The Role of Emotions in a Model of Behavioral Intentions of Visitors to the Gaudí Historic

House Museums in Barcelona, Spain

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Abstract

This study examined an integrated model of behavioral intentions towards historic house museums, through the simultaneous relationships among visitors' perceptions of the historic house museum, crowding, visitors' interactions with employees, their positive emotions about their visit, and their intention to revisit the museum and recommend it to others; and the moderator effect of price fairness. 736 visitors were surveyed after visiting *La Pedrera* and *Casa Batlló*, the historic house museums of the architect Antoni Gaudí in Barcelona. The results from a structural equation model indicate that visitors' perception of the historic house museum (that is, their appreciation of the architectural, aesthetic quality, the artistic work, and the accessibility), visitors'interactions with employees, and low levels of crowding are antecedents of emotions, and visitors' emotions about their visit are a positive predictor of intentions to revisit and recommend the museum to others. Additionally, price fairness was tested as a moderator effect using multi-group analysis. This analysis consists of comparing two sub-samples of visitors, which were selected according to whether they have a fair or unfair believe of price. The effect between perceptions of the historic house museum and positive emotions, and the effect of positive emotions on behavioral intentions is greater for visitors who found the price fair than for those that found the price unfair. The study leads to recommendations for cultural heritage managers and institutions.

Keywords: historic house museums, emotions, interactions with employees, crowding, price fairness, behavioral intentions

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The need for heritage sites to provide maximum utility for visitors is fundamental to ensure

the long-term sustainability of heritage sites in a competitive environment (Willis, 2009).

Visitors' behavioral intentions are a key variable for institutions and organizations in the art and

culture sector (Guillon, 2011), especially for historic houses, such as *Casa Batlló* and *Casa Milà*

(Barcelona, Catalonia, Spain), both of which are UNESCO World Heritage Sites (WHS) that

attract millions of visitors every year. Visitors' behavioral intentions can indicate a transition

from a favorable predisposition towards a product or service to a repeated purchase commitment,

and they can predict the future consumption behavior of visitors and that of the recipients their

word-of-mouth recommendations (Jani & Han, 2011).

Barcelona is one of the most important tourist cities in the world (MasterCard, 2015). The

museums of the city are visited every year by more than 12 million visitors, and the most popular

works of the architect Antoni Gaudí—*Sagrada Familia* and *Park Güell*—by 5,860,000 visitors.

Furthermore, the historic houses *Casa Milà* and *Casa Batlló*, designed by Gaudí, have more than

900,000 visitors each per year (Barcelona Tourism, 2015). Consequently, these historic houses,

which are the subject of this study, play a key role in the economy of the city.

Little work has been done studying visitors to historic houses. The research literature has

included the development of a quality scale for historic houses (Frochot & Hughes, 2000), the

study of narratives and stories at historic houses (Beranek, 2011), case studies of slavery

plantations (Eichsteadt & Small, 2002), visitors' satisfaction with their experiences at 18th

century plantations (Jewell & Crotts, 2009), and the museology of house museums (Young,

2007). Despite these works, no studies have addressed visitors' behavioral intentions, that is, the

factors that influence whether visitors report that they will return to the historic home in the future or recommend it to others.

Research to identify drivers of visitors' behavioral intentions has received much attention in recent years, including studies of festivals, archaeological sites, parks, museums, borders, and historical cities. Many of these studies have focused on identifying the antecedents of behavioral intentions, and their results have established several antecedents, such as: perceived value and satisfaction (Lee, Yoon, & Lee, 2007; Yuan, Morrison, Cai, & Linton, 2008); quality (Chen & Chen, 2010); service quality (Chen, Lee, Chen, & Huang, 2011; Lee, Graefe, & Burns, 2004); visit experience and sacrifices (Martín-Ruiz, Castellanos-Verdugo, & Oviedo-García, 2010); environment quality and government policy (Lee, 2016); and self-image congruity and disconfirmation (Wuang & Wu, 2011). Nevertheless, this prior research is insufficient to explain behavioral intentions toward historic houses because it does not investigate other cognitive variables, such as visitors' perception of historic houses , emotions, interactions with employees, and crowding.

The perception of historic houses means the visitor's appreciation of the architectural, aesthetic quality, the artistic work, and their accessibility from anywhere of the city. In addition, it is known that visitors have positive feelings regarding staff in heritage attractions, such as museums (Anderson, Piscitelli, Weier, Everett, & Taylor, 2002). Past research has identified the importance of employees attending to visitors, helping them, responding to their enquiries, and creating positive and profitable visitor relationships in the museum industry (Siu, Zhang, Dong, & Kwan, 2013). However, the influence of employees' interactions on visitors' emotional reactions to historic houses has not been investigated.

Another important aspect of heritage sites is the discomfort that crowding can cause (Hall & Piggin, 2001). Until now, studies of crowding have focused on retail (Hwang, Yoon, & Bendle, 2012), restaurants (Kim, Wen, & Doh, 2010), or leisure environments (Lee & Graefe, 2003). Most leisure studies analyze the influence of crowding and its negative effects on visitor satisfaction (Popp, 2012) or visitor coping strategies to avoid it (Fleishman, Feitelson, & Salomon, 2007; Sharp, Sharp, & Miller, 2015), but research in the heritage tourism sector and the historic house context is limited to identifying the influence of crowding on visitors' emotions. Nonetheless, there are no studies analyzing the opposite effect, which occurs when crowding is low. It is possible that the absence of crowding will have a positive effect on visitors' emotions (Palau-Saumell, Forgas-Coll, Sánchez-García, & Prats-Planagumà, 2014).

Prior research has recognized the importance of emotions as an antecedent of behavioral intentions (Yuksel, 2007). For instance, Voase (2007) posits that visits to historic buildings are basically emotional. However, few studies have used emotions as a mediating variable between cognitive variables and behavioral intentions. Specifically in the festivals sector, Lee, Lee, Lee, and Babin, (2008) have used emotions as a mediating variable between the physical environment and visitors' sense of loyalty, and Lee, Lee, and Choi (2011) have used emotions as a mediating variable between quality dimensions and visitors' behavioral intentions. This is a gap in the literature of visitor studies—more work is needed to identify whether emotions play a key role in visitors' behavioral intentions toward historic houses.

Prior research has shown that paying a higher price for a product or a service that is considered equal to another produces a perception of unfairness that affects a consumer's behavior (Haws & Bearden, 2006). Differences exist in admission fees between the two historic house museums in this study—*Casa Batlló* (21.5€) and *La Pedrera* (20.5€)—and other museums of the city—such as the Picasso Museum (11€), the Miró Foundation (11€), and the Catalonia

National Art Gallery (12€)—and other historic house museums and UNESCO WHS around the world. There is no research that analyzes possible differences in the perceptions of visitors who believe they have paid a fair price or, conversely, that the price paid was unfair; this, too, requires clarification.

