will result in his perceived quality of the service. It is possible then to understand that the quality of the service is dependent on two variables: on one side, the expected service and on the other side the perceived service (Grönroos, 1984).

Expectations of the customers regarding the service can be influenced by the marketing activities as also by traditions, ideologies, word-of-mouth or past experiences. The perceived service though is the outcome of the interaction of the customer with the provider, therefore is coming solely from his evaluation of the service (Grönroos, 1984).

Perceived service can be influenced by two quality dimensions: technical quality and functional quality. The first one focuses on the output of the service that the customer bought, e.g., a customer that flew from A to B after buying an aeroplane ticket. It emphasizes on the "what" of the service. Functional quality though is related to the "psychological" of the customer. Is the result of the interactions of the customer with the supplier, for instance, when the customer bought a ticket and then flew from A to B, he had several interactions with the company, therefore, all of those affected the way he perceives the service that he bought. It focuses on the "how" of the service (Grönroos, 1984).

Although literature says there's a distinction between functional quality (perceived quality) and technical quality (objective quality), there is a discussion regarding the objectiveness of the technical quality. There is the concept that technical quality is the output of measurable verifiable superiority of something according to the standards set. The fact that is a comparison with some standards, it opens a discussion involving the definition of what can be considered as a standard. Because of that, objective quality may actually not exist as all quality is perceived by someone, either consumers either providers (Zeithaml, 1988).

A service can be evaluated as having high or low quality among the services that the consumer set as substitutes. This is important because the comparison lays on the consumer perception of substitute services not on the suppliers (Zeithaml, 1988).

Employees of a company can also influence the perceived quality of a service on an interaction with a customer, i.e., the knowledge that the employee has about a service can improve the customer's perceptions of a service's quality by showing them some features or other attributes that they may not have noticed (Julian C Sweeney *et al.*, 1999).

Quality and price should be treated as separate influences on perceived value (Jillian C Sweeney & Soutar, 2001). It was proved that quality has a positive influence on perceived value and price has a negative influence. Having these previous works in mind, it can be understood that quality and price contribute separately to value and should be measured separately.

### 2.3 Satisfaction

Satisfaction is defined as pleasurable fulfilment, i.e., if a customer understands that some consumption fulfils some need, desire, goal or so forth, the fulfilment is pleasurable (Oliver, 1999). In other words, consumption will generate an outcome that consumer will analyze against some standard of pleasure versus displeasure.

Several authors stated that perceived value is a different construct from satisfaction (Sanchez *et al.*, 2006) Although perceived value can easily be confused with satisfaction, these constructs are distinct. Perceived value occurs at various stages of the purchase process while satisfaction is widely agreed to be a post-use/purchase evaluation (Jillian C Sweeney & Soutar, 2001). This means that value perceptions can be generated at any given phase of the purchase but satisfaction only occurs after the service was consumed.

Even focusing in the post-purchase phase, perceived value is the result of the confrontation of what was given versus what was received while satisfaction is the comparison between the result and the expectations that the consumer had for the result (Oliver, 1999), therefore making them different.

Another definition states that satisfaction comes from the fulfilment of some need, desire, goal or so forth. This definition sets satisfaction as a pleasure for the customer and reflects, on one hand, the cognitive nature of it but also the affective nature (Moliner *et al.*, 2007).

Jillian C Sweeney and Soutar (2001) also supports that satisfaction is a dimensional construct that “varies along a continuum from dissatisfaction to satisfaction” while the perceived value is a multidimensional construct.

### 2.4 Loyalty

Loyalty can be defined “as a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour” (Oliver, 1999, p. 34). Loyalty has two components: a behavioural component that suggests the intention for a customer to rebuy a product or service (as stated by Oliver (1999)), and a second “attitudinal component that is based on the partner’s preferences and impressions” (Trif, 2013, p. 115). This means that a commitment towards a brand is required for loyalty and not only a repurchase intention. Accordingly, loyalty can be defined as a bi-dimensional construct: a behavioural dimension that analyses the buying behaviour (analysis of customers that repeated purchases of the same brand of product or service over time) and attitudinal loyalty that incorporates analysis of consumer preferences and propensity towards certain brands. The logic behind the first concept is that a customer has some reason to continue buying from a specific seller, for example, if a customer had some problem before and the seller responded accordingly to the customer’s needs, he will continue to have reasons to keep the relationship with this seller. The logic behind attitude implies that customer attitude is customer’s relatively lasting affection towards an object or an experience (Trif, 2013). This is crucial to building loyalty towards a brand, as it is impossible to consider the repeated purchase of the same brand as true loyalty without the existence of a positive attitude towards the approached brand.

There are several other approaches to define loyalty, such as theories that used a simplified definition of attitude (East *et al.*, 2005), like the one mentioned before. These theories have provided major explanations on social and consumer research, therefore for this investigation project will also be used the simple definition that expresses the essence of the concept.

## 2.5 Trust

There is the definition of trust in literature as an expectation that a company is dependable and will deliver to customers what promised. Applied to online context, trust is one of the most important factors to determine either if customers will shop online and this trust can be built on top of all interactions and communications that the company will have to the customer (Sparks & Browning, 2011).

When talking about online context, trust is influenced by what the customer is able to see and interact. The design quality of a website, therefore, affects the trust of a customer in a website and a customer will trust more in a supplier if he believes that the technology used is reliable and credible because of the risk that online processes may involve (Bilgihan, 2016). It was also studied that the interaction of customers with online travel websites is different from other sites. Utilitarian features of these websites that help customers by saving time and effort and reducing risk contributes to the perception of trust that the customer builds regarding the website (Bilgihan, 2016).

## 2.6 Relationships between concepts

### ***Perceived Quality and Perceived Value***

There is a clear positive relationship in the literature between perceived quality and perceived value (Dodds *et al.*, 1991). An extension of this analysis also concluded that price has a positive influence on a perceived sacrifice and perceived quality and these two have a negative and positive link respectively with perceived value. This supports the idea that there is a positive link between perceived quality and perceived value and that perceived value is a multidimensional construct affected by several dimensions (Teas & Agarwal, 2000).

### ***Perceived Value and Satisfaction***

From a customer perspective, although a service may provide a service with high levels of quality, it doesn't necessary means that satisfaction with that service will be high. This contributes to understanding that perceived value moderates the relationship between quality and satisfaction and, therefore, perceived value has a positive link with satisfaction (Caruana *et al.*, 2000; Oh, 1999)

It is possible to understand then that there is a positive link between perceived value and satisfaction.

### ***Satisfaction and Loyalty***

To affect loyalty, satisfaction is required in a frequent or cumulative way so that individual episodes of satisfaction can become aggregated or mixed. Although necessary, this is not the only requirement for loyalty to occur (Oliver, 1999).

Is also understood in the literature that service suppliers that provide value are likely to have satisfied customers who are more likely to have future interactions with them again. This supports the idea that satisfied customers may be loyal customers and thus supports the positive link between satisfaction and loyalty (Williams & Soutar, 2009).

### ***Trust and Perceived Value***

According to literature, trust may reduce the non-monetary price of a transaction, for example by reducing the time spent searching for some service, therefore if a customer trusts in a specific supplier, the customer will reduce the pain of analysing and processing information about the company and spend less cognitive effort when buying from the supplier. This way, reducing the non-monetary price of a transaction may enhance acquisition utility which eventually is reflected in a positive influence on the perceived value when shopping online, i.e., the greater consumers trust online suppliers, the greater the perceived value that consumers may obtain by shopping online (Ponte *et al.*, 2015)

## **2.7 Perceived value, satisfaction, trust and loyalty in the context of tourism**

Although online travel agencies exist since 1995 and there are several studies about perceived value in the context of tourism, it wasn't possible to find in the literature a study that would focus on the analysis of the perceived value of service from an online travel agency.

Research from Oh (1999); Oh (2000), Oh (2003), Sanchez *et al.* (2006), Moliner *et al.* (2007), Williams and Soutar (2009) provides valuable knowledge to better understand perceived value in the context of tourism but not of them tackled the specific case of the online travel agencies. Regarding research that focused on the online perspective, it's possible to find the studies of Casalo *et al.* (2011); Cheung *et al.* (2008); Filieri and McLeay (2014); Liu and Zhang (2014); Pereira *et al.* (2016); Ponte *et al.* (2015) where basically the objective was to understand the antecedents affecting the buying of tourism services online or to understand post-purchase effects such as loyalty and satisfaction of online purchase.

Having in mind this status, it was then recognized one opportunity to develop one study that would tackle the missing research about online travel agencies.

### 3 Problem Characterization and conceptual framework

In this section, the problem will be explained, and its scope will be framed according to the evolution of the topic. Furthermore, the research objectives will be defined.

As mentioned in the introduction, online travel agencies (OTAs) exist since 1995 and have been keeping up with the evolution and innovation of the market and society. As such, is relevant to deepen understand the evolution and adaptation of these companies to market dynamics, and how they differ from traditional travel companies.

#### 3.1 Online travel agency context

It's very important to understand the context of the OTAs in order to understand how the value of a customer is affected. When a customer buys from an online travel agency, he is not buying the flight and hotel through the website but it's buying the simplicity of the process, the convenience that an online service enhances and, in many times, the promise of the cheapest price they will find on the market (as exemplified in Figure 2).

#### [edreams.com](https://www.edreams.com) - eDreams Flights - Book your Flight on eDreams

[Anúncio] [www.edreams.com/Flight\\_Offers/Cheap\\_Flights](https://www.edreams.com/Flight_Offers/Cheap_Flights) ▼

Find Special Flight Offers on **eDreams**. Book Now Your Next Flight & Save!

Best Price Guarantee · More than 750 Airlines · Customer Service 7/7 · Cheap Flights from €19

Destinations: London, Brussels, Paris, Dublin, Manchester

#### Flights - eDreams

Europe's Leading Travel Agency.

With 15 Years of Experience.

#### Lowest Price Guaranteed.

Low Fares All Day Every Day

Cheap Flights from +400 Airlines

**Figure 2 - eDreams Google Ad (Source: retrieved from Google)**

On the other side, for hotels and other partners, online travel agencies offer more than the promotion of their services, they offer full-time customer services, a constant updated online platform and years of research and development of marketing techniques. It's possible then to say that we are present in a market operating on a Service-dominant logic (S-D Logic) as the actors in the market exchange between themselves knowledge/services for other services (Barrett *et al.*, 2015). In fact, another important aspect is that value is created for customers through their own evaluation of the experience (Akaka *et al.*, 2015), i.e., in other words, we can understand that buying a hotel and flight through an online travel agency doesn't hold value on its own to the customer. What has value is his evaluation of the experience through the whole process, how his interactions with the online travel agency contributed to his objectives and satisfaction.

The process of a service is interactive and collaborative, and involves multiple economic actors or service systems entities, i.e., in the process of a service we will find the service provider that creates and offers value propositions when applies his specialized knowledge and skills for the benefit of others, and we will also find the customer that may realize the value of such

propositions through use or experience of the interaction itself (Breidbach & Maglio, 2016). When analyzing OTAs, we can clearly understand this dynamic, for instance, for hotels owners, having access to a global online platform with a team that constantly promotes it and improves it can be very valuable to grow their revenues. In fact, OTAs represent 38% of the global online market and 13% of the total market, and were responsible for nearly 19 billion dollars in hotel gross bookings in the U.S. in 2013, representing 15% of total hotel sales. Their market share is expected to continue growing in the next years (Carroll & Sileo, 2014).

Customer experience is important for OTAs in the sense that having a good experience may result in future rebuys. It's a holistic concept and includes all cognitive, affective, emotional, social and physical response to the provider (Verhoef *et al.*, 2009) and, because it is a holistic concept, it's not only impacted by elements that the provider can control (e.g., service interface, retail atmosphere, assortment, price), but also by elements that are outside of the provider's control (e.g., influence of others, purpose of shopping). Customer experience includes the whole experience, which involves the different phases such as search, purchase, consumption, and after-sale, and may occur in multiple retail channels.

Managing the customer experience should aim to foster relationships with customers and establish customer loyalty (Frow & Payne, 2007). Thus, is crucial for companies to provide a good customer experience in order to build customer loyalty. OTAs are not different and many of them even include this objective in their mission statement. For example, eDreams says in its mission statement: "we aim to make travel easier, more accessible and at a better value for our customers through our consumer insight, innovative technology and market leadership" (Edreams, 2017). Expedia says "we want our brands to be independent, innovative, fast. We want them relentlessly focused on what drives value for their customers" (Expedia, 2017). Also, Ctrip has as its business philosophy "Ctrip creates a seamless collaborative system between customers and partners" and "Ctrip treats customers with the utmost respect" (Ctrip, 2017).

It is clear that customer experience management is important for OTAs especially when customers can share on OTAs' websites their experience with the company, as shown in Figure 3.



**Figure 3 - Example of Expedia user rating (Source: extracted from Expedia)**

As companies that operate on the web, understanding technology is also important to understand OTAs. This is a resource for OTAs that is capable of acting on other resources in

value co-creation (Akaka & Vargo, 2014) therefore influencing directly on the experience of a customer of an OTA.

Nevertheless, technology-enablement, per se, doesn't result in a negative or a positive impact on a service system that exists through the exchange resources and that way co-creates value (Breidbach *et al.*, 2013). It's the individuals that have that power, therefore on an OTA context, it's the individuals that determine the value of a certain technological change to their experience.

For an OTA, innovation is also relevant. For companies that are already in the market since 1995, it's important to innovate and bring new features for customers. As companies know, when a particular technology is integrated with other resources, the value is created. Repeating this process of combining and integrating with other resources, innovation occurs (Akaka & Vargo, 2014). In the context of OTAs, one good example of the integration of other resources is, for instance, the inclusion of customer reviews on the services provided by the OTAs.

