

## **A Longitudinal Study on the Factors of Destination Image, Destination Attraction and Destination Loyalty**

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### **Abstract**

Destination loyalty is identified as a universal concept with links to destination image. These links are derived from shared fundamental attributes that generate positive or negative effects on the attractiveness of a travel destination.

This research study approaches the concept of destination loyalty in relation to the factors of destination image and destination attraction through a longitudinal comparison of data of 2012 and 2013. A destination factors model is proposed. From the analysis, the integrator 'Personal overall image of the destination', the ultimate factor that reflects the destination image as a holographic complexity of perceptions, is confirmed as a regression target for a number of factors of the proposed theoretical model. Against the theoretical expectations, a significant effect of the integrator on travel decisions was not confirmed. Destination attributes associated with higher rankings and lower rankings revealed significant effects on the integrator. These attributes show the degree of perceived attraction on travelers and tourists and highlight the development priorities and the development performance of the destination. The proposed model and the isolated factors of destination image, destination attraction and destination loyalty allow a wide range of possible applications to the evaluation of performance and development of destinations, and enable the identification and consolidation of competitive advantages towards an evolution to a future scenario of economic sustainability.

**Keywords:** Destination loyalty, destination image, destination attraction, destination fatigue, sustainable competitive advantage, destination perception.

## 1. INTRODUCTION

Destinations are facing worldwide competition for tourists. The intense competition of tourism industry demands destinations to build and maintain a favorable image, to develop attractive tourism offerings, and to achieve visitor satisfaction and loyalty for its sustainable tourism development.

The theme of customer or brand loyalty, with assumed effects on repetitive patterns of behavior was initially developed in marketing disciplines and attracted attention in research and academic and business fields. It is often suggested and accepted that satisfaction has a positive impact on consumer post-purchase behavior (Anderson and Sullivan, 1990; Cronin and Taylor, 1992; Fornell, 1992; Keaveney, 1995; Oliver, 1980; Oliver and Swan, 1989; all referred by Alegre and Cladera, 2009) and brand loyalty (Lam et al., 2004; Zeithaml et al., 1996; all referred by Bigne, Sanchez and Andreu, 2009) which benefits companies in economic terms. Satisfied customers will return to the company in the future. Loyal customers are more willing to continue patronage with the company even when prices rise (Bolton and Lemon, 1999; Zeithaml, 2000; all referred by Bigne, Sanchez and Andreu, 2009) and generate more positive word-of-mouth communication with consequent additional business (Bowen and Shoemaker, 2003; Petrick, 2004; Lau and McKercher, 2004; Oliver, 1999; Oppermann, 2000).

The concept is applied further in the travel and tourism context as destination loyalty. Repeat holidays at a familiar destination, a declared intention to revisit it, and word-of-mouth recommendations are common behavioral measures of destination loyalty often referred in the literature (Oppermann, 2000; referred by Alegre and Cladera, 2009). Research shows various benefits associated with having repeat visitors to a destination which include offering a stable market for the destination and free advertising to family members and friends in the form of word-of-mouth recommendations (Reid and Reid, 1993; Lau and McKercher, 2004; Oppermann, 2000). These act as information channels that informally link networks of friends, relatives and other potential travelers to a destination (Reid and Reid, 1993), produce more sales revenue (Hennig-Thurau and Hansen, 2000) and minimize marketing costs (Kozak, 2001; Lau and McKercher, 2004; Oppermann, 2000; all referred by Quintal and Polczynski, 2010). The attitudinal approach is often argued to capture other dimension of loyalty, that is, the psychological attachment of visitors to the destination, and attempts to understand the causes of repeat or non-repeat visits (Croes, Shani and Walls, 2010).

Individuals tend to hold overall perceptions of travel destinations known as destination images that take the form of beliefs, feelings, impressions or knowledge linked to a destination, including information derived from direct travel experience, the indirect experiences of reference groups, from tourist-oriented communication channels or non-specific sources as mass media or the internet. Images of destinations plays a role in evaluation or travel behavior associated to destination choice, future visit intentions and willingness of recommendation (Alcaniz et al., 2009;

Baloglu and McCleary, 1999; Beerli and Martin, 2004; Fakeye and Crompton, 1991; Lee et al., 2005; all referred by Byon and Zhang, 2010). Destination image is expected to influence destination loyalty (Li, Petrick and Zhou, 2008) and a positive association is postulated (Aksu et al., 2009).