To bridge these gaps, and to fully understand what is affecting visitors to recommend and revisit historic house museums, it is vital to understand how visitors' emotional reactions to historic homes and their antecedents are related to post-visitation behavioral intentions. Thus, the purpose of this study was to investigate the simultaneous relationships among visitors' perception of the historic house museum (that is, their appreciation of the architectural, aesthetic quality, and the artistic work), crowding, emotions, behavioral intentions, and interactions with employees. The moderating effects of perceived price fairness on the proposed relationships are also investigated. A good understanding of these relationships can provide managers of historic house museums insights into visitors' emotions and behavioral intentions, and help them to adapt their strategies to meet visitors' needs.

Historic House Museums

A historic house museum can be defined as a historic residence, or a complex of associated structures including a residence, that focuses on the maintenance, care, and interpretation of a historic building. This type of museum places the emphasis on the interpretation of the residential structure and the lives of the people who inhabited it (Butler, 2002). Historic houses instill feelings and evoke memories in visitors, and offer a special ambiance which takes visitors back to a previous era and makes them wonder about old lifestyles (Chhabra, 2010).

The most important attraction for visitors to historic or heritage buildings is the building itself or the facade with its visual elements and architectural styles which, due to their historical, architectural, or cultural characteristics, arouse emotions among visitors (Askari & Dola, 2009).

Palau-Saumell et al. (2013) used variables such as the degree to which visitors are impressed by the aesthetic quality of the house, consider its artistic work to be of high quality, and believe the house is easily accessible from anywhere in the city, which are the variables also used in this study, to measure the perception of historic house museum.

However, the literature measuring the perception of the historic houses among visitors is sparse, given that visitor perceptions are an individual's cognitive understanding or impression of a certain phenomenon or stimulus (Axelsen & Swan, 2010). Consumer perceptions are influenced by many factors (Pigrim & Dum, 1976), but in this research the focus is on the specific influence throughout the visit to the historic house museum. The contents of the cultural heritage building are considered valuable for intellectual and aesthetic reasons (Janiskee, 1996) because they produce emotional experiences in visitors (Voase 2007). As a result, visits to historic buildings are basically emotional (Voase, 2007) and buildings and facades of cultural and architectural interest provoke a wide range of emotional responses (Hertzman, Anderson, & Rowleya, 2008). Moreover, previous literature posits that the relationship between visitors and the ambience of museums causes emotions (Goulding, 2000).

Visitors' Interactions With Employees

The relationships of employees with visitors to a historic house museum take place during an interaction before, during, or after a visit. Prior research has examined the importance of personnel in generating emotions in customers. These emotions are based on the attitudes, behaviors, and knowledge executed by the employees during the interactions that take place with customers in the performance of a service (Brady & Cronin, 2001), and is the perspective used in this study. A similar situation occurs with the historic house museum, where front-line employees

interact with the visitors through contact in the reception or ticket office, book store, souvenir selling area, services of interpretation, information, and access to the collections and exhibitions (Gilmore & Rentschler, 2002; Nowacki, 2005). So that, this study use visitors receive prompt service from employees, employees are always willing to help visitors, and employees are not too busy to respond to visitor request promptly to measure visitor's interactions with employees.

Crowding

The study of crowding has its theoretical foundation in environmental and behavioral psychology (Neuts & Nijkamp, 2012). Crowding can be defined as the result of physical, social, and personal factors that sensitize a person because he or she is in a situation in which there is a shortage of space (Stokols, 1972). When the density of people in a physical space restricts or interferes with the activities of those present, people perceive that the space is full of people (Machleit, Eroglu, & Mantel, 2000) and this is perceived as an unpleasant sensation (Noone & Mattila, 2009). Hui and Bateson (1991) identified negative relationships between crowding and customer emotions when the public perceives there is a lack of control or excessive crowding in waiting areas. On the other hand, the relationships with emotions are positive when people associate crowding within a space with opportunities for social contact (Hui & Bateson, 1991). Other authors, like Hwang, Yoon, and Bendle (2012), found that crowding affects customers' emotions and whether they approach or avoid the service to be consumed. A UNESCO WHS receives millions of visitors, often causing problems of crowding (Smith, 2002). Consequently, taking into account the above literature, if crowding negatively affects emotions, a contrary effect may occur if the levels of crowding of a historic house are low.

Emotions

Cognitive appraisals have arisen as a dominant theory to understand and explain emotional experiences with products and services (Hosany, 2012). From a cognitive perspective, emotions can be defined as a subjective evaluation of a series of cognitive processes that a person makes of a situation or event (Camarero & Garrido, 2011). Emotions may be positive or negative (Scherer, 1988), but individuals tend to seek positive emotions and avoid negative ones (Maio & Esses, 2001). To understand the structure of emotions, different models have been used, but from the cognitive viewpoint the most widely used in studies of consumer behavior has been the PAD model—pleasure, arousal, and dominance (Mehrabian & Russell, 1974). This model identified the mediating role of emotions between the environment and human behavior (Forrest, 2013). However, there is a broad consensus to accept a version of the model with two dimensions— pleasure and arousal—that Russell (1980) adapted from his earlier work with Mehrabian. Pleasure—the way in which a person feels good, joyful, and happy—and arousal—the way in which a person feels excited or stimulated—are the dimensions most used to measure individual emotions in a wide variety of contexts (Yuksel, 2007). In fact, the PAD model takes into consideration that emotional states exist in bipolar categories (e.g., pleasure/displeasure, arousal/non-arousal). This bipolarity indicates that the presence of pleasure and arousal excludes the possibility of displeasure and non-arousal (Ladhari, 2007).

Behavioral Intentions

Consumer loyalty is a fundamental objective of all service providers. Oliver (1999) defines loyalty as the highest level of commitment. Favorable behavioral intentions frequently represent the conative stage of loyalty (Oliver, 1999), and researchers have named them behavioral intentions (Chen & Chen, 2010). The literature has used word-of-mouth—the willingness to recommend and willingness to repurchase or revisit—as specific forms of behavioral intentions

about the consumption of products and services (Chen et al., 2011). Word-of-mouth is seen by people as reliable information coming from a person who already has experience (Ha & Jang, 2010). The intention to recommend reflects a positive behavioral intention, which is the result of the value of the experiences enjoyed in the consumption of a service (Bowen & Shoemaker, 2003). Repurchase intention is the individual's judgment about buying a designated service again from the same company, taking into account his or her current situation and likely circumstances (Hellier, Geursen, Carr, & Rickard, 2003).