Considering the role of technology in the creation of the value of a service, it's possible to say that service innovation is the result of iterative processes of collaboration and learning between service providers and customers, i.e., innovation is driven by the co-creation of value and unique perspectives of how to apply and integrate technology as an operant resource resources. (Akaka & Vargo, 2014). For OTAs, this is even more obvious to understand the existing innovation, for instance, according to a CIO article, Expedia only spent 500 million in research and development just "to stay relevant and compete" (CIO, 2017), eDreams made 67 updates to its mobile app in a year "to improve the way in which consumers quickly see and can sort results" (Skift, 2017) making clear the commitment of this companies to constantly innovate their platform.

It is also important to reinforce that value creation cannot occur in isolation. It requires always the interaction of at least two actors. Each also means that the context of value co-creation can be scalable to any level of interaction and provides a comprehensive view for exploring multiples levels of value (Akaka *et al.*, 2015). For instance, in the context of OTA, whenever a customer reads and shares his experience on the platform, he is affecting other customers experience and generating value for the actors. It can have a different value for each actor, but there is an impact of an interaction and that is the definition of co-creation.

Another relevant fact is that the physical location of the actors involved in value co-creation may be irrelevant. With actual technologies for video-conference, social media, and e-mail, the exchange or resources can happen all around the world at any time (Breidbach & Maglio, 2016).

There will come more changes that will affect OTAs as the world is still facing evolution on customer experience and value co-creation, service organizations and ecosystems (Ostrom *et al.*, 2015) therefore let's see eventually how OTAs will adapt to their new context.

### **3.2 Online Travel Agencies vs Traditional Travel Agencies**

According to Portuguese Instituto Nacional de Estatística, a travel agency can be defined as an "facility whose main activities comprises the organization and sale of travel, tourist routes, reservation of services in hotel establishments and other tourist enterprises, initiatives or projects declared of interest for tourism, reservation of seats in any means of transportation,

representation of other travel and tourism agencies or national and foreign tour operators” (INE, 2017). In a very generic term, the main difference between an online travel agency and a traditional travel agency is only related to the channel used: online reflects an agency that only exists on world wide web and the traditional agency is one agency that has a physical location where customers can interact with it.

The fact that the physical environment and the personal interaction are only dominant elements in the physical agencies, employee attitudes, behaviour, and skills are factors that influence the perception of service quality (Grönroos, 1984). This author also emphasizes that interaction with employees and physical facilities are essential elements in the formation of the corporate image.

Is also relevant to understand that the nature of the provision of online services gives rise to a lack of trust among customers, which contributes to comprehend that satisfaction with the service provided through traditional channels and the size of the organization, as proxy, can transmit security and reliability to the new channels (Yap *et al.*, 2009).

### **3.3 Research objectives**

This study aims to investigate the perceived value of buying tourism services through an Online Travel Agency. It’s an objective of this study to understand the factors behind the perceived value of buying tourism services through online travel agencies. There are several different studies to analyse the perceived value of buying tourism services through travel agencies but there was no specific investigation for the online channel.

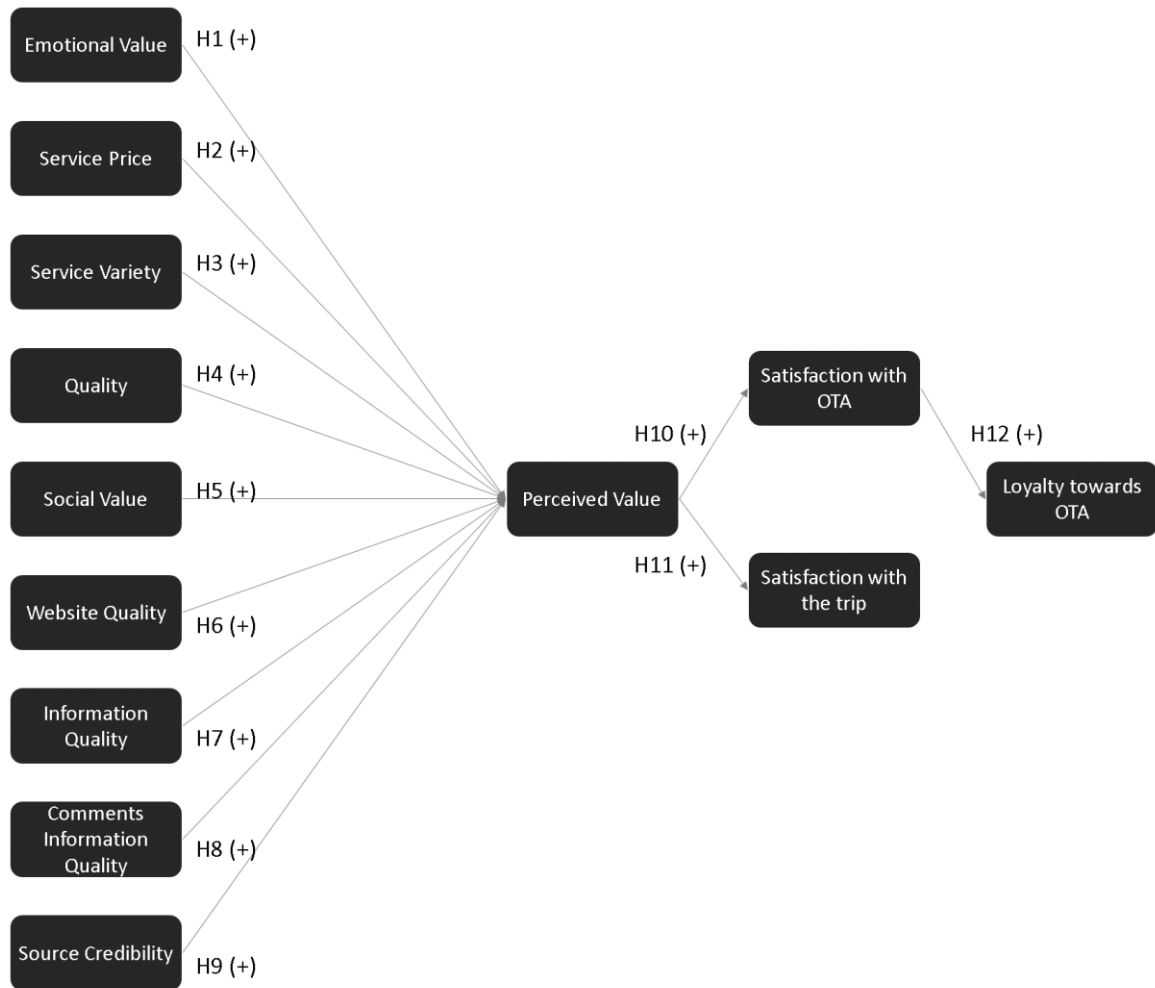
Another objective of this study is to provide insight into the way that the perceived website quality influences the perceived value of buying tourism services through online travel agencies, therefore, contributing to understanding how the channel used by the OTAs affect the perceived value of the customer.

The last objective is to explore the impact of perceived value on customers’ satisfaction and loyalty with online travel agencies.

This study is based on Sanchez *et al.* (2006) and the follow-up article Moliner *et al.* (2007), and, although they focus on the analysis of traditional travel agencies experience, they provided a foundation to analyse the online channel. The literature reviewed showed that there is no specific analysis of the perceived value of buying a tourism service through online travel agencies, therefore, making this study relevant for the academia. On chapter Conceptual framework and hypotheses, the hypotheses set to support these objectives will be presented.

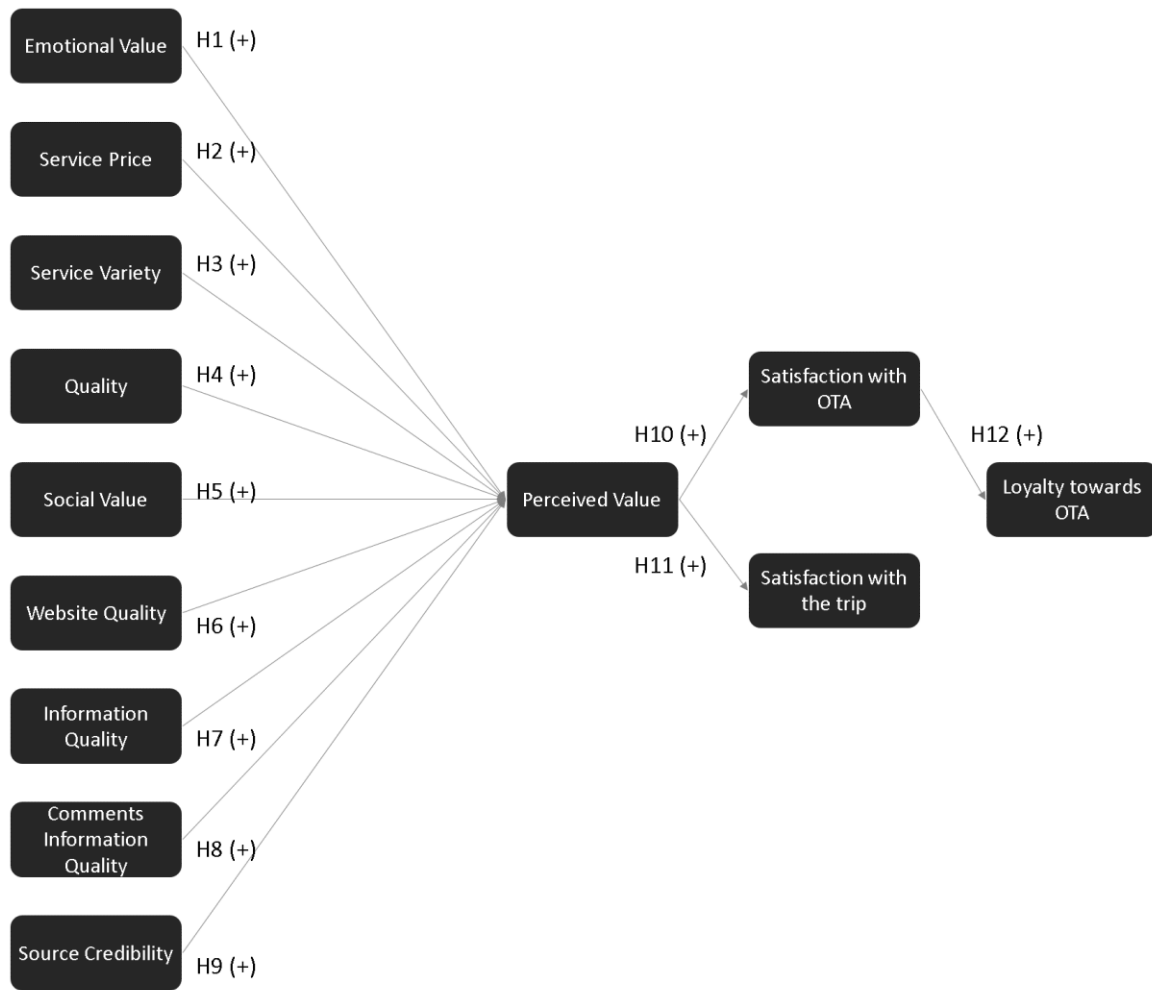
### 3.4 Conceptual framework and hypotheses

Drawing on the literature review and previous models Sanchez *et al.* (2006), Moliner *et al.* (2007), Liu and Zhang (2014), Filieri *et al.* (2015), and Pereira *et al.* (2016)) the conceptual model presented in Figure 4



**Figure 4** is proposed. It illustrates the research hypotheses.

The hypothesized relationships between variables identified in the model are consistent with those identified in the literature



**Figure 4 – Model of analysis**

The above figure demonstrates the relationship between core variables for this research, as well as the hypotheses of the investigation. The proposed model intends to measure Perceived Value, having as a starting point Emotional Value, Service Price, Service Variety, Quality, Social value, Website Quality, Information Quality, Comments Information Quality and Source Credibility. The model also intends to measure Perceived Value’ influence on Satisfaction with the trip and on Satisfaction with OTA, and the Satisfaction with OTA’ influence on Loyalty towards OTA.