Examining the travelers' perceptions of a destination image can isolate the factors that contribute to the attractiveness of a destination or the factors that need improvement. A traveler's perception about a destination influences visit or revisit intention (Rittichainuwat, Qu and Brown, 2001) and is consequently reflected in the success or failure of the destination (Deslandes, 2006). While establishing a positive and attractive image of a destination is important, the provision, availability and quality of tourist products and services that meet tourists' expectations is equally crucial to achieve and consolidate tourist satisfaction and loyalty. To a destination, a continual trend of having high number of tourist arrivals may discourage efforts in developing and updating the tourism offer. A high level of travel repetition, from the traveler's view, could also be a discouraging factor that results in destination revisit reluctance due to destination fatigue associated with loss of interest, curiosity and attractiveness. Attractions and resources are recognized as determinants that measure tourism destination competitiveness (Ritchie and Crouch, 1993) and the planned marketing and management of destination attributes is necessary (Cracolici, Nijkamp and Rietveld, 2008). Destinations, with the aim of achieving sustainable competitive advantage for the travel and tourism sector, have to find and define the main distinguishing features of the travel destination and build an image that is attractive to visitors (Glinska and Florek, 2013), developed in a way that matches the evolving travelers and tourists preferences aiming for a positive impact on their loyalty behavior.

In the following sections, the concepts of destination loyalty, destination fatigues and sustainable competitive advantage are discussed and a research model of visitor loyalty toward a destination is formulated.

## **2. DESTINATION LOYALTY, DESTINATION FATIGUE AND SUSTAINABLE COMPETITIVE ADVANTAGE**

Brand loyalty, the antecedent of destination loyalty, has been extensively studied among marketing researchers. Day (1969) defined loyalty as consistent purchase behavior rooted in positive attitudes toward a brand, differentiating two dimensions of loyalty: (1) attitudinal loyalty, which means psychological attachment to a brand, reflected in the affective response and attitude toward a brand, and (2) behavioral loyalty, which means behavioral consistency in using a brand as expressed in the intention of repurchase and intensity of purchase (Fakeye and Crompton, 1991). Behavioral consistency facilitates repeat patronage of customers. Loyalty is also expressed in free word-of-mouth advertising made by loyal customers. Similarly, Moreira and Iao (2013, 2012) defined brand loyalty as the recurrent behavior linked to a preferred brand on the basis of knowledge formed about a specific brand. In the context of tourism the term loyalty, presented as destination loyalty, is given particular attention in the increasing competition among rival destinations and emphasis on visitor loyalty to the destination. Destination loyalty 'results in the

iteration of a behavior or in a repetition pattern of versions of a positive or negative behavior towards a destination' (Moreira and Iao, 2013, p.76). Loyal visitors are described as frequent visitors who are not price sensitive and are considered the most profitable market segment.

Intention to return, actual repeat visitation, and willingness to recommend the destination are behavioral factors that measure tourists' loyalty to a destination (Castro, Armario and Ruiz, 2007; Chen and Gursoy, 2001; Chi and Qu, 2008; Kim and Crompton, 2002; Niininen, Szivas and Riley, 2004; Oppermann, 1998, 2000; Pritchard and Howard, 1997; Yoon and Uysal, 2005; all referred by McKercher and Guillet, 2011).

An individual can be attracted to a destination for its derived satisfying experience associated with travel products and services provided by the destination. Conversely, one may show a decline interest towards the destination when the phenomenon fatigue and boredom arisen from having repeat exposure or consumption of homogeneous stimuli (Davey, 2005). Moreira and Iao (2014 in press) define destination fatigue from the traveler's perspective, as a consequence of excessive exposure, through direct or indirect means, to a destination or to information related to a destination, thus affecting the destination image in a negative way and generating a decrease in the travel intention and travel behavior. By contrast, Butler's (1980) Tourism Area Life Cycle (TALC) model interpreted tourism development and decline of a destination, which characterizes the stages as exploration, involvement, development, consolidation, stagnation, decline and (or) rejuvenation while the number of tourist arrivals vary along the lifecycle overtime. Morgan and Pritchard (2002) applied the TALC concept to tourism destination brands that move through phases of being (1) fashionable (attracting pioneers and trendy visitors), (2) famous (bought by publicity and have to remain contemporary with introduction of new offerings), (3) familiar (aware by many people but has lost its appeal) and finally (4) fatigue (losing visitors). To a certain extent, tourism growth induces change to its tourism products that they cease to be attractive to travelers and the destination would enter decline stage since then (McKercher, 2005). Indicators of stagnation or fatigue are noticeable in the emergence of newer destinations, in changing visitor numbers, in destination's infrastructure and in business performance (Brooker and Burgess, 2008). Specific signs include a decline in visitors length of stay, outdated and poorly maintained accommodation and amenities, market perceptions of the destination becoming over commercialized, crowded and tacky, declining profits of major tourism businesses. Cooper's (2006) analysis of the TALC suggested that destinations at the stagnation or fatigue stage experience declining number, low yield, domestic and repeat visitors.