The Moderating Effect of Perceived Price Fairness

Both the theory of distributive justice and equity theory point out that perceptions of fairness are induced when a person compares the result of an exchange relationship with other possible exchanges (Xia, Monroe, & Cox, 2004). The theory of distributive justice maintains that people in an exchange relationship with others are entitled to receive a reward that is proportional to what they have invested in the relationship (Homans, 1961). Equity theory widens this perspective to include comparison with other consumers, which can influence the perception of fairness in an exchange relationship (Adams 1965). In the context of price fairness, the results of the exchange relationship that are compared are the prices, and evaluations of prices are always comparative. This means that consumers have a reference price, defined as a predictive price expectation that is shaped by consumers' prior experience and current purchase environment (Mazumdar, Raj, & Sinha, 2005). If the price analyzed by a consumer differs from the reference price, the price difference can induce a perception of unfairness (Xia et al., 2004). For this reason, price fairness is a price evaluation based on comparing the actual price to the reference price, competitors' prices, costs, and other consumers' prices (Kahneman, Knetsch, & Thaler, 1986).

Research Questions

Given the objectives of this investigation and previous literature, our study addressed the following research questions:

1. Is there a significant relationship between visitors' perception of a historic house museum (as measured by appreciation of the architectural, aesthetic quality, the artistic work, and the accessibility) and their emotions?

2. Is there a significant relationship between visitors' emotions about their visit and their interactions with employees?

3. Does an acceptable or low level of crowding positively influence visitors' emotions about their visit?

4. Is there a significant relationship between visitors' positive emotions about their visit and behavioral intentions to return and recommend with respect to the historic house museum?

5. Is there a significant relationship between visitors' perception of the historic house museum (as measured by appreciation of the architectural, aesthetic quality, the artistic work, and the accessibility) and their behavioral intentions to return and recommend with respect to the historic house museum?

6. What is the influence of visitors' perceptions of price fairness on the relationships posited in the above questions?

Research Model and Hypotheses

The literature suggests two main predictors of customer behavioral intentions: cognitive evaluations regarding the service received (visitors' perceptions of the historic house museum and crowding, and visitors' interactions with employees), and positive affective responses to this

service (Gracia, Bakker, & Grau, 2011). In addition, emotions are considered as a consequence of cognitive perceptions and an antecedent of behavioral intentions; that is, they mediate between the perception of a product or service and the intention to repeat a purchase or revisit a cultural attraction (Oliver, 1993). For this reason, the model presented in this study includes emotions as a mediator between cognitions—perceptions of historic houses and crowding, and interactions with employees—and behavioral intentions. On the basis of the literature review several hypotheses were formulated to answer the research questions.

There are no studies in the literature on historic houses that analyze the influence of visitors' perception of a historic house museum on their emotions, except for one by Palau-Saumell et al. (2013), who found direct and positive relationships between the perception of a building catalogued as a world heritage site and positive emotions to the *Sagrada Familia* in Barcelona. Based on these findings, it is hypothesized that:

H_1: Visitors' perception of the historic house museums will directly and positively

influence their emotions about their visit.

Earlier studies on retail banking found that the perception of interactions between employees and customers affect positively customers' emotions (Jamal & Adelowore, 2008). Based on this finding, it is hypothesized that:

H_2: The nature of visitors' interactions with employees will directly and positively

influence visitors' emotions towards their visit.

Based on the literature about crowding, discussed above, there is no evidence of a positive relationship between low levels of crowding and positive emotions, including the case of historic house museums. So, it is hypothesized that:

H_3: Visitors' perceptions of low levels of crowding of the historic house museums will

directly and positively influences their positive emotions towards the visit.

The literature has shown that the alteration of visitors' emotional states influences consumers' behavioral intentions. Earlier studies have noted the existence of positive relationships between emotions and behavioral intentions in visitors to museums (Camarero & Garrido, 2011). Therefore, it is hypothesized that:

H4: Visitors' positive emotions with regard to these historic house museums will directly and positively influence their behavioral intentions toward them.

The relationship between visitors' perception of heritage building and behavioral intentions has been tested by Palau-Saumell et al. (2013), although not in the context of historic house museums. Based on their findings, we propose the following hypothesis:

H5: Visitors' perception of the historic house museums will directly and positively influence their behavioral intentions to them.

Only a few studies, such as one by Rondan-Cataluna and Martin-Ruiz (2010), use price fairness as a moderating variable. These researchers found significant differences between consumers who believed the price was fair and those who believed it was unfair in the perception of benefits from the purchase of a product or service. But no researchers have used price fairness in the context of art and heritage. Therefore, it is reasonable to suppose that a perception of whether the entry fee is fair or unfair could cause moderator effects and significant differences among the causal relationships of the model. Thus, the following hypothesis is proposed:

H6: Visitors' perception on entrance fee fairness moderates all the relationships: (a) visitors' perception of the historic house museum on emotions, (b) visitors' interactions with employees on emotions, (c) visitors' perception of low levels of crowding on emotions, (d) emotions on behavioral intentions; and (e) visitors' perception of the historic house museum on behavioral intentions.

The hypotheses for this study are summarized in Figure 1. Figure 1 shows the direct relationships between independent and dependent variables and the moderating effects.

INSERT FIGURE 1 ABOUT HERE

Method

Study Site

The research was carried out at two historic house museums: *Casa Milà* and *Casa Batlló*. They were designed by the architect Antoni Gaudí. *Casa Milà*, also known as *La Pedrera*, was built between 1906 and 1912 and Gaudí created an astonishing modernist style building. The Milà family retained ownership of the building until 1946. From that date onwards, the building suffered changes of ownership and a notable deterioration until a bank bought it, restored it, and turned it, from 1986, into a center for cultural activities and artistic exhibitions (Catalunya Caixa, 2014). *Casa Batlló* was built between 1875 and 1877 without the intervention of Gaudí. In 1904, the house was bought by the textile businessman, Josep Batlló, as a private house, and he selected Gaudí to renovate it. Subsequently, the building passed through several hands and uses, until in 2002 the current owners finished the refurbishment work and adaptation of the building to receive the general public (Casa Batlló, 2014).

Measurement Scales

The survey questionnaire was developed on the basis of a literature review to measure the structural model. Each construct, or latent variable, must be calculated with observable variables or items. We employed previously used scales in the measurement of the relevant constructs of the structural model and adapted to the terminology of the heritage context (see Appendix A).