**EMOTIONAL VALUE AND PERCEIVED VALUE**

There is a support in the literature for the hypothesized relationship between emotional value and perceived value. Emotional value translates the emotional responses that a service generated in a customer. It’s a social-psychological dimension dependent on the existing ability of a service to induce feelings and emotional states (De Ruyter *et al.*, 1997; Grönroos, 1997; Sanchez *et al.*, 2006; Sheth *et al.*, 1991; Jillian C Sweeney & Soutar, 2001; Julian C Sweeney *et al.*, 1999; Williams & Soutar, 2009). It is hypothesized a positive relationship between emotional value and perceived value, therefore the hypothesis to test is:

**H1:** Emotional value positively influences Perceived value.

#### **SERVICE PRICE AND PERCEIVED VALUE**

Literature supports a link between the price paid by the customer for the service and its perceived value. It is set in several studies as the sacrifice made by the customer to “get” the service and that would eventually constitute a negative influence on perceived value, nevertheless for this study the understanding to measure the influence of price was the same as the literature consulted. Service price will be conceptualized as the value received for the price paid or, in other words, the value for the money. Therefore, is conceptualized a positive influence between service price and perceived value (De Ruyter *et al.*, 1997; Sanchez *et al.*, 2006; Sheth *et al.*, 1991; Jillian C Sweeney & Soutar, 2001; Julian C Sweeney *et al.*, 1999; Williams & Soutar, 2009) contributing to the definition of the second hypothesis as:

**H2:** Service price positively influences Perceived value.

#### **SERVICE VARIETY AND PERCEIVED VALUE**

There is no literature supporting this direct link between service variety, nevertheless, having in mind the what literature says about service variety and perceived value is expected to service variety to have a positive influence on perceived value. Variety of services on the same location enables customers to minimize their time and effort spent on looking for suppliers (Hoch *et al.*, 1999), nevertheless too much variety can affect the decision-making of the customer in the sense that (Kim, 2006). In this study, the focus will be on the positive aspect of service variety on customer perceived value, therefore the third hypothesis is:

**H3:** Service variety positively influences Perceived value.

#### **QUALITY AND PERCEIVED VALUE**

As supported in the literature review, there is a positive influence on the perceived quality and perceived value. Having in mind that quality represents the positive result of an evaluation of a service against its substitutes, a customer will be there positively influenced the perceived quality of the service (Grönroos, 1984; Oh, 1999; Sanchez *et al.*, 2006; Jillian C Sweeney & Soutar, 2001; Teas & Agarwal, 2000; Williams & Soutar, 2009; Zeithaml, 1988). The fourth hypothesis comes then as:

**H4:** Quality positively influences Perceived value.

#### **SOCIAL VALUE AND PERCEIVED VALUE**

It is supported in literature a positive influence from social value to perceived value. Social value represents the ability of the service to enhance customers’ social concept (Sanchez *et al.*, 2006; Sheth *et al.*, 1991; Jillian C Sweeney & Soutar, 2001; Julian C Sweeney *et al.*, 1999; Williams & Soutar, 2009). In that sense, the fifth hypothesis to be tested is:

**H5:** Social value positively influences Perceived value.

#### **WEBSITE QUALITY AND PERCEIVED VALUE**

As it is supported in the literature, the quality affects positively the perceived value of the customer. Website quality represents then the positive effect of the website structure on customer’s interaction with the supplier (Grönroos, 1984; Oh, 1999; Sanchez *et al.*, 2006; Jillian C Sweeney & Soutar, 2001; Teas & Agarwal, 2000; Williams & Soutar, 2009; Zeithaml, 1988), therefore the sixth hypothesis will be:

**H6:** Website quality positively influences Perceived value.

#### **INFORMATION QUALITY AND PERCEIVED VALUE**

The quality of the information present in a website has positive influence on the value as stated in the literature (Grönroos, 1984; Oh, 1999; Sanchez *et al.*, 2006; Jillian C Sweeney & Soutar, 2001; Teas & Agarwal, 2000; Williams & Soutar, 2009; Zeithaml, 1988), in this sense, the seventh hypothesis will be defined as:

**H7:** Information quality positively influences Perceived value.

#### **COMMENTS INFORMATION QUALITY AND PERCEIVED VALUE**

As stated in the literature, the quality of the information of the comments posted by other users has a positive influence on the perceived value (Grönroos, 1984; Oh, 1999; Sanchez *et al.*, 2006; Jillian C Sweeney & Soutar, 2001; Teas & Agarwal, 2000; Williams & Soutar, 2009; Zeithaml, 1988), therefore the eighth hypothesis to be tested will be:

**H8:** Comments information quality positively influences Perceived value.

#### **SOURCE CREDIBILITY AND PERCEIVED VALUE**

The credibility of the source supports the trust of a customer in a certain supplier. Trust was also identified in the literature to have an impact on the perceived value (Bilgihan, 2016; Filieri *et al.*, 2015; Ponte *et al.*, 2015), in that sense the ninth hypothesis is set as:

**H9:** Source credibility positively influences Perceived value.

#### **PERCEIVED VALUE AND SATISFACTION**

It is supported in literature a positive influence from perceived value to satisfaction. (Sanchez *et al.*, 2006; Sheth *et al.*, 1991; Jillian C Sweeney & Soutar, 2001; Julian C Sweeney *et al.*, 1999; Williams & Soutar, 2009), so the eleventh and twelfth hypotheses are:

**H10:** Perceived value positively influences Satisfaction with OTA.

**H11:** Perceived value positively influences Satisfaction with the trip.

#### **SATISFACTION WITH OTA AND LOYALTY**

It is supported in literature a positive influence from perceived value to satisfaction. (Sanchez *et al.*, 2006; Sheth *et al.*, 1991; Jillian C Sweeney & Soutar, 2001; Julian C Sweeney *et al.*, 1999; Williams & Soutar, 2009), in that sense, the thirteenth hypothesis is:

**H12:** Satisfaction with OTA positively influences Loyalty.

Table 2 shows a summary of all the hypotheses of investigation supported by the literature analysed.

**Table 2 - Summary of hypotheses of investigation**

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<b>H1:</b> Emotional value positively influences Perceived value.
<b>H2:</b> Service price positively influences Perceived value.
<b>H3:</b> Service variety positively influences Perceived value.
<b>H4:</b> Quality positively influences Perceived value.
<b>H5:</b> Social value positively influences Perceived value.
<b>H6:</b> Website quality positively influences Perceived value.
<b>H7:</b> Information quality positively influences Perceived value.
<b>H8:</b> Comments information quality positively influences Perceived value.
<b>H9:</b> Source credibility positively influences Perceived value.
<b>H10:</b> Perceived value positively influences Satisfaction with OTA.
<b>H11:</b> Perceived value positively influences Satisfaction with the trip.
<b>H12:</b> Satisfaction with OTA positively influences Loyalty.

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Source: adapted from Filieri *et al.* (2015); Liu and Zhang (2014); Moliner *et al.* (2007); Pereira *et al.* (2016); Ponte *et al.* (2015); Sanchez *et al.* (2006)

### 3.5 Methodology

This chapter intends to define the methodology that will be used in this dissertation to respond to the research question previously presented.

In the investigation field, there are two main groups of investigation methods: qualitative and quantitative methods. Qualitative methods generally generate data not easily reduced to numbers. In another hand, quantitative methods result in data to which the mathematical' power analysis can be applied simply (Rossman & Wilson, 1985). For this reason, this dissertation intends to apply a quantitative methodology to address the research questions. An online survey was chosen since it's one of the most popular techniques for data gathering in the context of a quantitative research.

The proposed model in this dissertation intends to measure Perceived Value, having as a starting point Emotional Value, Service Price, Service Variety, Quality, Social, Website Quality, Information Quality, Comments Information Quality and Source Credibility. The model also intends to measure Perceived Value' influence on Satisfaction with the trip and on Satisfaction with OTA, and the Satisfaction with OTA' influence on Loyalty towards OTA. To achieve this, a multivariate approach is the most appropriate, as it will be explained in the following paragraphs.

Because the questions of interest to this study are complex and involve multiple dimensions, multivariate analysis enables to simultaneous model relationships among the variables. As will be presented in this section, Structural Equation Modelling is the appropriate and most efficient estimation technique for a series of separate multi-regression equations estimated at the same time Hair *et al.* (2009)

Multivariate analysis is a group of statistical techniques used when there are two or more measurements on each element and the variables are analysed simultaneously (Hair *et al.*, 2009)

### 3.6 Structural Equation Modelling

The study uses Structural Equation Modelling (SEM) to test the proposed hypothesis. SEM is an approach that aims to explain the relationships among multiple variables, enabling to estimate the structure of interrelationships expressed in a series of equations (Hair *et al.*, 2009). SEM delivers the appropriate and most efficient estimation technique for a series of separate multi-regression equations estimated at the same time (Hair *et al.*, 2009). The structural equation models include the measurement model and structural model.

The measurement model describes how well the observed indicators measure the unobserved (latent) variables. Latent variables, also known as constructs, are concepts that are not directly observable. Latent variables can be explained using observable variables (Marôco, 2010). Latent variables are measured by observable variables that can be collected by surveys, tests, among others. (Hair *et al.*, 2009; Marôco, 2010). To develop the measurement model, first, an exploratory factor analysis (EFA) was used to provide insight into the interrelationships among the attitudinal variables and the underlying structure of the data. Then a confirmatory factor analysis (CFA) was used to evaluate the measurement model derived from EFA (Hair *et al.*, 2009; Hu & Bentler, 1999)

The structural model enables to identify the causal relationships among latent variables. After validating the measurement model, the structural equations model was used to analyse the hypothesized relationships between constructs.

## **FACTOR ANALYSIS**

Factor analysis is a statistical technique used to explain the interrelationships between many variables. There are two main types of Factorial Analysis: Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA).

### **Exploratory Factor Analysis (EFA)**

EFA explores the data and delivers information about how many factors are needed to best represent the data (Hair *et al.*, 2009). EFA was conducted using IBM SPSS Statistics 24.

Before leading the process of factorial analysis, it is required to understand if the data is appropriate for the analysis using Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity. KMO shows which components to use (Marôco, 2010) and proves that the sample is suitable when the number is between 0.5 and 1 (Silva, 2006). Bartlett's Test of Sphericity analyses statistically the presence of correlations among variables (Hair *et al.*, 2009).

EFA was performed using Principal Component Analysis' extraction method.

### **Confirmatory Factor Analysis (CFA)**

The results from Exploratory Factor Analysis were then confirmed through Confirmatory Factor Analysis using IBM SPSS AMOS 24. Marôco (2010) explains that CFA is conducted to “evaluate the quality of fit of a theoretical measurement model to the correlational structure observed between the manifest variables (items)”. Assessing measurement model validity enables testing the measurement theory by comparing the measurement model against reality, which is represented by the sample. The validity of a measurement model can be determined by examining goodness-of-fit-statistics (GOF), content and construct validity.

Model fit was assessed according to recommended cut-off values for fit (Hair *et al.*, 2009). Goodness-of-fit (GOF) measures the correspondence of the actual or observed input matrix with that predicted from the proposed model. To describe a model's strength when doing SEM, several fit indices may be considered to assess the fit of the model. In this study, the ones presented in Table 3 were used.

Construct Reliability (CR) represents “the measure of reliability and internal consistency of the measured variables representing a latent construct”. The value should be superior to 0.7 (Hair *et al.*, 2009, p. 689). Construct validity is assessed by testing convergent, and discriminant validity.

**Table 3 - Fit indices**

Fit Indices	References
<b>Absolute Fit Indices:</b> direct measure of how well the model reproduces the observed data	
$\chi^2$	Should be non-significant if there is a good model fit. But as it increases with sample size, it is usually significant for large samples
SRMR (Standardized Root Mean Square Residual)	Should be < 0,06
RMSEA (Root Mean Square Error of Approximation)	Should be < 0,06
<b>Incremental Fit Indices:</b> how well the estimated model fits relative to some alternative baseline model	
NNFI (Non-Normed Fit Index or Tucker-Lewis Index – TLI)	< 0.8 – Bad Adjustment ]0,8; 0,9] – Tolerable Adjustment ]0,9; 0,95] – Good Adjustment
CFI (Comparative Fit Index)	$\geq 0,95$ – Very Good Adjustment

Source: adapted from Hair *et al.* (2009)

There is convergent validity when there are positive and high correlations between the items of a specified construct. This measure of consistency uses the Construct Reliability (CR) and the Average Variance Extracted (AVE) (Marôco, 2010). We are in presence of convergent validity when CR is higher than AVE and AVE is superior to 0,5 (Hair *et al.*, 2009).

Regarding discriminant validity, it intends to prove how much a construct is different from the others, measuring different factors of them. When the root square of AVE is higher than the correlations of the specified construct, we are in presence of discriminant validity (Marôco, 2010).

### **Data Collection**

Data were obtained using online questionnaires, (see survey instrument in annexe A – Survey). The data collection instrument was built using a personal installation of the *LimeSurvey* software platform. The study targeted users of online travel agencies platforms, such as booking.com, expedia.com, lastminute.com, agoda.com, fareportal.com, flightnetwork.com, makemytrip.com, edreams.com among others. The online survey was sent to OTAs users, through UP dynamic email and Facebook Social Network, and was available between from 13<sup>th</sup> to 31<sup>st</sup> of August 2017.

The questionnaire included a brief explanation and all questions were multiple choice and mandatory. Regarding the measurement of constructs, this dissertation picked previously developed and tested scales. The last section of the survey was built to understand the respondent profile through some sociodemographic variables: gender, age, education level, and country of residence. The questionnaire was conducted in English and in Portuguese (the respondents could select the language they wanted), so the scales were previously translated to Portuguese aiming to retain their original meaning.

The survey was submitted to a pre-test with 15 respondents. The pre-test had the main goal to analyse the clarity of the questions and identify possible errors. With the feedback gathered, some improvements were made.

An online survey was chosen because it's one of the most popular techniques for data gathering in the context of a quantitative research. The fact that the survey was built online, allows accessing a large set of people despite their geographic location which saves time and money (Schmidt, 1997).

The sample of this study contains 290 complete responses with a response rate of 48,9% (the number of completed surveys divided by the total of surveys generated). Hair *et al.* (2009) mention that the sample size should be preferably 100 or larger. Generally, the minimum is to have at least five times as many observations the number of variables. So, the sample size for this study is adequate.

### **Survey instrument**

The survey instrument was developed based on previously developed scales identified in the literature review. A 5-point Likert scale was applied to all the constructs analysed to ensure standardization of scales. The respondents could select from (1) "Strongly disagree" to (5) "Strongly agree" and there was no option "I don't know / Not applicable".

As described before, the survey was disseminated in two languages, English and Portuguese, so the scales were previously translated to Portuguese aiming to retain their original meaning. Table 4 presents the questionnaire items in English; however, the original survey is available for consultation in annexe A, both in Portuguese and English.