Similarly, Plog (2001) introduced the concepts of psychocentrism, midcentrism and allocentrism to describe travelers and tourists seeking a varying vacation experience. The psychocentric type is repressed, intellectually restricted, cautious, conservative who look for familiarity and well developed tourism activities, facilities and destinations. By opposition, the allocentric type is extroverted, intellectually curious and seeking variety and novelty in the experiences when traveling. Midcentrics sit between the two extremes and share characteristics of

each to varying degrees. Plog's destination life cycle model (1974) argued that 'a destination that appeals to specific types of people typically follow a relatively predictable pattern of growth and decline in popularity over time' (Plog, 2001, p.13). As a destination evolves through its life cycle, it appeals first to the allocentric type and last to the psychocentric type. To allocentric travelers who seek novelty and change, and return home and tell stories about their adventurous trip, repeat visit to the same destination which is seen as fatigued (lack of sustainability movements and strategy revision that keep up with changes in tourist demand) may result in a loss of curiosity and interest, thus exhibiting a gradual decline in loyalty behavior. A destination that expects and takes for granted the continuous growth of tourist arrivals reacting with a non-response of inertia and risk aversion will defend the status quo at all costs and end in a degrading stage of stagnated progress, with no significant modifications or updates to the tourism offer. The issue raises the importance of destination policy management and marketing and emphasizes tourist satisfaction through the creation and maintenance of the attractiveness of the destination attributes and hence the destination competitive advantage.

In the tourism literature, destination competitiveness is linked to the ability of a destination to perform better than its rival destinations on aspects that are considered important by tourists (Dwyer and Kim, 2003). D'Hartserre defined competitiveness as 'the ability of a destination to maintain its market position and share and (or) to improve upon them through time' (d'Hartserre, 2000, p.23) while Hassan (2000) defined it as 'the destination's ability to create and integrate value-added products that sustain its resources while maintaining market position relative to competitors' (p.239). Being competitive is a means to an end, that is, destinations compete in international tourism market primarily to enhance the economic prosperity of residents (Dwyer and Kim, 2003). Competitive advantage is achieved for the growth sustainability of destinations (Chen, Chen and Lee, 2011), and for the development and prosperity of the community (Glinska and Florek, 2013). Ritchie and Crouch (2000, p.5) claimed that 'to be competitive, a destination's development of tourism must be sustainable, not just economically and not just ecologically, but socially, culturally and politically'. According to Crouch and Ritchie (1999), destination marketing is directed to create awareness of the tourists to the destination. The image projected can influence perceptions and hence affect visitation. Ritchie and Crouch (1993) concluded that attractions and resources are recognized as determinants that measure tourism destination competitiveness.

Destination competitiveness relies highly on strategic marketing and management of destination attributes (Cracolici, Nijkamp and Rietveld, 2008). Destinations spend tremendous resources that include activities and efforts to sell and manage a place that often begin with a prelude of image design, with the aim of achieving competitive advantage for the travel and tourism business. Destinations have to look for and define its main distinguishing features based on which to build an attractive image (Glinska and Florek, 2013). Finally, the image of a destination changes over time, and constant efforts are necessary to track, measure and promote positive and attractive images of the destination and to rectify any deficiencies and remove negative perceptions that may be formed by travelers and tourists.