Three items were selected to measure the perception of the historic house museum: the architectural and aesthetic quality of the houses, the quality of the artistic work, and the houses were easily accessible from anywhere in the city. These items were operationalized from a study by Palau-Saumell et al. (2013), and they are in the historic houses section in the questionnaire. Visitors' assessments of three aspects of their interactions with employees: the degree to which they agreed with statements about how prompt, willing, and available employees' were to help with service requests— are in the visitors' interactions with employees section in the questionnaire. These items were based on Jamal and Adelowore's scale (2008), and are in the visitors' interactions with employees section in the questionnaire. Two items were used to measure crowding: visitors didn't feel cramped, and visitors didn't feel squashed. These items were adopted from Kim, Wen, and Do (2010), and they are in the crowding section in the questionnaire. Three items were selected to measure visitor's emotions: the visit left visitors pleased, made them happy, and was stimulating. These items were adapted from a study of positive emotions by Gracia, Bakker, and Grau (2011), representing the pleasure and arousal dimensions, and they are in the emotions section in the questionnaire. Visitors' behavioral intentions were assessed with two items that measured the likelihood of visitors returning to the historic house and their willingness to recommend it to friends and relatives. Both were operationalized from the study of Chen and Tsai (2007), and they are in the behavioral intentions section of the questionnaire. Finally, the measure to evaluate price fairness was taken from Rondán-Cataluña and Martínez-Ruiz (2011), and contained four items: considering the benefits provided, the charged price is fair; the price charged by the vendor seems reasonable; the price charged for the visit is comparable to the price of other alternatives; the profits of the vendor are fair in comparison with the profits of other alternatives in the heritage market. These items are in the price fairness section in the questionnaire.

The items were reviewed through qualitative interviews with professionals working for heritage attractions. We conducted deep interviews with two guides of heritage attractions, two managers of tourist guide companies with experience in visiting the historic houses of this study, and two professionals of house museums. The results of the in-depth interviews achieved a high level of consensus among the experts to retain the aforementioned items. Furthermore, to test the items of the questionnaire, a pre-test of 50 personal interviews was carried out in February 2012. This led us to improve the wording of the questionnaire. The items of the questionnaire were valued by means of a 5-point scale, which respondents rated from 1 (*strongly disagree*) to 5 (*strongly agree*).

Sampling and Data Collection

The interviews were performed at the exit of *Casa Milà* and *Casa Batlló* after visitors had finished their visit. The information was gathered between May and June 2012 on the basis of a convenience sampling strategy among visitors who had not taken the guided tour. This decision was made because most visitors do the visit without guide. Therefore, they have no relations with the guides. However, all visitors have contact with other employees. The sampling strategy was to cover all hourly segments during the period analyzed, so that during the first six weeks the surveys were carried out in the morning, and in the following six weeks in the afternoon or evening. A total of 736 personal interviews were completed, of which 30 questionnaires were rejected because they were incomplete or invalid, making a total of 706 usable interviews. The sample profile was 54.8% men and 45.2% women. The age distribution was: 10.1% were 18-24 years, 23.3% were 25-34 years, 25.6% were 35-44 years, 19.8% were 45-54 years, 15.1% were 55-64 years, and 6.1% were 65 years and over. The educational level was: 8.7% were elementary school, 35.2% were high school, and 56.1% were university degree. Regarding occupations,

7.1% were students, 49.3% were employees, 26.8% were self-employed, and 16.8% were others.

Method of Analysis

A structural equation model (SEM) was used to examine hypotheses 1 to 5. SEM allows

researchers to simultaneously test hypothesized relationships among a complete structure of

variables (Byrne 1998). It is a family of multivariate models that include simultaneous equations,

factor analysis, and multilevel models, for single and multi-group data.

Hypothesis 6 was tested using a multi-group SEM analysis. Multiple group analysis in SEM

allows comparison of multiple samples across the same measurement instrument or multiple

population groups (e.g., unfairness versus fairness of price) for any identified structural equation

model. The common way of testing moderating effects in SEM is to divide the data set into two

or more groups and to compare the model fit across groups (Im, Kim, & Han, 2008).

The model was estimated from the matrices of variances and covariances by robust maximum

likelihood estimation with EQS 6.1 statistical software. First, a study of the dimensionality,

reliability, and validity of the scale was estimated to ensure that we were measuring the construct

that it was intended to measure. Subsequently, the invariance of the instrument of measurement

was verified to be able to compare the regression coefficients of each of the samples (moderator

effects; see hypothesis H6). Prior to this comparison, the causal relationships for the whole

sample were determined to test hypotheses 1 to 5.

Results

The first phase of the analysis focused on the study of the psychometrical properties of the

scale for the whole sample. This analysis aims to demonstrate individual reliability of each item.

The analysis permitted us to refine the scale, eliminating non-significant items if necessary

(Appendix B). The second phase focused on discriminant validity, which refers to the degree of

differentiation between different constructs from a single measurement system. It checks that the

relationship of the items with their respective constructs is stronger than the relationship of an

item with a different construct (Appendix B). To test the proposed moderating effect of price

fairness, the respondents were divided into two groups (Appendix C). The unfair group,

participants who responded that the entry fee to the historic home was unfair, was made up of

316 cases. The fair group, participants who responded that the entry fee to the historic home was

fair, contained 390 individuals.

Structural Model Results

To test hypotheses 1 to 5, an analysis of the causal relationships for the total sample was

performed. All of the goodness-of-fit statistics of the proposed model were above the

recommended threshold values (Appendix D).

The hypotheses were tested by evaluating the relationships between the independent and

dependent variables. Table 1 and Figure 2 report the findings of these effects. In Table 1, the

parameter (β) measured the magnitude of the relationship between the variables represented in

the model, indicating the strength of the causal relationship. The value of "t" indicates whether

the causal relationship is significant. This occurs when the value of "t" is greater than 1.96. In

Figure 2, unidirectional arrows, between latent variables, indicate the direction of causal

relationship and the influence of independent variables on the dependent variables trough the

same values of the Table 1.