The survey was divided into two stages: the first stage with a question to understand if the participant bought any service from an OTA in the past 12 months and a second stage, that would only be shown in case of positive answer in the first stage, where 5 sets of questions were required to be filled by the participants.

**Table 4 - Summary of the scales of the research constructs**

Author(s)	Construct	Item's code	Items
Perceived value of the purchase of a tourism product (Sanchez <i>et al.</i> , 2006)	Emotional value	E1	I felt relaxed using this website
		E2	The online travel agency gave me a positive feeling
		E3	The online travel agency didn't pressure me to decide quickly
		E4	I am comfortable with the tourism service purchased
An investigation of factors affecting customer selection of online hotel booking channels (Liu & Zhang, 2014)	Service Price	SP1	I could get a better rate with this online travel agency
		SP2	This online travel agency offered better value for my money

Perceived value of the purchase of a tourism product (Sanchez <i>et al.</i> , 2006)		SP3	It was a good purchase for the price paid
		SP4	The price was the main criterion for the decision
An investigation of factors affecting customer selection of online hotel booking channels (Liu & Zhang, 2014)	Service Variety	SV1	There were more rooms available for the region of my destination.
		SV2	There were more hotel rooms available at this website, meeting my requirement on quality and budget.
		SV3	This website provided me one-stop shopping to fulfil my travel needs (hotel room plus air ticket).
		SV4	This website could provide more hotel choices in popular locations for tourists.
Perceived value of the purchase of a tourism product (Sanchez <i>et al.</i> , 2006)	Quality	Q1	The service purchased was well organised
		Q2	Relative to other tourism services purchased it had an acceptable level of quality
		Q3	The quality of the tourism service was maintained throughout
		Q4	The result was as expected
Perceived value of the purchase of a tourism product (Sanchez <i>et al.</i> , 2006)	Social value	S1	Using the services of the online travel agency has improved the way others perceive me
		S2	People who use online travel agencies obtain social approval
		S3	Online travel agencies are used by many people that I know
		S4	Purchasing this tourism service improved the way others perceive me
An investigation of factors affecting customer selection of online hotel booking channels (Liu & Zhang, 2014)	Website Quality	WQ1	There were more in-depth product/service descriptions available with this website.
		WQ2	This website provided more accurate information on travel products, e.g. hotel availability.
		WQ3	This website provided better post-purchase service, e.g. confirmation email including detailed information like how to get to the hotel from the airport.
		WQ4	This website replied to my inquiries within 24 hours
		WQ5	This website provided with clearer statements assuring my privacy and security.
		WQ6	There was detailed information on hotel location on this website.
Influence of trust and perceived value on the intention to purchase travel online Integrating the effects of assurance on trust antecedents (Ponte <i>et al.</i> , 2015)	Information quality	IQ1	This website provided accurate information about the tourism service that I wanted to purchase.
		IQ2	This website provided sufficient information when I tried to make a transaction.
		IQ3	This website provided enough depth of information about its services

		IQ4	The information provided by this website was helpful to me in purchasing tourism services
		IQ5	The information in this website was clear for me to make a purchase.
		IQ6	This website provided up-to-date information.
Why Do Travelers Trust TripAdvisor Antecedents of Trust Towards Consumer Generated Media and Its Influence on Recommendation Adoption and Word of Mouth (Filieri <i>et al.</i> , 2015)	Comments Information Quality	CIQ1	The information in online reviews was timely
		CIQ2	The information in online reviews was relevant to my needs
		CIQ3	The information in online reviews was complete for my needs
		CIQ4	The information in online reviews was valuable
		CIQ5	The information in online reviews was useful
		CIQ6	The information in online reviews was credible
Why Do Travelers Trust TripAdvisor Antecedents of Trust Towards Consumer Generated Media and Its Influence on Recommendation Adoption and Word of Mouth (Filieri <i>et al.</i> , 2015)	Source Credibility	SC1	The reviewers were credible
		SC2	The reviewers were experienced
		SC3	The reviewers were trustworthy
		SC4	The reviewers were reliable
Online purchase determinants of loyalty: The mediating effect of satisfaction in tourism (Pereira <i>et al.</i> , 2016)	Satisfaction with OTA	SO1	I am very satisfied with this online travel agency's services.
		SO2	My choice for this online travel agency was correct.
		SO3	Purchasing through this online travel agency exceeded my expectations.
		SO4	I believe this online travel agency has many desirable characteristics.
Relationship quality with a travel agency: The influence of the post-purchase perceived value of a tourism package (Moliner <i>et al.</i> , 2007)	Satisfaction with the trip	ST1	I am satisfied with the tourism service I purchased.
		ST2	My expectations have been fulfilled.
		ST3	Compared to other tourism services that I have used or heard about, the degree of satisfaction of this one is high.
Online purchase determinants of loyalty: The mediating effect of satisfaction in tourism (Pereira <i>et al.</i> , 2016)	Loyalty towards OTA	L1	I have no doubts to recommend this online travel agency to friends and relatives.
		L2	This online travel agency is my first choice when I intend to purchase tourism services.
		L3	I clearly have a preference for this website over others in the same business area.

**Sample characterization**

The sample population consisted of 290 individuals distributed as presented in Table 5.

**Table 5 - Sample's Socio-Demographic Information**

	<i>M</i>	<i>F</i>
<b>Age</b>		
<18	1	1
18-25	38	23
26-35	76	73
36-45	13	32
46-55	2	21
56-65	3	5
>65		2
<b>Education</b>		
Nursery school to 8th grade		4
High school graduate, diploma or the equivalent	15	36
Bachelor Degree	82	31
Master Degree	27	81
Doctor Degree	6	4
Other	3	1
<b>Country</b>		
Portugal	59	127
Malta	47	9
Brazil	10	5
Switzerland	3	7
The United Kingdom of Great Britain and Northern Ireland	3	4
Spain	1	2
Lithuania	3	
France	1	1
Morocco	2	
Romania	1	1
Slovakia	1	1
Netherlands	2	

An analysis of the data reveals the following information:

- The sample is relatively balanced regarding sex distribution with 54% of the answers coming from female participants and 46% coming from male participants;
- 51% of the participants have between 26 and 35 years old;
- 76% of the sample has either a Bachelor degree (39%) or a Master degree (37%);
- Most of the participants live in Portugal (64%) while 19% live in Malta and 17% of participants live in one of the remaining 10 countries.

On Table 6 it's possible to understand the distribution of the participants by OTA used.

**Table 6 - Respondents per OTA**

<i>OTA</i>	<i>Number</i>	<i>Percentage</i>
<i>agoda.com</i>	1	0,34%
<i>booking.com</i>	223	76,90%
<i>edreams.com</i>	36	12,41%
<i>fareportal.com</i>	1	0,34%
<i>lastminute.com</i>	2	0,69%
<i>other</i>	27	9,31%

It is possible then to conclude that most of the respondents have chosen “booking.com” (76,90%), following by “edreams.com” (12,41%).

## 4 Results

The results of this research will be presented in this section as well as the hypotheses analyses. First, to identify the constructs underlying the set of attributes an exploratory factor analysis (EFA) was conducted. Then, a confirmatory factor analysis CFA was performed to test the adequacy of the measurement model followed by a structural equation model analysis (SEM) to examine the relationships between the measured constructs.

### 4.1 Exploratory Factor Analysis (EFA)

The variables were subjected to principal component analysis with varimax rotation to verify the underlying dimension of the scales.

Varimax rotation is perhaps the most popular rotation criterion. Rotation can be applied to principal component coefficients and factor loadings to simplify them. The simplification reached can help in interpreting the factors or rotated PCs (Jolliffe, 2002). As that author said “when an orthogonal rotation method (varimax) is performed, the loadings for the rotated factors (PCs) are given by the projections of each plotted point onto the axes” (p. 154)

First, data was analysed to understand its adequacy for factor analysis. The Kaiser-Meyer-Olkin (KMO) was 0.903179, above the recommended cut-off value of 0.5, and Bartlett's Test of Sphericity is statistically significant ( $p=0,000$ ), (see Table 7).

**Table 7 - KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,903179
Bartlett's Test of Sphericity	Approx. Chi-Square	6656,729713
	DF	1326,000000
	Sig.	0,000

Results from the exploratory factor analysis (EFA), including the factor solution and scale reliabilities are presented in Table 8 and Table 9.

**Table 8 - Exploratory Factor Analysis (EFA) and reliability (Varimax rotation)**

Factor / Variable	Factor Loadings	Cronbach's alpha
<b>Emotional value</b>	-	<b>0,739579</b>
I felt relaxed using this website	0,797142	-
The online travel agency gave me a positive feeling	0,840521	-
The online travel agency didn't pressure me to decide quickly	0,650312	-
I am comfortable with the tourism service purchased	0,799854	-

<b>Service Price</b>	-	<b>0,720913</b>
I could get a better rate with this online travel agency	0,825513	-
This online travel agency offered better value for my money	0,819952	-
It was a good purchase for the price paid	0,765648	-
The price was the main criterion for the decision	0,603388	-
<b>Service Variety<sup>1</sup></b>	-	<b>0,410387</b>
There were more rooms available for the region of my destination.	0,840785	-
There were more hotel rooms available at this website, meeting my requirement on quality and budget.	0,859823	-
This website provided me one-stop shopping to fulfil my travel needs (hotel room plus air ticket).	0,128781	-
This website could provide more hotel choices in popular locations for tourists.	0,381368	-
<b>Quality</b>	-	<b>0,836057</b>
The service purchased was well organised	0,809739	-
Relative to other tourism services purchased it had an acceptable level of quality	0,833615	-
The quality of the tourism service was maintained throughout	0,866932	-
The result was as expected	0,769719	-
<b>Social<sup>1</sup></b>	-	<b>0,640998</b>
Using the services of the online travel agency has improved the way others perceive me	0,795279	-
People who use online travel agencies obtain social approval	0,848019	-
Online travel agencies are used by many people that I know	0,066047	-
Purchasing this tourism service improved the way others perceive me	0,816085	-
<b>Website Quality</b>	-	<b>0,717378</b>
There were more in-depth product/service descriptions available with this website.	0,565584	-
This website provided more accurate information on travel products, e.g. hotel availability.	0,751604	-
This website provided better post-purchase service, e.g. confirmation email including detailed information like how to get to the hotel from the airport.	0,620710	-
This website replied to my inquiries within 24 hours	0,616316	-
This website provided with clearer statements assuring my privacy and security.	0,667270	-
There was detailed information on hotel location on this website.	0,652281	-
<b>Information quality</b>	-	<b>0,834767</b>
This website provided accurate information about the tourism service that I wanted to purchase.	0,694678	-
This website provided sufficient information when I tried to make a transaction.	0,713488	-
This website provided enough depth of information about its services	0,778164	-

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<sup>1</sup> 2 components extracted.

Perceived value of buying tourism services through an Online Travel Agency

The information provided by this website was helpful to me in purchasing tourism services	0,765241	-
The information in this website was clear for me to make a purchase.	0,810050	-
This website provided up-to-date information.	0,686979	-
<b>Comments Information Quality</b>	-	<b>0,830254</b>
The information in online reviews was timely	0,711737	-
The information in online reviews was relevant to my needs	0,741478	-
The information in online reviews was complete for my needs	0,761455	-
The information in online reviews was valuable	0,736780	-
The information in online reviews was useful	0,755808	-
The information in online reviews was credible	0,710296	-
<b>Source Credibility</b>	-	<b>0,854363</b>
The reviewers were credible	0,821523	-
The reviewers were experienced	0,822066	-
The reviewers were trustworthy	0,839361	-
The reviewers were reliable	0,855420	-
<b>Satisfaction with OTA</b>	-	<b>0,778601</b>
I am very satisfied with this online travel agency's services.	0,838446	-
My choice for this online travel agency was correct.	0,790458	-
Purchasing through this online travel agency exceeded my expectations.	0,681458	-
I believe this online travel agency has many desirable characteristics.	0,817396	-
<b>Satisfaction with the trip</b>	-	<b>0,715014</b>
I am satisfied with the tourism service I purchased.	0,827599	-
My expectations have been fulfilled.	0,833305	-
Compared to other tourism services that I have used or heard about, the degree of satisfaction of this one is high.	0,739156	-
<b>Loyalty</b>	-	<b>0,710583</b>
I have no doubts to recommend this online travel agency to friends and relatives.	0,731542	-
This online travel agency is my first choice when I intend to purchase tourism services.	0,807309	-
I clearly have a preference for this website over others in the same business area.	0,846825	-

Extraction Method: Principal Component Analysis.

**Table 9 - Exploratory Factor Analysis (EFA) and reliability (Varimax rotation) - Constructs Service variety and Social**

Factor / Variable	Factor Loadings	Cronbach's alpha
<b>Service Variety</b>	-	<b>0,711205</b>
There were more rooms available for the region of my destination.	0,880864	
There were more hotel rooms available at this website, meeting my requirement on quality and budget.	0,880864	-
This website provided me one-stop shopping to fulfil my travel needs (hotel room plus air ticket).	Eliminated	-
This website could provide more hotel choices in popular locations for tourists.	Eliminated	-
<b>Social Value</b>	-	<b>0,471994</b>
Using the services of the online travel agency has improved the way others perceive me	0,796976	-
People who use online travel agencies obtain social approval	0,847186	-
Online travel agencies are used by many people that I know	Eliminated	-
Purchasing this tourism service improved the way others perceive me	0,816614	-

All constructs have factor loadings superior to 0.5, above the cut-off value of 0.5 (Hair *et al.*, 2009). All scales have been found to be sufficiently reliable, with coefficients of internal consistency (Cronbach's alpha) ranging from 0.640998 to 0.854363<sup>2</sup>, except for Service Variety which has a Cronbach's alpha of 0.410387, that is weak. For this reason, the construct Service Variety should be eliminated. Also, Service Variety and Social does not present one-dimensionality (contrary all the other constructs). For both reasons, more tests were conducted for these two constructs.