### **3. FACTORS OF DESTINATION IMAGE, DESTINATION ATTRACTION AND DESTINATION LOYALTY**

Research studies have identified a range of variables that influence destination image (Alcaniz et al., 2009; Baloglu and McCleary, 1999; Beerli and Martin, 2004; Chen and Hsu, 2000; Echtner and Ritchie, 1991; Fakeye and Crompton, 1991; all referred by Byon and Zhang, 2010), service quality (Chen and Tsai, 2007; Lee et al., 2005), tourist satisfaction (Yoon and Uysal, 2005), and perceived risk (Lepp and Gibson, 2003; Sonmez and Graefe, 1998; Moreira, 2008, 2007). In particular, destination image has been found to have a significant impact on travel-related behaviors such as destination choice and future travel intentions (Alcaniz et al., 2009; Baloglu and McCleary, 1999; Beerli and Martin, 2004; Fakeye and Crompton, 1991; Lee et al., 2005). The perception of a destination is influenced by information exposure and produces different levels of attraction capable of generating a gradual intensity of development, economic competition and sustainability risks (Moreira, 2013, 2012, 2011a, 2011b, 2011c, 2011d, 2010a, 2010b, 2010c, 2009a, 2009b, 2009c).

Destination image is sourced from the concept of brand image, a set of beliefs associated with a particular brand, which is widely studied in marketing and consumer behavior perspectives. Keller (1993) defined brand image as 'perceptions about a brand as reflected by the brand associations (attributes, benefits, and attitudes) held in consumer memory' (p.3). In the travel and tourism context the concept is termed destination image and reflects the overall impression of a place.

The intangibility of the travel and tourism destinations and of its service products means visitors may have limited knowledge prior to actual purchase and experience. Hence, destination image becomes one factor that may influence tourist choice (Tasci, Gartner and Cavusgil, 2007; Um and Crompton, 1990). It is believed that the more positive the image is, the higher the probability of the destination is considered and finally selected (Baloglu and McCleary, 1999). This assumption stimulates research and calls for a focal effort to enhance the attractiveness of a destination, creating and maintaining a favorable image as a form of differentiation from rival destinations and thus, developing a potential competitive advantage (James, Durand and Dreves, 1976).

Destination image is defined by Crompton (1979) as 'the sum of beliefs, ideas and impressions that a person has of a destination' (p.418). Destination image is a complex and holographic set of perceptions of an individual towards a destination. According to Echtner and Ritchie (1993), destination image includes both functional (e.g. climate) and psychological (e.g. friendliness of staff) components. Similarly, a holistic image encompasses both cognitive beliefs (knowledge factor of the destination attributes) and affective feelings (emotion and attachment to a destination) (Beerli and Martin, 2004; Baloglu and McCleary, 1999). Gartner (1993), however, argued that the overall image of a destination is formed by three components: cognitive, affective, and conative which is the action component of image. Milman and Pizam (1995) stated that destination image consists of three components: (1) the product (e.g. variety and quality of attractions), (2) the attitude

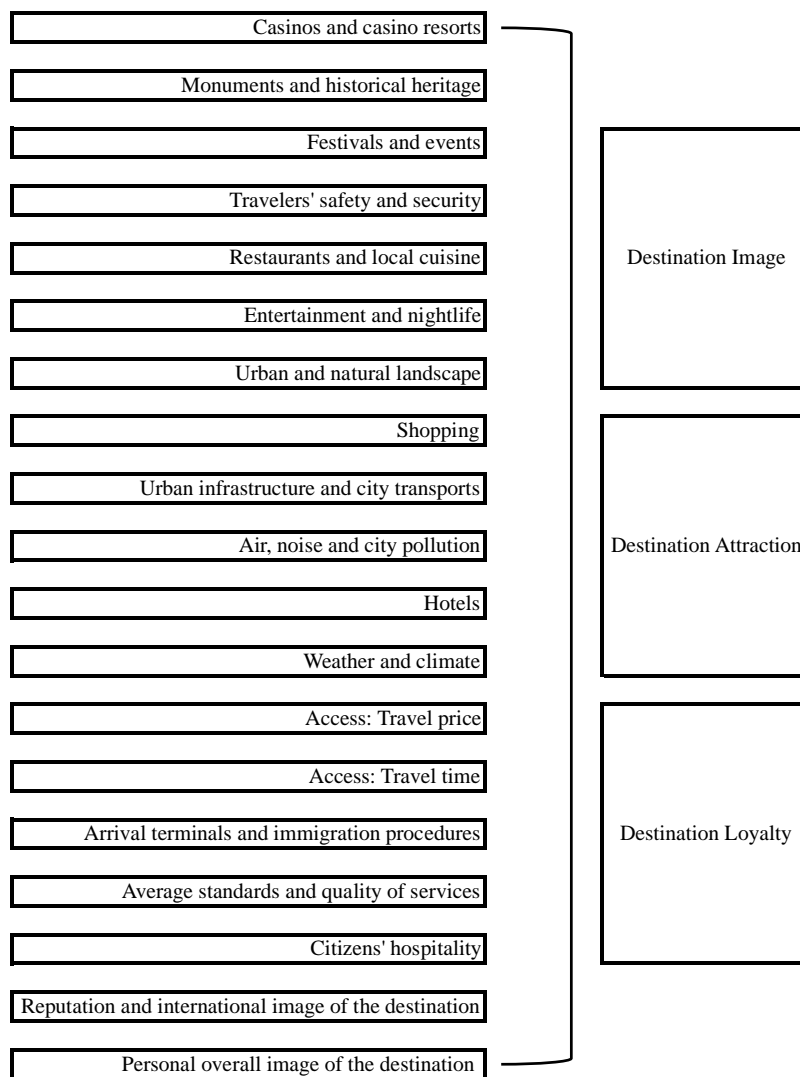
and behavior of employees who have direct encounter with tourists, (3) the environment (e.g. weather). Wang and Hsu (2010) classified destination image into five dimensions: (1) tourism resources (e.g. heritage), (2) amenities (e.g. shopping facilities), (3) supporting factors (e.g. transportation and communication system), (4) travel environment (e.g. cleanliness), (5) service quality (e.g. staff skills and knowledge).