Hypothesis 1 (visitors' perception of the historic house museums will directly and positively

influences their emotions about their visit) suggests a direct and positive relationship between

visitors' perceptions of the house museums and emotions ($\beta = 0.48$; $t = 7.98$), so H_1 is supported

(see Table 1 and Figure 2). Therefore, visitors who were more likely to agree with statements that they were impressed by the architectural and aesthetic quality of the houses, that the quality of the artistic work was high, and that the houses were easily accessible from anywhere in the city, were also more likely to agree with statements that the visit left them pleased, made them happy, and was stimulating. Hypothesis 2 (the nature of visitors' interactions with employees will directly and positively influences visitors' emotions towards their visit) confirm a direct and positive effect between visitors' interactions with employees and emotions ($\beta = 0.16$; $t = 3.12$), supporting H_2 (see Table 1 and Figure 2). Consequently, visitors who were more likely to agree with employees services (that is, their willing to help and their prompt service) were also more likely to agree with statements that the visit left them pleased, made them happy, and was stimulating. Hypothesis 3 (visitors' perceptions of low levels of crowding of the historic house museums will directly and positively influences their positive emotions towards the visit) corroborates the effect of low levels of crowding on emotions ($\beta = 0.21$; $t = 5.64$), thus H_3 is supported (see Table 1 and Figure 2). Accordingly, visitors who were more likely to feel low level of crowding of the historic house museums were also more likely to agree with statements that the visit left them pleased, made them happy, and was stimulating. Hypothesis 4 (visitors' positive emotions with regard to these historic house museums will directly and positively influence their behavioral intentions toward them) confirm the effect of emotions on behavioral intentions ($\beta = 0.53$; $t = 8.90$), providing support for H_4 (see Table 1 and Figure 2). Hence, visitors who were more likely to agree with statements that the visit left them pleased, made them happy, and was stimulating were also more likely to return and recommend the visit to their friends and relatives . Finally, hypothesis 5 (visitors' perception of the historic house museums will directly and positively influence their behavioral intentions to them) verifies the direct effect of the historic house museum on behavioral intentions ($\beta = 0.29$; $t = 4.97$), supporting H_5 (see

Table 1 and Figure 2). Therefore, visitors who were more likely to agree with statements that

they were impressed by the architectural and aesthetic quality of the houses, that the quality of

the artistic work was high, and that the houses were easily accessible from anywhere in the city,

were also more likely to return and recommend the visit. These findings indicate that all of the

hypotheses were supported.

INSERT TABLE 1 ABOUT HERE

INSERT FIGURE 2 ABOUT HERE

The existence of significant differences in the causal relationships was estimated to analyze

the moderating effect exercised by perceptions of whether the admission price for these historic

homes was fair or not. Restrictions that permit calculation of these significant differences

between the estimated parameters were added, through comparison of the χ2 of the restricted

structural model with the χ2 of the unrestricted structural model, as shown in Table 2. The

analysis carried out to establish the causal relationships between the variables being studied is

adequate, because the statistics of the model exceed the recommended levels, and thus the fit of

the multi-group model is correct (Hair et al., 2006).

Price fairness partially moderates the model. As showed in Table 2 and Figure 3, significant

differences resulted in two of the five posited causal relationships, with greater influence on

visitors who perceived the price as fair. This is so in the relationship between visitors'

perceptions of the house museum and emotions, with a higher value among those who perceive

the entry fee to be fair ($\beta = 0.70$) than among those who perceive it to be unfair ($\beta = 0.33$),

identifying the moderating effect ($\Delta\chi^2 = 12.31$; $p = 0.00$) and confirming H$_{6a}$. It is also so in the

relationship between emotions and behavioral intentions, with higher values among those who

perceive the entry fee to be fair ($\beta = 0.54$) than among those who perceive it to be unfair ($\beta =$

0.49), confirming the moderating effect ($\Delta\chi^2 = 4.28$; p = 0.03) and H_{6d}.

There are no significant differences between the unfair and fair groups in the relationship of visitors' perception of the house museum and behavioral intentions, of interactions with employees and emotions, and of crowding and emotions (H_{6b}, H_{6c}, and H_{6e}).

INSERT TABLE 2 ABOUT HERE

INSERT FIGURE 3 ABOUT HERE

Discussion

This research examined the simultaneous relationships between visitors' perceptions of two house museums, the nature of their interactions with employees, perceptions of crowding, emotions about their visit, their behavioral intentions, and the moderating effect of perceived price fairness. The findings show that the visitors' perceptions of historic house museum and emotions are the key variables of the model. From these results, it is believed that the behavioral-intention model outlined in the conceptual framework is corroborated. The originality of this contribution is that this model of relationships had not been tested in the literature on visitor studies, and specifically not in the context of historic houses. This model should be useful for better understanding the behavioral intentions of historic house visitors. Overall, our results support the argument that emotions play a mediating role in the relationship between the historic house, visitors' interactions with employees, perceived crowding, and behavioral intentions. That is, the perception of a historic house, positive interactions with employees, and a low level of crowding is associated with visitors' development of an emotional feeling towards the visit and, ultimately, the visitors' expressed intentions to recommend and to repeat the visit in the future.

These results confirm the partial findings of earlier studies in the heritage context. The direct

effects of a historic house museum on emotions and on visitors' behavioral intentions are

confirmed. That is, the perception of the building causes visitors to feel happy, pleasant, and

stimulated. This finding is consistent with previous research in the heritage context stating that

historic buildings influences visitors' emotions, and it is the main attraction to revisit and

recommend (Palau-Saumell et al., 2013). That is, a positive perception of the historic house

contributed both to developing emotional feelings toward the visit and a willingness to

recommend and revisit it.

In addition, the findings confirm previous studies carried out in other contexts but not studied

sufficiently in the literature on historic houses. The results support the claim that visitors'

interactions with employees produce a positive effect on visitors' emotions (Jamal & Adelowore,

2008). The higher evaluation visitors hold of their interactions with employees, the more positive

their emotions toward the visit.

The findings also verify the relationship between crowding and emotions when the levels of

crowding are low. This contributes to increasing the emotional level, and even, when the activity

is hedonic, crowding can form part of the experience itself (Noone & Mattila, 2009). Our results

suggest that low levels of crowding in the interior of historic house museums, which are also

heritage sites, causes an inverse effect to the negative effects of crowding on emotions. These

findings expand prior literature, because they seem to negate the argument that crowding leads to

a negative influence. That is, it gives the idea that low levels of crowding positively influence the

visitors' emotions (Palau-Saumell et al., 2014).

The results indicate that emotions are an antecedent of behavioral intentions, and confirm

studies in the festivals sector (Lee, Lee, & Choi, 2011). This suggests that as visitors become

more emotional, their likelihood of being able to recommend and revisit the site increases.

The moderating effects of price fairness indicate that they are significant in the most decisive

path of the model, moderating the relationship between visitors' perception of the house museum, their emotions, and their behavioral intentions. The house museum arouses much more positive emotions in the visitors who consider the price to be fair.. Additionally, the emotions of visitors who consider the price to be fair affect their behavioral intentions much more than those of the visitors who consider it unfair. This means that the emotions influence more word-of-mouth and revisit intentions among visitors who believe the price is fair than among those who believe it is unfair. One possible explanation therefore is be that those who believe they have paid a fair price enjoy the visit substantially more than those who do not, and will be more willing to recommend the site and to revisit it.