To improve the one-dimensionality the third and fourth constructs were eliminated. This way, one-dimensionality is proven with a Total variance explained of 77.592089. Cronbach's alpha presents a good value (0.711205), as well as the communalities (0.880864). The same process was conducted to Social Value, and the third construct was eliminated. However, despite the one-dimensionality was proven, Cronbach's alpha presents an unacceptable value (0.471994). It was also tried to eliminate both third and fourth items, but the results were even worse. For this reason, the social value construct was eliminated.

#### 4.2 Measurement model - Confirmatory Factor Analysis (CFA)

The next step in the analysis is to perform a Confirmatory Factor Analysis (CFA) to test the previously specified model using Structural Equation Modelling (SEM) techniques. CFA allows testing the EFA final solution to determine the goodness of fit, convergent and discriminant validity of the constructs in the model. After testing the measurement model, the following step involves analysing the structural relationships among measured constructs.

<sup>2</sup> It is commonly accepted that the minimum value for  $\alpha$  should be 0.7. However, sometimes in the context of the social sciences, it is acceptable a  $\alpha=0.6$  (Marôco & Garcia-Marques, 2006)

Model fit was assessed according to recommended cut-off values for fit measures suggested (Hair *et al.*, 2009). To assess construct validity, the convergent and discriminant validity was evaluated. For convergent validity analysis, coefficients of indicators to their respective constructs should be at least 0.5, and preferably 0.7, and statistically significant (Hair *et al.*, 2009). In these cases, all loadings are highly significant and above 0.5.

Table 10 shows the average variance extracted (AVE) and construct reliabilities (CR) for each construct. The AVE estimates range from 0.420107 to 0.696741. Construct reliabilities range from 0.811778 to 0.90184, exceeding 0.7, thus suggesting adequate reliability. Also, construct reliability for each construct should be higher than AVE to show convergence validity (Marôco, 2010), which happens.

**Table 10 - Reliability estimates and average variance extracted**

<b>Factor</b>	<b>Construct Reliability</b>	<b>Average variance extracted (%)</b>
<b>Emotional value</b>	0,856658	0,601146
<b>Service Price</b>	0,842725	0,576022
<b>Service Variety</b>	0,860675	0,673251
<b>Quality</b>	0,891794	0,673657
<b>Website Quality</b>	0,811778	0,420107
<b>Information quality</b>	0,880373	0,551816
<b>Comments Information Quality</b>	0,876675	0,542464
<b>Source Credibility</b>	0,90184	0,696741
<b>Satisfaction with OTA</b>	0,864018	0,615084
<b>Satisfaction with the trip</b>	0,84281	0,64189
<b>Loyalty</b>	0,838527	0,634671

To assess discriminant validity was assessed using the average variance extracted (AVE) estimates for each factor were compared with the squared inter-construct correlations associated with the factor. For all the factors, the AVE exceeds the squared correlations with the remaining factors. The analysis shows the correlations between constructs, with, the square root of AVE values in the diagonal. (see Table Correlation Matrix and AVE square root in diagonal, available for consultation in annexe B – Factorial analysis).

In conclusion, all constructs have both convergent and discriminant validity. Next, the measurement model is presented in Table 11.

**Table 11 - Confirmatory Factor Analysis (CFA) results**

Code	Factor / Variable	Factor loadings
-	<b>Emotional value</b>	-
E1	I felt relaxed using this website	0,728
E2	The online travel agency gave me a positive feeling	0,777
E3	The online travel agency didn't pressure me to decide quickly	0,483 <sup>3</sup>
E4	I am comfortable with the tourism service purchased	0,737
	<b>Service Price</b>	-
SP1	I could get a better rate with this online travel agency	0,738
SP2	This online travel agency offered better value for my money	0,790
SP3	It was a good purchase for the price paid	0,674
SP4	The price was the main criterion for the decision	0,413 <sup>3</sup>
	<b>Service Variety</b>	-
SV1	There were more rooms available for the region of my destination.	0,698
SV2	There were more hotel rooms available at this website, meeting my requirement on quality and budget.	0,791
	<b>Quality</b>	-
Q1	The service purchased was well organised	0,721
Q2	Relative to other tourism services purchased it had an acceptable level of quality	0,784
Q3	The quality of the tourism service was maintained throughout	0,841
Q4	The result was as expected	0,657
	<b>Website Quality</b>	-
WQ1	There were more in-depth product/service descriptions available with this website.	0,457 <sup>3</sup>
WQ2	This website provided more accurate information on travel products, e.g. hotel availability.	0,680
WQ3	This website provided better post-purchase service, e.g. confirmation email including detailed information like how to get to the hotel from the airport.	0,509
WQ4	This website replied to my inquiries within 24 hours	0,503
WQ5	This website provided with clearer statements assuring my privacy and security.	0,565
WQ6	There was detailed information on hotel location on this website.	0,592
	<b>Information quality</b>	-
IQ1	This website provided accurate information about the tourism service that I wanted to purchase.	0,638
IQ2	This website provided sufficient information when I tried to make a transaction.	0,630
IQ3	This website provided enough depth of information about its services	0,722
IQ4	The information provided by this website was helpful to me in purchasing tourism services	0,705
IQ5	The information in this website was clear for me to make a purchase.	0,768
IQ6	This website provided up-to-date information.	0,618
	<b>Comments Information Quality</b>	-
CIQ1	The information in online reviews was timely	0,648

<sup>3</sup> This item will be eliminated since factor loading is inferior to 0,5

CIQ2	The information in online reviews was relevant to my needs	0,677
CIQ3	The information in online reviews was complete for my needs	0,696
CIQ4	The information in online reviews was valuable	0,675
CIQ5	The information in online reviews was useful	0,695
CIQ6	The information in online reviews was credible	0,638
	<b>Source Credibility</b>	-
SC1	The reviewers were credible	0,677
SC2	The reviewers were experienced	0,696
SC3	The reviewers were trustworthy	0,675
SC4	The reviewers were reliable	0,696
	<b>Satisfaction with OTA</b>	-
SO1	I am very satisfied with this online travel agency's services.	0,751
SO2	My choice for this online travel agency was correct.	0,566
SO3	Purchasing through this online travel agency exceeded my expectations.	0,714
SO4	I believe this online travel agency has many desirable characteristics.	0,769
	<b>Satisfaction with the trip</b>	-
ST1	I am satisfied with the tourism service I purchased.	0,690
ST2	My expectations have been fulfilled.	0,657
ST3	Compared to other tourism services that I have used or heard about, the degree of satisfaction of this one is high.	0,685
	<b>Loyalty towards OTA</b>	-
L1	I have no doubts to recommend this online travel agency to friends and relatives.	0,747
L2	This online travel agency is my first choice when I intend to purchase tourism services.	0,596
L3	I clearly have a preference for this website over others in the same business area.	0,615

Some adjustments to the model were made, to improve model fit:

- 1) E3 (factor loading 0.483), SP4 (factor loading 0.413) and WQ1 (factor loading 0.457) were eliminated. For WQ1 this was already expected, due to the communalities value.
- 2) One covariance between errors was established (modification index higher than 30 between L2 and L3's errors).

As it is possible to see in Table 12,  $\chi^2/DF$  indexes demonstrate good adjustment for the Measurement model. The other fit indices also indicate a good fit of the measurement model. The value for RMSEA is 0.044 which is below the more restrict the cut-off value of 0.06. SRMR has a value of 0.033, inferior to the cut-off value of 0.06. The CFI value is 0.908, which marginally exceed the CFI guidelines of greater than 0.90 to be a good adjustment, as well as TLI value that is 0.902.

**Table 12 - Indexes of goodness of fit of the models – Measurement model**

Indexes <sup>4</sup>	Reference	Index model fit – Measurement Model
DF	-	845
$\chi^2/DF$	> 5 – Bad Adjustment ]2; 5] – Tolerable Adjustment ]1; 2] – Good Adjustment ~1 – Very Good Adjustment	1,565
CFI	< 0.8 – Bad Adjustment ]0,8; 0,9] – Tolerable Adjustment	0,908
TLI	]0,9; 0,95] – Good Adjustment $\geq 0,95$ – Very Good Adjustment	0,902
RMSEA	Should be < 0,06	0,044
SRMR	Should be < 0,06	0,033

Source: Hair *et al.* (2009)

The model presents a satisfactory model fit, according to recommended cut-off values (Hair *et al.*, 2009).

### 4.3 Structural Model

A structural model allows for the specification and simultaneous evaluation of multiple causal structures among latent variables. In this study, the structural model aimed to test the hypothetical causal relationships among the attitudinal measurement scales and other constructs, such as perceived value, satisfaction with OTA, satisfaction with trip and loyalty towards OTA.

The previous CFA analysis enables the measurement model examination and testing and taken together the results provide evidence on the validity of individual measures based on the model's overall fit and other evidence of construct validity. Thus, the next step involves analysing the relationships between constructs with a structural equation modelling (SEM) approach.

Some alternative models were tested to ascertain possible relations between constructs accordingly with theoretical support. However, the best indexes were the ones of the proposed model, leading to a model with the acceptable fit.

Table 13 shows the goodness of fit statistics for the SEM model. The good fitness of the model was not satisfactory. Even though CFA indicated that the specification of the model was good, the test of the structural model indicated bad adjustment. Therefore, several tests were made to understand what would be the best configuration of the model in order to have a better adjustment. Table 14 presents the several tests made as well as the good fitness statistics.

<sup>4</sup> DF – degrees of freedom; CFI – Comparative Fit Index; NNFI – Non-Normed Fit Index or TLI - Tucker – Lewis Index; NFI – Normed Fit Index; RMSEA – Root Mean Square Error of Approximation; SRMR – Standardized Root Mean Square Residual.

**Table 13 - Indexes of goodness of fit of the models – Structural model**

Indexes	Reference	Index model fit – Measurement Model
DF	-	850
$\chi^2/DF$	> 5 – Bad Adjustment ]2; 5] – Tolerable Adjustment ]1; 2] – Good Adjustment ~1 – Very Good Adjustment	2,455
CFI	< 0.8 – Bad Adjustment ]0,8; 0,9] – Tolerable Adjustment	0,762
TLI	]0,9; 0,95] – Good Adjustment $\geq 0,95$ – Very Good Adjustment	0,748
RMSEA	Should be < 0,06	0,071
SRMR	Should be < 0,06	0,2251

**Table 14 – Tests and structural model's goodness of fit**

Test	Factors	$\chi^2/DF$	CFI	TLI	RMSEA	SRMR
1	Emotional value, Loyalty, Quality, Satisfaction with OTA, Satisfaction with the trip	2,417	0,924	0,908	0,07	0,122
2	Emotional value, Loyalty, Quality, Satisfaction with OTA, Satisfaction with the trip, Service Price	2,474	0,9	0,884	0,071	0,1529
3	Emotional value, Loyalty, Quality, Satisfaction with OTA, Satisfaction with the trip, Source Credibility	2,39	0,906	0,891	0,069	0,1601
4	Emotional value, Loyalty, Quality, Satisfaction with OTA, Satisfaction with the trip, Service Price, Source Credibility	2,348	0,89	0,976	0,068	0,1724
5	Emotional value, Information Quality, Loyalty, Quality, Satisfaction with OTA, Satisfaction with the trip, Service Price	2,394	0,854	0,84	0,069	0,2107
6	Comments Information Quality, Emotional value, Information quality, Loyalty, Quality, Satisfaction with OTA, Satisfaction with the trip, Service Price, Service Variety, Source Credibility	2,348	0,827	0,813	0,068	0,2168
7	Comments Information Quality, Emotional value, Information quality, Loyalty, Quality Satisfaction with OTA, Satisfaction with the trip, Service Price, Service Variety, Source Credibility, Website Quality	2,407	0,786	0,771	0,07	0,2288
8	Comments Information Quality, Emotional value, Information quality, Loyalty, Quality, Satisfaction with OTA, Satisfaction with the trip, Service Price, Service Variety, Source Credibility, Website Quality	2,338	0,782	0,768	0,068	0,2238

9	Comments Information Quality Information quality, Loyalty Quality, Satisfaction with OTA, Satisfaction with the trip, Service Price, Service Variety, Source Credibility, Website Quality	2,184	0,815	0,802	0,064	0,2072
10	Comments Information Quality, Information quality, Loyalty, Quality, Satisfaction with OTA, Satisfaction with the trip, Service Price, Source Credibility, Website Quality	2,247	0,819	0,805	0,066	0,2111
11	Comments Information Quality, Information quality, Loyalty, Quality, Satisfaction with OTA, Satisfaction with the trip, Service Price, Service Variety, Source Credibility	2,1	0,867	0,855	0,062	0,193
12	Information quality, Loyalty, Quality, Satisfaction with OTA, Satisfaction with the trip, Service Price, Service Variety, Source Credibility	2,078	0,896	0,885	0,061	0,1755
13	Loyalty, Quality, Satisfaction with OTA, Satisfaction with the trip, Service Price, Source Credibility	1,985	0,93	0,919	0,058	0,1299
14	Comments Information Quality, Loyalty, Quality, Satisfaction with OTA, Satisfaction with the trip, Service Price, Source Credibility	2,137	0,889	0,877	0,063	0,1711
15	Loyalty, Quality, Satisfaction with OTA, Satisfaction with the trip, Service Price	1,924	0,948	0,937	0,057	0,0928

Structural model test number 15 showed the best fits accordingly to the goodness of fit measures. Table 15 presents the results of the final model. Although SRMR is above the recommended cut-off of 0.06, it's still an acceptable fit if it's below 0.1 (Cangur & Ercan, 2015).