The image of a destination varies with different individual perceptions and can be analyzed from different perspectives. From the demand or traveler's perspective, destination image plays a role in the decision process (Pike and Ryan, 2004) in which an individual has to confront information search, alternatives selection, satisfaction and behavioral intention towards the destination (Jenkins, 1999). Tourists' past travel behavior (previous destination visitation and activity experience) may influence destination image formation (Beerli and Martin, 2004), overall satisfaction and revisit intention. The extent of experience would influence visitor processing of product information. A traveler with more experience would analyze and elaborate more on product information (Alba and Hutchinson, 1987) whereas low experience travelers tend to evaluate more on simplistic attributes of a destination.

Destination image is also claimed to influence and have a positive association to traveler satisfaction. The more positive the image is, the higher the tourist satisfaction (Chon, 1991; Court and Lupton, 1997; Fakeye and Crompton, 1991; Prayag, 2009; Wang and Hsu, 2010). The study of Kristensen et al. (2000) also supported that satisfaction in turn influences behavioral intentions. A traveler's behavioral intention is measured in terms of revisit intention and word-of-mouth recommendation in the literature on tourism (Baker and Crompton, 2000; Castro, Armario and Ruiz, 2007). Satisfaction literature has well-established the relationship between satisfaction and future intention behavior. Hui et al. (2007) in their study showed that satisfied travelers are willing to choose the same destination again in the future and are also willing to refer the destination to their friends and relatives. Wang and Hsu (2010) found the mediating effect of overall satisfaction on the relationship between destination image and behavioral intention.

It is crucial for a destination to identify the attributes and features that are perceived as important for building and reinforcing a competitive advantage and at the same time to identify any negative destination attributes for rectification. The proposed model including 19 factors of destination image that will influence destination attraction and, after direct experience, destination loyalty, is presented in Figure 1. Destination loyalty could be either positive loyalty, reflected in the possibility of more visits and the willingness to return, or negative loyalty, reflected in the unwillingness to return. Two of these factors are considered integrators, synthesizing the information of a set of specific characteristics. The first is the *'Reputation and international image of the destination'* and the second the *'Personal overall image of the destination'*. The second is proposed as the ultimate integrator, synthesizing all the other factors and influencing the destination image, destination attraction, and destination loyalty.

**Figure 1. Theoretic model: Factors of destination image, destination attraction and destination loyalty**



The specific relations of the factors and destination image, destination attraction, and destination loyalty are deliberately left open, as in different time frames and different destinations these relations should be different, and therefore should be checked independently for every study. The model is designed for minimal complexity and allows a wide range of possible applications to the evaluation of different types of destinations, from the city level to hotel resorts or even more accurate sites as a specific monument, garden or park, shop, restaurant or café, with selected sets of factors. The model is potentially capable of evaluating the performance of cruise ships, airlines, airports and other transportation services, under the same performance criteria. The types of studies possible are also extensive, from individual time frame case studies to longitudinal studies and compared studies of two or more destinations. Benchmarking studies to evaluate the progressive development or recovery of destinations against a target standard are also a potential application of the destination factors model.