As to the implications for managers of historic house museums, it is necessary to continue maintaining the architectural and aesthetic quality of this historic house, the quality of artistic work, and the accessibility from anywhere in the city. Other outstanding factors are the positive effect of interactions with employees and of crowding on emotions. First, tourism heritage managers should improve contacts between employees and visitors, since any improvement will improve visitors' emotions. Second, effective management of carrying capacity eases the flow of visitors and allows the visit to take place without overcrowding, which is important for historic buildings that endure the pressure of thousands of visitors.

With regard to the moderator effects of price fairness, and given the impossibility of knowing which visitors consider the price to be fair and which consider it to be unfair, managers must help visitors make more sense of the historic house museum. Management should improve narrative structures around the objects to communicate these stories better. As a result, they may achieve a more intense effect on the emotions of visitors who consider the price to be fair and simultaneously influence the emotions of those who consider the price unfair, thereby diminishing any negative impact.

The main limitation of this study is that data were gathered only on visitors to two historic house museums in Barcelona at a particular time of year. Replicating the path model in other historic house museums and implementing a sampling strategy that will cover the different seasons throughout the year may provide additional insights.

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TABLES

Table 1

Structural Model Relationships Obtained

Hypothesis	Path	Parameter (β)	t	Results
H_1	Historic house museum → Emotions	0.48	7.98**	Supported
H_2	Visitor's interactions with employees → Emotions	0.16	3.12**	Supported
H_3	Crowding → Emotions	0.21	5.64**	Supported
H_4	Emotions → Behavioral intentions	0.53	8.90**	Supported
H_5	Historic house museum → Behavioral intentions	0.29	4.97**	Supported

Note. Fit of the model: Chi-squared = 67.1260, df = 53, *p* = 0.092; RMSEA = 0.047; GFI = 0.949; AGFI = 0.913.
** *p* < .01

Table 2

The Moderating Effect of Price Fairness

Hypothesis	Path	Unfair (n=316) Parameter (β)	t	Fair (n=390) Parameter (β)	t	$\Delta \chi2$	p	Support
H_{6a}	Historic house museum → Emotions	0.33	4.43**	0.70	7.17**	12.31	0.00**	Yes
H_{6b}	Visitor's interactions with employees → Emotions	0.22	3.55**	0.08	0.93	2.01	0.16	No
H_{6c}	Crowding → Emotions	0.22	4.39**	0.10	2.08*	1.64	0.20	No
H_{6d}	Emotions → Behavioral intentions	0.49	7.02**	0.54	5.24**	4.28	0.03*	Yes
H_{6e}	Historic house museum → Behavioral intentions	0.26	3.69**	0.33	3.25**	0.14	0.70	No

Note. Fit of the model: Chi-squared = 116.396, df=112, *p* = 0.369; RMSEA = 0.051; GFI = 0.951; AGFI = 0.928.
Simultaneously latent variables test: $\Delta \chi2$ = 13.941; Δdf = 5; *p* = 0.015 < .05
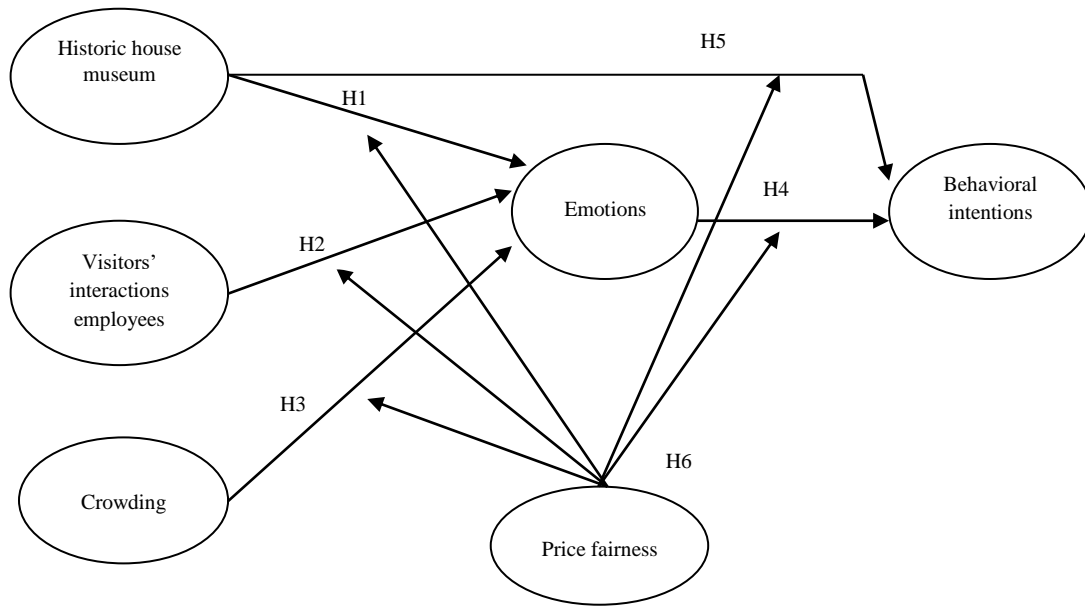* *p* < .05; ** *p* < .01

FIGURES

Figure 1. The conceptual model. Ellipses contain latent variables. Unidirectional arrows between latent variables indicate a causal relationship. The arrows from the ellipse labeled price fairness indicate the moderating effects of price fairness in all the relationships of the model.

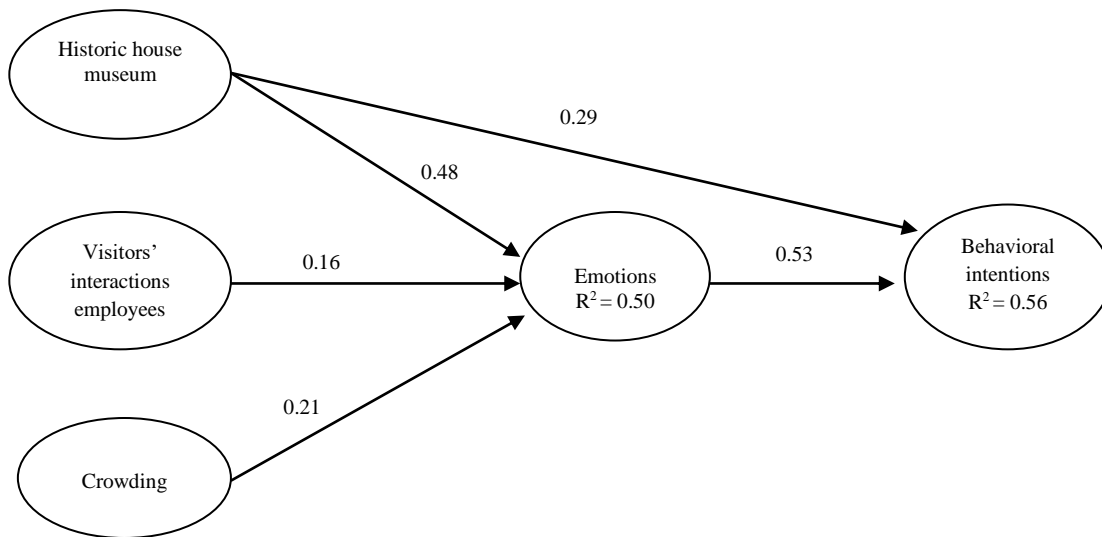*Figure 2.* Results of the hypothesized path model. Mediating effect of emotions: The results indicate that to recommend and repeat visits, a visitor must first be excited (see the direction of the arrow: emotions influences behavioral intentions, and, also see, the positive value of the parameter, $\beta = 0.53$). (Fit of the model: Chi-squared = 67.1260, df = 53; $p =0.092$; RMSEA = 0.047; GFI = 0.949; AGFI = 0.913.)