**Table 15 - Indexes of goodness of fit of the models – Test of Structural model**

Indexes	Reference	Index model fit – Measurement Model
DF	-	111
$\chi^2/DF$	> 5 – Bad Adjustment ]2; 5] – Tolerable Adjustment ]1; 2] – Good Adjustment ~1 – Very Good Adjustment	1,924
CFI	< 0.8 – Bad Adjustment ]0,8; 0,9] – Tolerable Adjustment	0,948
TLI	]0,9; 0,95] – Good Adjustment ≥ 0,95 – Very Good Adjustment	0,937
RMSEA	Should be < 0,06	0,057
SRMR	Should be < 0,06	0,0928

Figure 5 presents then the valid model to represent the relationship between of the antecedents of perceived value and its consequents. The direct effect values (standardized values) allow the examination of the relative magnitude of the coefficients, that is, the strength and direction of a direct relationship between variables in the model. All paths and R<sup>2</sup> values are significant at p<0.001 level.

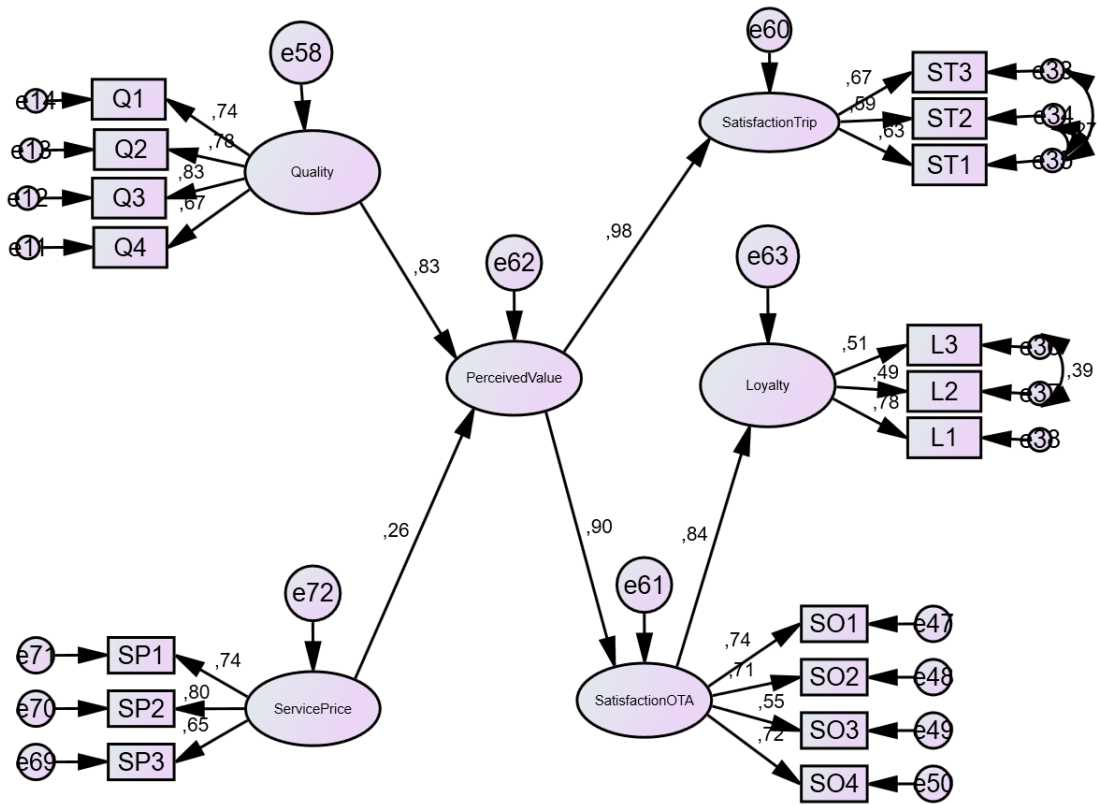


Figure 5 - Structure Model

The results (see Table 16) show strong relations between quality and perceived value (0.8), perceived value and satisfaction with the trip (0.98), perceived value and satisfaction with OTA (0.9) and between satisfaction with OTA and loyalty (0.84). However, there is a low relation between service price and perceived value.

Table 16 - Standardized Total Effects

	Perceived Value	Satisfaction with OTA	Loyalty	Satisfaction with Trip
Service Price	0,258	0,233	0,196	0,252
Quality	0,829	0,749	0,631	0,811
Perceived Value	0	0,904	0,761	0,978
Satisfaction with OTA	0	0	0,843	0

The standardized total effects allow understanding the impact of each variable on the others. As expected from the analysis of Figure 5, Quality is the construct with the most impact on Perceived Value which makes able to conclude that for these individuals it is more important the quality of the service than all the factors related to the price. It is possible to understand that Perceived Value has a big impact on Satisfaction with OTA and Satisfaction with Trip. These influences make sense according to the literature. And at last, the positive strong influence of Satisfaction with OTA and Loyalty with OTA. Once again is according to the literature where a satisfied customer will be more loyal towards a supplier.

#### HYPOTHESES TESTING

It is possible to understand that H1, H3, H5, H6, H7, H8 and H9 were removed from the analysis as the evolution of the model (EFA and CFA) concluded to remove several constructs from the model. Therefore, it was only possible to analyse H2, H4, H10, H11 and H12 from the initial hypotheses defined.

As it is possible to see in Table 17, all available hypotheses were confirmed. Therefore, there is a validation of the literature consulted.

**Table 17 - Hypotheses Testing**

	Estimates <sup>5</sup>	p-value	Conclusion
<b>H2:</b> Service price positively influences Perceived value.	0,242	<0,001	Confirmed
<b>H4:</b> Quality positively influences Perceived value.	0,742	<0,001	Confirmed
<b>H10:</b> Perceived value positively influences Satisfaction with OTA.	1	<0,001	Confirmed
<b>H11:</b> Perceived value positively influences Satisfaction with trip.	1,118	<0,001	Confirmed
<b>H12:</b> Satisfaction with OTA positively influences Loyalty towards OTA.	0,873	<0,001	Confirmed

<sup>5</sup> E.g.: When Quality goes up by 1 unity, Perceived Value goes up by 0,742 unities.

## 5 Conclusion and future research

This study aims to contribute to the academia with more knowledge regarding the analysis of perceived value especially in the tourism sector using the online channel. The evolution of the internet and consequently the e-commerce changed the service context in the tourism and travel sector, therefore, the relationship between customers and service providers changed creating a new context that needed to be analysed. Easy access to information and technology defines the context of customers today making them more informed and prepared than ever. Tourism service providers have then to handle with this context and provide relevant experiences to their customers.

Having in mind the first research objective that aimed to “understand the factors behind the perceived value of buying tourism services through online travel agencies”, it is possible to conclude that in this study quality of the service and service price are the factors behind perceived value. These two factors are supported by the literature as perceived value dimensions. It is supported by the work of Gounaris *et al.* (2007); Moliner *et al.* (2007); Sanchez *et al.* (2006); Sheth *et al.* (1991); Jillian C Sweeney and Soutar (2001); Williams and Soutar (2009); Woodruff (1997); Zeithaml (1988), nevertheless the fact that other dimensions like emotional value or social value, for example, weren't able to be confirmed as dimensions of perceived value constitutes a difference from the main studies developed in the area. Another important conclusion from the analysis would be that, although in a first instance price could be thought as the main influencer of perceived value, quality of the service is actually the main influencer. In a certain way, this supports a conclusion that for these participants having a service with quality is very important. It is relevant to them to have a good experience that leaves them satisfied with the supplier.

Regarding the second research objective to “understand how the perceived website quality influences the perceived value of buying tourism services through online travel agencies”, it isn't possible to conclude anything. With the evolution of the analysis and model, the construct of website quality was dropped from the model thus it's impossible to conclude about this research question. Although literature supports that the perceived website quality affects the way that customers rely on the supplier and this trust affect the perceived value of the customer, in this study, it wasn't possible to conclude about the influence of the dimension.

As far as the third research objective “explore the impact of perceived value on customers' satisfaction and loyalty with online travel agencies”, it is possible to conclude that there is a positive influence of perceived value on satisfaction with the OTA and there is a positive influence between satisfaction with OTA and loyalty. These were expected as there is support in the literature (Gounaris *et al.*, 2007; Oliver, 1999; Pereira *et al.*, 2016; Trif, 2013). For OTA's the combination of this information with the conclusion from the first research, objective could be useful to understand what can be the focus to create loyal customers.

Overall, this study provides tourism services suppliers with some insight about the influence of quality for customers. In a certain way, it supports that quality of the service is crucial for the perception of value for customers and that value is the basis for satisfaction and, eventually loyalty.

This research has some limitations, namely the sample size. Although the best efforts to spread the questionnaire to the biggest number possible of customers of OTA's, there was a clear limitation of access to them. The usage of tools like dynamic e-mail of U. Porto and Facebook

helped to reach some customers but is clear that the number was still low. A bigger number and more participants from other sources (outside U. Porto universe) would be good to have a broader understanding of the context.

Further research could also use other methodologies for data collecting; such as qualitative methods that could provide a deeper understanding of the topic.

## References

- Akaka, M. A., & Vargo, S. L. (2014). Technology as an operant resource in service (eco) systems. *Information Systems and e-Business Management*, 12(3), 367-384.
- Akaka, M. A., Vargo, S. L., & Schau, H. J. (2015). The context of experience. *Journal of Service Management*, 26(2), 206-223.
- Barrett, M., Davidson, E., Prabhu, J., & Vargo, S. L. (2015). Service innovation in the digital age: key contributions and future directions. *MIS quarterly*, 39(1), 135-154.
- Bilgihan, A. (2016). Gen Y customer loyalty in online shopping: An integrated model of trust, user experience and branding. *Computers in Human Behavior*, 61, 103-113.
- Boksberger, P. E., & Melsen, L. (2011). Perceived value: a critical examination of definitions, concepts and measures for the service industry. *Journal of services marketing*, 25(3), 229-240.
- Bolton, R. N., & Drew, J. H. (1991). A multistage model of customers' assessments of service quality and value. *Journal of consumer research*, 17(4), 375-384.
- Breidbach, C. F., Kolb, D. G., & Srinivasan, A. (2013). Connectivity in service systems: Does technology-enablement impact the ability of a service system to co-create value? *Journal of Service Research*, 16(3), 428-441.
- Breidbach, C. F., & Maglio, P. P. (2016). Technology-enabled value co-creation: An empirical analysis of actors, resources, and practices. *Industrial Marketing Management*, 56, 73-85.
- Cangur, S., & Ercan, I. (2015). Comparison of Model Fit Indices Used in Structural Equation Modeling Under Multivariate Normality. *Journal of Modern Applied Statistical Methods*, 14(1), 14.
- Carroll, B., & Sileo, L. (2014). Online Travel Agencies: More than a Distribution Channel. *New York: PhocusWright*.
- Caruana, A., Money, A. H., & Berthon, P. R. (2000). Service quality and satisfaction—the moderating role of value. *European journal of marketing*, 34(11/12), 1338-1353.
- Casaló, L. V., Flavián, C., & Guinalú, M. (2011). Understanding the intention to follow the advice obtained in an online travel community. *Computers in Human Behavior*, 27(2), 622-633.
- Cheung, C. M., Lee, M. K., & Rabjohn, N. (2008). The impact of electronic word-of-mouth: The adoption of online opinions in online customer communities. *Internet research*, 18(3), 229-247.
- Chu, S.-C., Leung, L. C., Van Hui, Y., & Cheung, W. (2007). Evolution of e-commerce Web sites: A conceptual framework and a longitudinal study. *Information & Management*, 44(2), 154-164.
- CIO. (2017). Data the differentiator as Expedia CMO reveals \$500m R&D spend. Retrieved from <http://www.cio.co.uk/it-strategy/data-key-as-expedia-cmo-reveals-500m-rd-spend-3508088/>
- Cronin, J. J., Brady, M. K., & Hult, G. T. M. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of retailing*, 76(2), 193-218.
- Ctrip. (2017). Vision and business philosophy. Retrieved from <http://pages.english.ctrip.com/about/en/vision-and-business-philosophy.html>
- De Ruyter, K., Wetzels, M., Lemmink, J., & Mattson, J. (1997). The dynamics of the service delivery process: a value-based approach. *International journal of research in marketing*, 14(3), 231-243.
- Dodds, W. B., & Monroe, K. B. (1985). The effect of brand and price information on subjective product evaluations. *ACR North American Advances*.
- Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of marketing research*, 307-319.