The current study is a longitudinal research that intends to assess the current image of Macau and identifies favorable and unfavorable aspects perceived by visitors and if any positive or negative change in the perception of the destination factors occurs over time. To secure a competitive advantage, a destination's overall image, its attractions, and the tourist experience offered have to achieve superior performance to that of alternative destinations. Based on previous research and a review of the literature, a theoretical model of destination image and visitor loyalty behavior is formulated in this paper. The variables include: (1) destination characteristics, services and other factors inherent to the destination, (2) Destination image, (3) Destination attraction, and (4) Destination loyalty. Factors related to the destination, expressed in terms of transportation, infrastructure and access; weather and climate; heritage and attraction sites; accommodations; food and beverages; shopping; entertainment and events; hospitality of citizens; pollution etc., together with integrators of overall image and international image, contribute to the formation of visitor's perceptions and image of a destination. Travelers with a favorable image perception would show a higher preference for the destination over other alternatives in the decision process and thus becomes an attraction factor. If perceptions and overall travel experience are compatible and favorable, this is likely to result in loyalty behavior of revisit intention and positive word-of-mouth recommendations to other potential travelers. On the other hand, travelers who hold a negative image about a destination would more likely avoid and show reluctance to travel there, turning the destination unattractive and as a consequence their desire to travel to the destination will decline and their consistent non-visit loyalty behavior will be shown and formed. According to the proposed model, a sequential positive relationship is hypothesized among the variables: destination-attributed factors contribute to the formation of its image, making the destination attractive or unattractive to travelers, which in turn influences their degree of loyalty towards the destination. It has to be noted that the research model is not restricted to the destination Macau, as in the case of this study. In fact, the model has a wide application to any destinations that wish to determine the factors that shape the destination image and investigate the impacts on destination loyalty.

#### **4. METHOD**

The data was collected in Macau SAR, PR China, during 2012 and 2013. The data sample included 540 questionnaire-structured interviews (240 in 2012, 300 in 2013). The interviews were directed to travelers and tourists and were conducted on different sites, at the city center, monuments, and travel entry points. The locations and number of interviews in 2012 were the following: (1) Macau Airport, 50; (2) A-Ma Temple, 30; (3) China Border Gate, 40; (4) Senado Square, 30; (5) Taipa, 50; and (6) Macau Ferry Terminal, 40. Gender distribution was of 57 percent of female to 43 percent of male respondents and the dominant age categories 25-34 years, 33 percent, and 35-44 years, 35 percent. The lateral categories scored an almost even percentage distribution (15-24 years, 15 percent and 45-54 years, 14 percent). The first place of residence of the respondents was Mainland China (50 percent), followed by Hong Kong (35 percent) and Taiwan (10 percent). Other places of residence included Singapore, Thailand, Malaysia and the

Philippines, all with 2 percent or less of the sample each. The locations and number of interviews in 2013 were the following: (1) the Senado Square at Macau city center, 100; (2) the Macau Airport departure hall, 100; and (3) the Macau Ferry Terminal departure hall, 100. The gender distribution was 58 percent female to 42 percent male, with ages between 15 and 67 years old (age mean 32, age standard deviation 11). The origin market distribution considering the place of residence was of 70 percent for Mainland China, 10 percent for Taiwan, 8 percent for Hong Kong, and 16 other countries or territories with 1 percent or less of the sample.

## 5. RESULTS

The first important conclusion after the analysis of the results of 2012 and 2013 is that the two samples were predominantly benevolent and all the items mean scores were positioned on the positive range of the 1-5 rating scale. The means and standard deviation of the ratings are presented in Table 1.