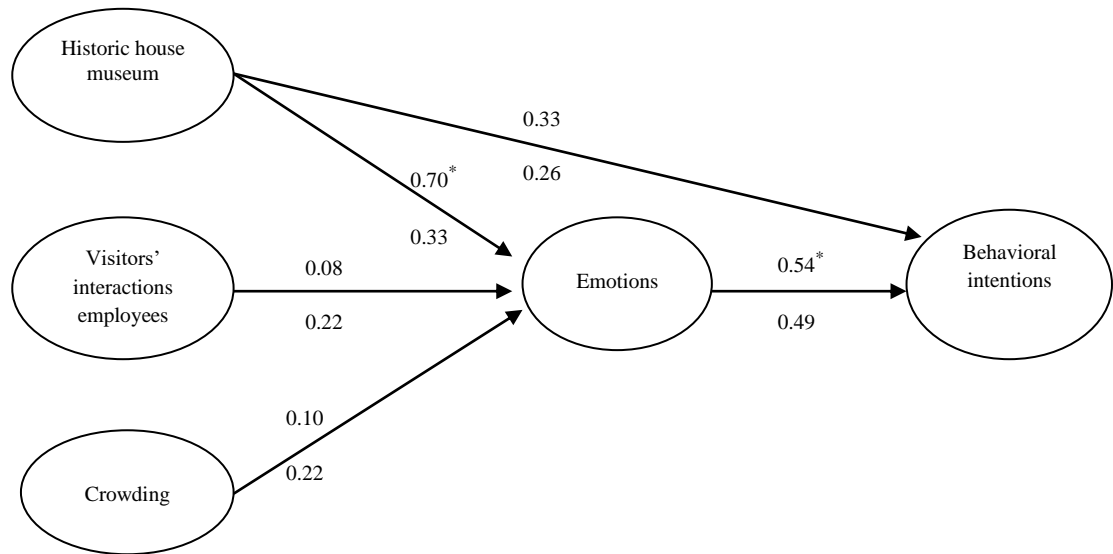*Figure 3*. The moderating effect of price fairness. Two values are shown for each relation: the top value is when the price is considered fair, and the bottom value is for when the price is considered unfair. When there are significant differences ($p < .05$), an asterisk (*) indicates the higher value. (Fit of the model: Chi-squared =116.3966, df = 112, $p = 0.3690$; RMSEA = 0.051; GFI = 0.951; AGFI = 0.928.)

APPENDIX A

VISITOR QUESTIONNAIRE

Full name of the interviewer: Number of questionnaire:

Date: Historic House:

> Good morning / afternoon. WE WOULD APPRECIATE VERY MUCH YOUR COLLABORATION answering the following questions, whose objective is to develop a research about your opinion to the HISTORIC HOUSE MUSEUMS. This survey is made for research in MARKETING. We can guarantee you a confidentiality and anonymity to all the collected information. Finally, this survey does not have any lucrative aims but only a research purpose.

Q1. Where are you from? (Country of residence):

Q2. Have you been on this House Museum before? ① Yes   ② No

Q3. (Only, if yes) How many times? _____

Please now value with 1 to 5 the following statements (**1 meant TOTALLY DISAGREE, 5 meant TOTALLY AGREE**)

LATENT VARIABLES

Q4. PERCEPTION OF HISTORIC HOUSE MUSEUMS

1	I am impressed by the architectural and aesthetic quality of this historic house	1	2	3	4	5
2	The quality of artistic work of the historic house is high	1	2	3	4	5
3	This historic house is easily accessible from anywhere in the city	1	2	3	4	5

Q5. VISITORS' INTERACTIONS WITH EMPLOYEES

1	I receive prompt service from employees	1	2	3	4	5
2	Employees are always willing to help visitors	1	2	3	4	5
3	Employees are not too busy to respond to visitor request promptly	1	2	3	4	5

Q6. CROWDING

1	I didn't feel cramped in the historic house	1	2	3	4	5
2	I didn't feel squashed up during the visit	1	2	3	4	5

Q7. EMOTIONS

1	The pleasure of visiting made me happy	1	2	3	4	5
2	The visit left me pleased	1	2	3	4	5
3	The visit was stimulating	1	2	3	4	5

P8. BEHAVIORAL INTENTIONS

1	I would like to come back to this Historic House in the future	1	2	3	4	5
2	I will recommend the Historic House to friends and relatives	1	2	3	4	5

Q9. PRICE FAIRNESS

1	Considering the benefits provided, the charged price is fair	1	2	3	4	5
2	Given the costs of the visit, the price charged by the vendor seems reasonable	1	2	3	4	5
3	The price charged for the visit is comparable to the price of other alternatives in the heritage market	1	2	3	4	5
4	The profits of the company who managed this building are fair in comparison with the profits of other alternatives in the heritage market	1	2	3	4	5

DEMOGRAPHIC VARIABLES

Q10.   Gender: ①Male   ② Female

Q11.   Age:

①From 18 to 24 years ②From 25 to 34 years ③From 35 to 44 years ④From 45 to 54 years ⑤From 55 to 64 years ⑥65 years and over

Q12.   Educational level

①Without studies   ②Elementary School   ③High School   ④University Degree

Q13.   Main Occupation

①Employe   ②Self-employed ③Student   ④Retired   ⑤Unemployed   ⑥Other (specify)

Q14.   Income compared to the national media

① Below average   ② Average ③ Above average

THANK YOU VERY MUCH FOR YOUR COLLABORATION

APPENDIX B

VALIDATION OF SCALE

Table B1 shows the probability associated with chi-squared values higher than 0.05 (0.077), indicating an overall good fit of the scale (Jöreskog & Sörbom, 1996). Convergent validity checks that the constructs that are expected to be related to each other in fact are related. Convergent validity is demonstrated in two ways. First, the factor loadings are significant and greater than 0.5 (Hair et al., 2006), confirming the posited relationships between indicators (such as items of each construct) and constructs (such as historic house museum, visitors' interactions with employees, crowding, emotions, behavioral intentions). Second, the average variance extracted (AVE) for each of the factors is higher than 0.5 (Fornell & Larcker, 1981), with levels that ranged from 0.56 (perceptions of a historic house museum) to 0.83 (crowding), suggesting that the indicators are representative of the latent constructs.