- East, R., Gendall, P., Hammond, K., & Lomax, W. (2005). Consumer loyalty: singular, additive or interactive? *Australasian Marketing Journal (AMJ)*, 13(2), 10-26.
- Edreams. (2017). Mission, Vision and Values. Retrieved from <http://www.edreamsodigeo.com/about-us/mission-vision-and-values/>
- Expedia. (2017). Mission, Vision, Values. Retrieved from <http://www.expediainc.com/about/mission-vision-values/>
- Filieri, R., Algezauí, S., & McLeay, F. (2015). Why do travelers trust TripAdvisor? Antecedents of trust towards consumer-generated media and its influence on recommendation adoption and word of mouth. *Tourism Management*, 51, 174-185.
- Filieri, R., & McLeay, F. (2014). E-WOM and accommodation: An analysis of the factors that influence travelers' adoption of information from online reviews. *Journal of Travel Research*, 53(1), 44-57.
- Fornell, C., Johnson, M. D., Anderson, E. W., Cha, J., & Bryant, B. E. (1996). The American customer satisfaction index: nature, purpose, and findings. *the Journal of Marketing*, 7-18.
- Frow, P., & Payne, A. (2007). Towards the 'perfect' customer experience. *Journal of Brand Management*, 15(2), 89-101.
- Gardial, S. F., Clemons, D. S., Woodruff, R. B., Schumann, D. W., & Burns, M. J. (1994). Comparing consumers' recall of prepurchase and postpurchase product evaluation experiences. *Journal of consumer research*, 20(4), 548-560.
- Gounaris, S. P., Tzempelikos, N. A., & Chatzipanagiotou, K. (2007). The relationships of customer-perceived value, satisfaction, loyalty and behavioral intentions. *Journal of Relationship Marketing*, 6(1), 63-87.
- Grewal, D., Krishnan, R., Baker, J., & Borin, N. (1998). The effect of store name, brand name and price discounts on consumers' evaluations and purchase intentions. *Journal of retailing*, 74(3), 331-352.
- Grewal, D., Monroe, K. B., & Krishnan, R. (1998). The effects of price-comparison advertising on buyers' perceptions of acquisition value, transaction value, and behavioral intentions. *the Journal of Marketing*, 46-59.
- Grönroos, C. (1984). A service quality model and its marketing implications. *European journal of marketing*, 18(4), 36-44.
- Grönroos, C. (1997). Value-driven relational marketing: from products to resources and competencies. *Journal of marketing management*, 13(5), 407-419.
- Gustafson, P. (2012). Managing business travel: Developments and dilemmas in corporate travel management. *Tourism Management*, 33(2), 276-284. doi:10.1016/j.tourman.2011.03.006
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate Data Analysis* (7th ed.): Pearson.
- Havlena, W. J., & Holbrook, M. B. (1986). The varieties of consumption experience: comparing two typologies of emotion in consumer behavior. *Journal of consumer research*, 13(3), 394-404.
- Hoch, S. J., Bradlow, E. T., & Wansink, B. (1999). The variety of an assortment. *Marketing Science*, 18(4), 527-546.
- Hu, L. t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, 6(1), 1-55.
- INE. (2017). Detalhe do Conceito - Agência de viagens. Retrieved from <http://smi.ine.pt/Conceito/Detalhes/6440>
- Jolliffe, I. (2002). *Principal Component Analysis* (2 ed.): Springer-Verlag New York.
- Kim, Y. A. (2006). The Impact on Customers' Perception of Product Variety. *Korea Review of International Studies*, 9(1).

- Kracht, J., & Wang, Y. (2010). Examining the tourism distribution channel: evolution and transformation. *International Journal of Contemporary Hospitality Management*, 22(5), 736-757.
- Li, W.-K., Monroe, K. B., & Chan, D. K. (1994). The effects of country of origin, brand, and price information: a cognitive-affective model of buying intentions. *ACR North American Advances*.
- Liu, J. N., & Zhang, E. Y. (2014). An investigation of factors affecting customer selection of online hotel booking channels. *International Journal of Hospitality Management*, 39, 71-83.
- Marôco, J. (2010). *Análise de equações estruturais: Fundamentos teóricos, software & aplicações*: ReportNumber, Lda.
- Marôco, J., & Garcia-Marques, T. (2006). Qual a fiabilidade do alfa de Cronbach? Questões antigas e soluções modernas? *Laboratório de Psicologia*, 65-90.
- Moliner, M. A., Sánchez, J., Rodríguez, R. M., & Callarisa, L. (2007). Relationship quality with a travel agency: The influence of the postpurchase perceived value of a tourism package. *Tourism and Hospitality Research*, 7(3-4), 194-211.
- Monroe, K. B., & Chapman, J. D. (1987). Framing effects on buyers' subjective product evaluations. *ACR North American Advances*.
- Murphy, P., Pritchard, M. P., & Smith, B. (2000). The destination product and its impact on traveller perceptions. *Tourism Management*, 21(1), 43-52.
- Oh, H. (1999). Service quality, customer satisfaction, and customer value: A holistic perspective. *International Journal of Hospitality Management*, 18(1), 67-82.
- Oh, H. (2000). The effect of brand class, brand awareness, and price on customer value and behavioral intentions. *Journal of Hospitality & Tourism Research*, 24(2), 136-162.
- Oh, H. (2003). Price fairness and its asymmetric effects on overall price, quality, and value judgments: the case of an upscale hotel. *Tourism Management*, 24(4), 387-399.
- Oliver, R. L. (1999). Whence consumer loyalty? *the Journal of Marketing*, 33-44.
- Ostrom, A. L., Parasuraman, A., Bowen, D. E., Patricio, L., & Voss, C. A. (2015). Service research priorities in a rapidly changing context. *Journal of Service Research*, 18(2), 127-159.
- Pereira, H. G., de Fátima Salgueiro, M., & Rita, P. (2016). Online purchase determinants of loyalty: The mediating effect of satisfaction in tourism. *Journal of Retailing and Consumer Services*, 30, 279-291.
- Ponte, E. B., Carvajal-Trujillo, E., & Escobar-Rodríguez, T. (2015). Influence of trust and perceived value on the intention to purchase travel online: Integrating the effects of assurance on trust antecedents. *Tourism Management*, 47, 286-302.
- Ravald, A., & Grönroos, C. (1996). The value concept and relationship marketing. *European journal of marketing*, 30(2), 19-30.
- Rossmann, G. B., & Wilson, B. L. (1985). Numbers and words: Combining quantitative and qualitative methods in a single large-scale evaluation study. *Evaluation review*, 9(5), 627-643.
- Sanchez, J., Callarisa, L., Rodriguez, R. M., & Moliner, M. A. (2006). Perceived value of the purchase of a tourism product. *Tourism Management*, 27(3), 394-409.
- Schmidt, W. C. (1997). World-Wide Web survey research: Benefits, potential problems, and solutions. *Behavior Research Methods*, 29(2), 274-279.
- Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why we buy what we buy: A theory of consumption values. *Journal of business research*, 22(2), 159-170.
- Silva, J. S. F. d. (2006). Modelagem de Equações Estruturais: Apresentação de uma metodologia.
- Sirohi, N., McLaughlin, E. W., & Wittink, D. R. (1998). A model of consumer perceptions and store loyalty intentions for a supermarket retailer. *Journal of retailing*, 74(2), 223-245.

- Skift. (2017). Interview: eDreams Odigeo CEO Touts the Road Back From Post-IPO Nightmare. Retrieved from <https://skift.com/2017/05/04/interview-edreams-odigeo-ceo-touts-the-road-back-from-post-ipo-nightmare/>
- Sparks, B. A., & Browning, V. (2011). The impact of online reviews on hotel booking intentions and perception of trust. *Tourism Management*, 32(6), 1310-1323.
- Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: The development of a multiple item scale. *Journal of retailing*, 77(2), 203-220.
- Sweeney, J. C., Soutar, G. N., & Johnson, L. W. (1999). The role of perceived risk in the quality-value relationship: a study in a retail environment. *Journal of retailing*, 75(1), 77-105.
- Teas, R. K., & Agarwal, S. (2000). The effects of extrinsic product cues on consumers' perceptions of quality, sacrifice, and value. *Journal of the academy of marketing science*, 28(2), 278-290.
- Trif, S.-M. (2013). The influence of overall satisfaction and trust on customer loyalty. *Management & Marketing*, 8(1), 109.
- Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: Determinants, dynamics and management strategies. *Journal of retailing*, 85(1), 31-41.
- Wakefield, K. L., & Barnes, J. H. (1996). Retailing hedonic consumption: a model of sales promotion of a leisure service. *Journal of retailing*, 72(4), 409-427.
- Watson, R. T., Berthon, P., & Pitt, L. F. (2008). *Electronic commerce: the strategic perspective*: BC Campus.
- Williams, P., & Soutar, G. N. (2009). Value, satisfaction and behavioral intentions in an adventure tourism context. *Annals of Tourism Research*, 36(3), 413-438.
- Woodruff, R. B. (1997). Customer value: the next source for competitive advantage. *Journal of the academy of marketing science*, 25(2), 139-153.
- WTTC. (2017). Travel & Tourism: Economic Impact 2017 World. March 2017. Retrieved from <https://www.wttc.org/-/media/files/reports/economic-impact-research/regions-2017/world2017.pdf>
- Yap, K. B., Wong, D. H., Loh, C., & Bak, R. (2009). Building trust in e-banking: where is the line between online and offline banking. *Australian and New Zealand Marketing Academy, Melbourne, Australia*.
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *the Journal of Marketing*, 2-22.

## **Annex**

### **A – Survey**

#### ***English version***

#### **Online Travel Agency**

In the scope of the Masters in Service Engineering and Management of the Faculty of Engineering of the University of Porto, to obtain the degree of Master, I am currently developing an investigation on the perceived value of the purchase of tourism services via Online Tourism Agencies (OTA). In that sense, I request your participation in this study by completing this questionnaire.

The duration will not exceed 7 minutes.

Thank you in advance for your cooperation.

There are 20 questions in this survey

#### **Online travel agencies Client**

In the last 12 months have you purchased any tourism service (e.g. Hotel, plane ticket) at an online travel agency?

Consider the following example sites from online travel agencies: booking.com, expedia.com, lastminute.com, agoda.com, fareportal.com, flightnetwork.com, makemytrip.com, edreams.com, priceline.com, Tourradar.com \*

Please choose **only one** of the following:

Yes  No

#### **In which online travel agency did you make your last purchase? \***

Choose one of the following answers

Please choose **only one** of the following:

- booking.com
- expedia.com
- lastminute.com
- agoda.com
- fareportal.com
- flightnetwork.com
- makemytrip.com
- edreams.com
- priceline.com
- tourradar.com
- Other

**A**

For the following questions, consider your experience with the purchase process at the previously selected online travel agency.

Please choose the appropriate response for each item:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
I could get a better rate with this online travel agency.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This online travel agency offered better value for my money.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It was a good purchase for the price paid.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The price was the main criterion for the decision.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please choose the appropriate response for each item:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
There were more hotel rooms available at this online travel agency for the region of my destination.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There were more hotel rooms available at this online travel agency, meeting my requirement on quality and budget.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This online travel agency provided me one stop shopping to fulfil my travel needs (hotel room plus air ticket).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This online travel agency could provide more hotel choices in popular location for tourists.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please choose the appropriate response for each item:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
I felt relaxed using this website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The online travel agency gave me a positive feeling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The online travel agency didn't pressure me to decide quickly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am comfortable with the tourism service purchased.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**B**

For the following questions, consider your experience with the online travel agency website. Whenever the question is comparative, please consider the traditional travel agencies as a comparison basis.

Please choose the appropriate response for each item:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
There were more in-depth product/service descriptions available with this website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This website provided more accurate information of travel products, e.g. hotel availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This website provided better post purchase service, e.g. confirmation email including detailed information like how to get to the hotel from airport.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This website replied to my inquiries within 24 hours.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This website provided with clearer statements assuring my privacy and security.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There was detailed information on hotel location in this website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please choose the appropriate response for each item:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
This website provided accurate information about the tourism service that I wanted to purchase.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This website provided sufficient information when I tried to make a transaction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This website provided enough depth of information about its services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information provided by this website was helpful to me in purchasing tourism services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information in this website was clear for me to make a purchase.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This website provided up-to-date information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**C**

For the following questions, consider your experience with the reviews of the tourism services on the website.

Please choose the appropriate response for each item:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
The information in online reviews was timely.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information in online reviews was relevant to my needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information in online reviews was complete for my needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information in online reviews was valuable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information in online reviews was useful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
The information in online reviews was credible.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please choose the appropriate response for each item:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
The reviewers were credible.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The reviewers were experienced.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The reviewers were trustworthy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The reviewers were reliable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**D**

For the following questions, consider your experience with the purchased tourism service.

Please choose the appropriate response for each item:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
I am satisfied with the tourism service I purchased.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My expectations have been fulfilled.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compared to other tourism services that I have used or heard about, the degree of satisfaction of this one is high.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please choose the appropriate response for each item:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
The service purchased was well organised.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Relative to tourism services purchased had an acceptable level of quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The quality of the tourism service was maintained throughout.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The result was as expected.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**E**

For the following questions, consider your experience with the online travel agency.

Please choose the appropriate response for each item:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Using the services of the online travel agency has improved the way others perceive me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who use online travel agencies obtain social approval.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online travel agencies are used by many people that I know.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Purchasing this tourism service improved the way others perceive me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please choose the appropriate response for each item:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
I am very satisfied with this online travel agency's services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My choice for this online travel agency was correct.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Purchasing through this online travel agency exceeded my expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this online travel agency has many desirable characteristics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please choose the appropriate response for each item:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
I have no doubts to recommend this online travel agency to friends and relatives.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This online travel agency is my first choice when I intend to purchase tourism services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I clearly have a preference for this website over others in the same business area.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Demographics**

**Gender**

Please choose **only one** of the following:

- Female
- Male

**Age**

Please choose **only one** of the following:

- <18 years old
- 18 to 25 years old
- 26 to 35 years old
- 36 to 45 years old
- 46 to 55 years old
- 56 to 65 years old
- > 65 years old

### **Education**

Choose one of the following answers

Please choose **only one** of the following:

- Nursery school to 8th grade
- High school graduate, diploma or the equivalent
- Bachelor Degree
- Master Degree
- Doctor Degree
- Other

### **Country of Residence**

Please choose **only one** of the following:

Country of Residence

### ***Portuguese Version***

#### **Online Travel Agency**

No âmbito do Mestrado em Engenharia de Serviços e Gestão da Faculdade de Engenharia da Universidade do Porto, para obtenção do grau de Mestre, encontro-me neste momento a desenvolver uma investigação sobre o valor percebido da compra de serviços de turismo via Agências de Turismo Online (OTA). Nesse sentido, solicito a sua participação neste estudo através do preenchimento deste questionário.

A duração não será superior a 7 minutos.

Desde já agradeço a sua colaboração

Existem 20 perguntas neste inquérito

#### **Cliente agências de viagem online**

Nos últimos 12 meses adquiriu algum serviço de turismo (ex.: Hotel, Bilhete de avião) em alguma agência online de viagens?

Considere-se os seguintes sites de exemplo de agências online de viagens: booking.com, expedia.com, lastminute.com, agoda.com, fareportal.com, flightnetwork.com, makemytrip.com, edreams.com, priceline.com, tourradar.com \*

Por favor, selecione **apenas uma** das seguintes opções:

- Sim
- Não

Em que agência de viagens online realizou a sua última compra?

Escolha uma das seguintes respostas

Por favor, selecione **apenas uma** das seguintes opções:

- booking.com
- expedia.com
- lastminute.com
- agoda.com
- fareportal.com
- flightnetwork.com
- makemytrip.com
- edreams.com
- priceline.com
- tourradar.com
- Outro

**A**

Para as seguintes questões, considere a sua experiência com o processo compra na agência de viagens online previamente selecionada.

Por favor, selecione a posição apropriada para cada elemento:

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
Eu pude obter um melhor preço com esta agência de viagens online.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Esta agência de viagens online ofereceu a melhor relação qualidade/preço.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Foi uma boa compra pelo preço pago.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O preço foi o principal critério para a decisão.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Por favor, selecione a posição apropriada para cada elemento:

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
Havia mais quartos de hotel disponíveis nesta agência de viagens online para a região do meu destino.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Havia mais quartos de hotel disponíveis nesta agência de viagens online, atendendo a minha exigência de qualidade e orçamento.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Esta agência de viagens online forneceu-me todas as opções num único sítio para cumprir com todas as minhas necessidades da viagem (quarto de hotel mais o bilhete de avião).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
---	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Esta agência de viagens online poderia oferecer mais opções de hotéis em locais populares para os turistas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Por favor, selecione a posição apropriada para cada elemento:

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
Eu senti-me relaxado ao usar este website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

A agência de viagens online deu-me uma sensação positiva.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
---	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

A agência de viagens online não me incomodou para decidir rapidamente.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
--	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
Estou confortável com o serviço turístico comprado.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**B**

Para as seguintes questões, considere a sua experiência com o website da agência online de viagens. Sempre que a questão for comparativa, por favor considere as agências de viagens tradicionais como termo de comparação.

Por favor, selecione a posição apropriada para cada elemento:

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
Havia descrições mais aprofundadas dos produtos/serviços disponíveis neste website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Este website forneceu informações mais precisas sobre serviços de viagem, por exemplo disponibilidade do hotel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Este website forneceu um serviço pós-venda melhor, por exemplo, email de confirmação, incluindo informações detalhadas de como chegar ao hotel do aeroporto.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Este website respondeu às minhas perguntas dentro de 24 horas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Este website forneceu declarações claras garantindo a minha privacidade e segurança.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
Existiam informações detalhadas sobre a localização do hotel neste website.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Por favor, selecione a posição apropriada para cada elemento:

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
Este website forneceu informação detalhada sobre o serviço turístico que eu queria adquirir.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Este website forneceu informação suficiente quando eu queria fazer uma transação.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Este site forneceu informações suficientes sobre seus serviços.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A informação fornecida por este site foi útil para mim na compra de serviços turísticos.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A informação neste website foi clara para eu fazer uma compra.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Este website forneceu informações atualizadas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**C**

Para as seguintes questões, considere a sua experiência com as avaliações dos serviços turísticos presentes no website.

Por favor, selecione a posição apropriada para cada elemento:

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
A informação em comentários online foi oportuna.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A informação em avaliações online foi relevante para as minhas necessidades.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A informação em avaliações online foi completa para as minhas necessidades.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A informação em avaliações online foi valiosa.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A informação em avaliações online foi útil.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A informação em avaliações online foi credível.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Por favor, selecione a posição apropriada para cada elemento:

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
Os comentadores eram credíveis.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Os comentadores eram experientes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Os comentadores eram confiáveis.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Os comentadores eram fidedignos.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**D**

Para as seguintes questões, considere a sua experiência com o serviço turístico comprado.

Por favor, selecione a posição apropriada para cada elemento:

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
Estou satisfeito com o serviço de turismo que comprei.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As minhas expectativas foram satisfeitas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Em comparação com outros serviços turísticos que usei ou ouvi falar, o grau de satisfação deste é alto.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Por favor, selecione a posição apropriada para cada elemento:

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
O serviço adquirido estava bem organizado.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relativamente a outros serviços turísticos adquiridos tinha um nível aceitável de qualidade.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A qualidade do serviço turístico foi mantida durante toda a sua duração.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O resultado foi o esperado.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**E**

Para as seguintes questões, considere a sua experiência com a agência de viagens online.

Por favor, selecione a posição apropriada para cada elemento:

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
Usar os serviços desta agência de viagens online melhorou a forma como os outros me vêem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As pessoas que usam os serviços de agências de viagens online obtêm aprovação social.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As agência de viagens online são usadas por muitas pessoas que eu conheço.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comprar este serviço turístico melhorou a forma como os outros me percebem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Por favor, selecione a posição apropriada para cada elemento:

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
Estou muito satisfeito com os serviços desta agência de viagens online.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A minha escolha nesta agência de viagens online estava correta.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A compra através desta agência de viagens online excedeu minhas expectativas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
Eu acredito que esta agência de viagens online tem muitas características desejáveis.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Por favor, selecione a posição apropriada para cada elemento:

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
Não tenho dúvidas em recomendar esta agência de viagens online para amigos e familiares.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Esta agência de viagens online é a minha primeira escolha quando pretendo comprar serviços turísticos.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Eu claramente tenho uma preferência por este site em relação a outros na mesma área de negócios.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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### Demografia

#### Gênero

Por favor, selecione **apenas uma** das seguintes opções:

- Feminino
- Masculino

#### Idade

Escolha uma das seguintes respostas

Por favor, selecione **apenas uma** das seguintes opções:

- <18 anos
- 18 a 25 anos

- 26 a 35 anos
- 36 a 45 anos
- 46 a 55 anos
- 56 a 65 anos
- >65 anos

**Escolaridade**

Escolha uma das seguintes respostas

Por favor, selecione **apenas uma** das seguintes opções:

- Ensino Básico
- Ensino Secundário
- Licenciatura
- Mestrado
- Doutoramento
- Outro

**País de Residência**

Escolha uma das seguintes respostas

Por favor, selecione **apenas uma** das seguintes opções:

País de Residência

**B – Factorial analysis****B.1 – Communalities (Source: own elaboration on SPSS)**

	Initial	Extraction
SP1	1,000	,695
SP2	1,000	,689
SP3	1,000	,624
SP4	1,000	,605
SV1	1,000	,700
SV2	1,000	,694
SV3	1,000	,711
SV4	1,000	,721
E1	1,000	,681
E2	1,000	,683
E3	1,000	,605
E4	1,000	,719
WQ1	1,000	,471
WQ2	1,000	,596
WQ3	1,000	,616
WQ4	1,000	,568
WQ5	1,000	,509
WQ6	1,000	,590
IQ1	1,000	,541
IQ2	1,000	,564
IQ3	1,000	,669
IQ4	1,000	,675
IQ5	1,000	,655
IQ6	1,000	,556
CIQ1	1,000	,636
CIQ2	1,000	,576
CIQ3	1,000	,664
CIQ4	1,000	,596
CIQ5	1,000	,566
CIQ6	1,000	,605
SC1	1,000	,713
SC2	1,000	,707
SC3	1,000	,718
SC4	1,000	,743
RA1	1,000	,627

RA2	1,000	,612
RA3	1,000	,662
RA4	1,000	,557
RA5	1,000	,522
ST1	1,000	,629
ST2	1,000	,652
ST3	1,000	,556
Q1	1,000	,641
Q2	1,000	,670
Q3	1,000	,706
Q4	1,000	,661
WMB1	1,000	,645
WMB2	1,000	,693
WMB3	1,000	,624
WMB4	1,000	,667
S1	1,000	,668
S2	1,000	,733
S3	1,000	,610
S4	1,000	,691
SO1	1,000	,625
SO2	1,000	,702
SO3	1,000	,463
SO4	1,000	,601
L1	1,000	,631
L2	1,000	,712
L3	1,000	,666

Extraction Method: Principal Component Analysis.

B.2 – Total Variance Explained (Source: own elaboration on SPSS)

**Emotional**

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,405	60,115	60,115	2,405	60,115	60,115
2	,745	18,621	78,736			
3	,495	12,368	91,103			
4	,356	8,897	100,000			

Extraction Method: Principal Component Analysis.

**Service Price**

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,304	57,602	57,602	2,304	57,602	57,602
2	,761	19,019	76,622			
3	,547	13,685	90,306			
4	,388	9,694	100,000			

Extraction Method: Principal Component Analysis.

**Service Variety**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1,608	40,206	40,206	1,608	40,206	40,206	1,571	39,269	39,269
2	1,138	28,458	68,664	1,138	28,458	68,664	1,176	29,395	68,664
3	,811	20,268	88,933						
4	,443	11,067	100,000						

Extraction Method: Principal Component Analysis.

**Quality**

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,695	67,366	67,366	2,695	67,366	67,366
2	,530	13,257	80,623			
3	,447	11,171	91,793			
4	,328	8,207	100,000			

Extraction Method: Principal Component Analysis.

**Social**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,022	50,549	50,549	2,022	50,549	50,549	2,019	50,483	50,483
2	1,001	25,031	75,580	1,001	25,031	75,580	1,004	25,097	75,580

3	,544	13,607	89,187					
4	,433	10,813	100,000					

Extraction Method: Principal Component Analysis.

### Website Quality

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,521	42,011	42,011	2,521	42,011	42,011
2	,973	16,210	58,221			
3	,720	11,995	70,216			
4	,686	11,439	81,655			
5	,591	9,846	91,501			
6	,510	8,499	100,000			

Extraction Method: Principal Component Analysis.

### Information quality

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,311	55,182	55,182	3,311	55,182	55,182
2	,701	11,680	66,861			
3	,601	10,020	76,882			
4	,549	9,148	86,030			
5	,448	7,468	93,498			
6	,390	6,502	100,000			

Extraction Method: Principal Component Analysis.

### Comments information Quality

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,255	54,246	54,246	3,255	54,246	54,246
2	,644	10,729	64,976			
3	,597	9,952	74,928			
4	,556	9,273	84,201			
5	,482	8,038	92,239			
6	,466	7,761	100,000			

Extraction Method: Principal Component Analysis.

**Source credibility**

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,787	69,674	69,674	2,787	69,674	69,674
2	,457	11,419	81,093			
3	,407	10,165	91,258			
4	,350	8,742	100,000			

Extraction Method: Principal Component Analysis.

**Satisfaction with OTA**

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,460	61,508	61,508	2,460	61,508	61,508
2	,694	17,339	78,848			
3	,487	12,182	91,030			
4	,359	8,970	100,000			

Extraction Method: Principal Component Analysis.

**Satisfaction with the trip**

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1,926	64,189	64,189	1,926	64,189	64,189
2	,634	21,120	85,309			
3	,441	14,691	100,000			

Extraction Method: Principal Component Analysis.

**Loyalty**

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1,904	63,467	63,467	1,904	63,467	63,467
2	,658	21,946	85,413			
3	,438	14,587	100,000			

Extraction Method: Principal Component Analysis.

B.3 – Correlation Matrix and AVE square root in diagonal

	<b>Emotional value</b>	<b>Service Price</b>	<b>Service Variety</b>	<b>Quality</b>	<b>Website Quality</b>	<b>Info. Quality</b>	<b>C. Info. Quality</b>	<b>Source Cred.</b>	<b>Satis. w/ OTA</b>	<b>Satis. w/ trip</b>	<b>Loyalty</b>
<b>Emotional value</b>	<b>0,775</b>										
<b>Service Price</b>	0,526	<b>0,759</b>									
<b>Service Variety</b>	0,246	0,333	<b>0,8205</b>								
<b>Quality</b>	0,540	0,379	0,303	<b>0,821</b>							
<b>Website Quality</b>	0,720	0,539	0,481	0,582	<b>0,648</b>						
<b>Info. Quality</b>	0,774	0,468	0,438	0,556	0,892	<b>0,743</b>					
<b>C. Info. Quality</b>	0,508	0,282	0,274	0,424	0,603	0,488	<b>0,737</b>				
<b>Source Cred.</b>	0,465	0,265	0,230	0,434	0,568	0,530	0,713	<b>0,835</b>			
<b>Satis. w/ OTA</b>	0,710	0,434	0,285	0,787	0,683	0,662	0,491	0,491	<b>0,784</b>		
<b>Satis. w/ trip</b>	0,713	0,482	0,217	0,807	0,654	0,588	0,390	0,448	0,817	<b>0,801</b>	
<b>Loyalty</b>	0,649	0,369	0,244	0,664	0,663	0,568	0,497	0,402	0,835	0,833	<b>0,797</b>