The composite reliability measures the internal consistency of the observable variables in a latent variable. The reliability of the scale is demonstrated because the composite reliability (CR) indices of each of the dimensions obtained are higher than 0.6 (Bagozzi & Yi, 1988), with levels that ranged from 0.74 (historic house museum) to 0.90 (crowding), indicating the internal consistency of the five constructs used in this study.

Table B1

Analysis of the dimensionality, reliability and validity of the scale (Fully standardized solution)

Items	Factor loading	t-Value
Historic house museum (CR=0.74; AVE=0.56)		
Aesthetic architecture	0.67	6.56[**]
Artistic work	0.74	6.73[**]
Accessible	0.67	6.57[**]
Visitors' interactions with employees (CR=0.84; AVE=0.68)		
I receive prompt service from employees	0.68	11.14[**]
Employees are always willing to help visitors	0.90	17.58[**]
Employees are not too busy to respond to visitor request promptly	0.81	19.23[**]
Crowding (CR=0.90; AVE=0.83)		
I didn't feel cramped in the historic house	0.87	14.95[**]
I didn't feel squashed up during the visit	0.94	11.85[**]
Emotions (CR=0.85; AVE=0.70)		
The pleasure of visiting made me happy	0.78	15.94[**]
The visit left me pleased	0.86	14.62[**]
The visit was stimulating	0.78	11.32[**]
Behavioral intentions (CR=0.81; AVE=0.71)		
Intention to revisit	0.84	9.31[**]
Willingness to recommend	0.82	9.17[**]

Note. Fit of the model: Chi-squared = 52.1468, df = 39, p = 0.077; RMSEA = 0.041; GFI = 0.956; AGFI = 0.931. CR = Composite reliability; AVE = Average Variance Extracted; [**] $p < .01$

Table B2 shows the discriminant validity of the construct considered, evaluated through AVE (Fornell & Larcker, 1981). The discriminant validity refers to the degree of differentiation between different constructs from a single measurement system. It checks the relationship of the items with their respective constructs is stronger than the relationship of an item with a different construct. The square roots of the AVE are greater than the correlations among the constructs, supporting the discriminant validity of the constructs (Hair et al., 2006).

Table B2

Discriminant validity of the scale

	1	2	3	4	5
1. Historic house museum	0.75				
2. Visitors' interactions with employees	0.47**	0.83			
3. Crowding	0.50**	0.27**	0.91		
4. Emotions	0.50**	0.43**	0.66**	0.83	
5. Behavioral intentions	0.47**	0.44**	0.42**	0.61**	0.85

Below the diagonal: correlation estimated between the factors. Diagonal: square root of AVE; $^{**}p < .01$

APPENDIX C

TEST OF MODERATING EFFECTS AND INVARIANCE OF MEASUREMENT

To test the moderating effect of price fairness, the respondents were divided into two groups. A four-item scale, from Rondan-Cataluña and Martin-Ruiz (2011), was used. The scale was submitted to a confirmatory factor analysis, and factor loadings were greater than 0.7 (between 0.71 and 0.88), which generated a composite reliability (CR) of 0.89 and an AVE of 0.71. In addition, the model presented an adequate fit, as the probability associated with chi-squared ($\chi2$) was greater than 0.05 (0.37). Afterwards, a cluster analysis was carried out to obtain different groups with different levels of price fairness, forming first a hierarchical cluster. Once the cluster centers were obtained, a k-means cluster analysis was applied resulting in two groups. The first, unfair (values between 1.72 and 2.04) was made up of 316 cases. The second, price fairness (values between 3.24 and 3.48) contained 390 individuals.

After that, the focus was the analysis of the invariance of the instrument (Table C1). This analysis is prior to the verification of the differences in the parameters that are common to the study variables between the two groups (Hair et al., 2006). The first step considers the model individually for each of the samples. The model fits well, separately, in the two samples (Table 5), for when the price is unfair ($\chi^2 = 135.14$; df=39) and the price is fair ($\chi^2 = 184.45$; df = 39). In the simultaneous estimation of the model in both samples, again the model fits adequately ($\chi^2 = 319.59$; df = 78). The last step refers to the equality of the factor loadings in the two groups (metrical invariance). When this restriction is introduced into the model, the fit is not significantly worse than that of the previous step, as deduced from the comparison between the χ^2 of steps 2 and 3 ($\Delta\chi2 = 20.33$; Δdf = 13; p = 0.087), so the invariance of the factor loadings is ratified.

Table 5. Invariance measurement test of Price Fairness

	χ2	df	Δχ2	Δdf	p	RMSEA (90%CI)	SRMR	CFI	NNFI
Individual groups:									
Unfair price	135.14	39				0.075 (0.061-0.089)	0.046	0.962	0.924
Fair price	184.45	39				0.069 (0.056-0.082)	0.041	0.950	0.915
Measurement of invariance:									
Simultaneous model	319.59	78				0.079 (0.069-0.089)	0.043	0.956	0.911
Model with restricted factor loadings	339.92	91	20.33	13	0.087	0.079 (0.070-0.088)	0.044	0.955	0.922

APPENDIX D

MODEL FIT EVALUATION

We evaluated model fit based on root mean square error of approximation (RMSEA), the goodness-of-Fit index (GFI), and the adjusted goodness-of-fit index (AGFI). RMSEA with values below 0.08 shows a good fit (MacCallum, Browne, & Sugawara, 1996) and GFI and AGFI values greater than 0.95 indicate also a good fit (Tabachnick & Fidell, 2007). As presented in Table 1, all of the goodness-of-fit statistics of the proposed theoretical model were above the recommended threshold values Thus, the probability of the chi-squared is higher than 0.05 (0.092), GFI is close to unity (0.949), and RMSEA is close to zero (0.047).

Additionally, according to the R^2 results, the variance in emotions ($R^2 = 0.50$) can be jointly explained by historic house museum, visitors' interactions with employees and crowding, and the variance in behavioral intentions ($R^2 = 0.56$) can be jointly explained by historic house museum and emotions. According to the above results, the model of the current study could well predict and explain customer behavioral intentions (Figure 2).