**Table 1. Variables descriptive statistics 2012 versus 2013**

	<i>Mean 2012</i>	<i>SD 2012</i>	<i>Mean 2013</i>	<i>SD 2013</i>
1. Casinos and casino resorts	3.62	1.0	3.89	1.0
2. Monuments and historical heritage	3.96	0.7	4.06	1.0
3. Festivals and events	3.70	0.7	3.68	0.9
4. Travelers' safety and security	4.04	0.7	4.27	0.8
5. Restaurants and local cuisine	4.00	0.7	3.98	1.0
6. Entertainment and nightlife	3.67	0.8	3.84	0.9
7. Urban and natural landscape	3.71	0.8	3.76	0.9
8. Shopping	4.00	0.7	4.09	0.9
9. Urban infrastructure and city transports	3.56	0.8	3.66	1.1
10. Air, noise and city pollution	3.40	0.8	3.63	1.0
11. Hotels	4.03	0.7	4.24	0.8
12. Weather and climate	3.65	0.8	3.93	0.8
13. Access to Macau: Travel price	3.73	0.7	3.74	1.0
14. Access to Macau: Travel time	3.75	0.8	3.76	0.9
15. Arrival terminals and immigration procedures	3.59	1.0	3.75	1.0
16. Average standards and quality of services	3.87	0.7	3.99	0.8
17. Macau citizens' hospitality	3.80	0.8	3.92	1.0
18. Macau reputation and international image	3.93	0.7	4.18	0.8
19. Personal overall image of Macau	3.96	0.7	4.31	0.7

The standard z-scores allow the comparison of the ratings of 2012 and 2013 (Table 2 and Table 3). The factors standard z-scores are superimposed on a neutral horizon or zero line on Figure 2 and Figure 3. One variable scored very close to zero. The variable '*Macau citizens' hospitality*' is difficult to influence and the answers perhaps captured that difficulty and the uncertainty associated with the item in the neutral score. However, a zero position in two consecutive years could be analyzed as a warning sign of a possible negative decline of this factor in the future. To both sides of the neutral item two categories can be defined, one on the positive range, the other on the negative range of the standard scores.

**Table 2. Variables standard Z 2012**

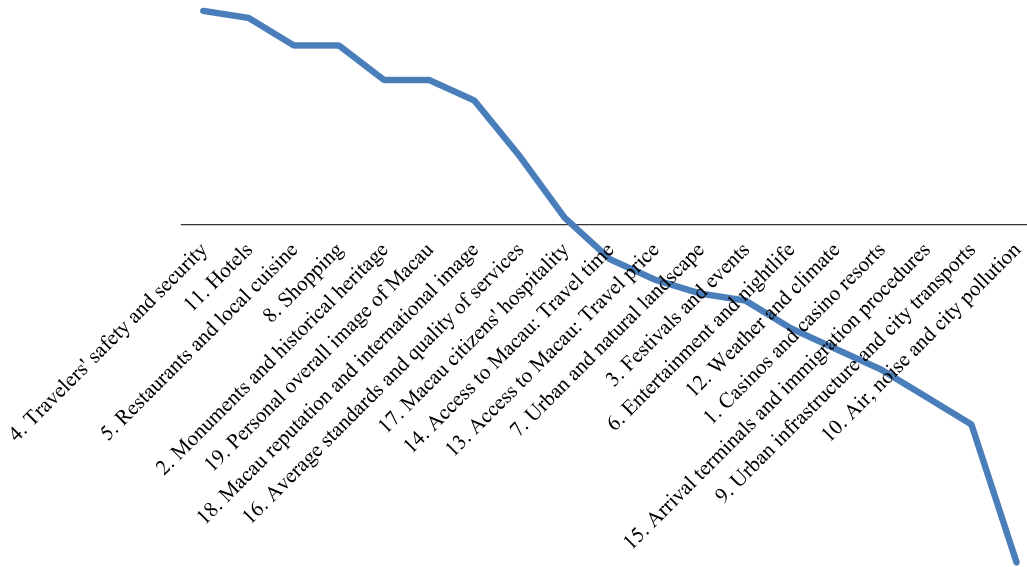
	<i>Standard Z 2012</i>
4. Travelers' safety and security	0.31
11. Hotels	0.30
5. Restaurants and local cuisine	0.26
8. Shopping	0.26
2. Monuments and historical heritage	0.21
19. Personal overall image of Macau	0.21
18. Macau reputation and international image	0.18
16. Average standards and quality of services	0.10
17. Macau citizens' hospitality	0.01
14. Access to Macau: Travel time	-0.05
13. Access to Macau: Travel price	-0.08
7. Urban and natural landscape	-0.10
3. Festivals and events	-0.11
6. Entertainment and nightlife	-0.15
12. Weather and climate	-0.18
1. Casinos and casino resorts	-0.21
15. Arrival terminals and immigration procedures	-0.25
9. Urban infrastructure and city transports	-0.29
10. Air, noise and city pollution	-0.49

**Table 3. Variables standard Z 2013**

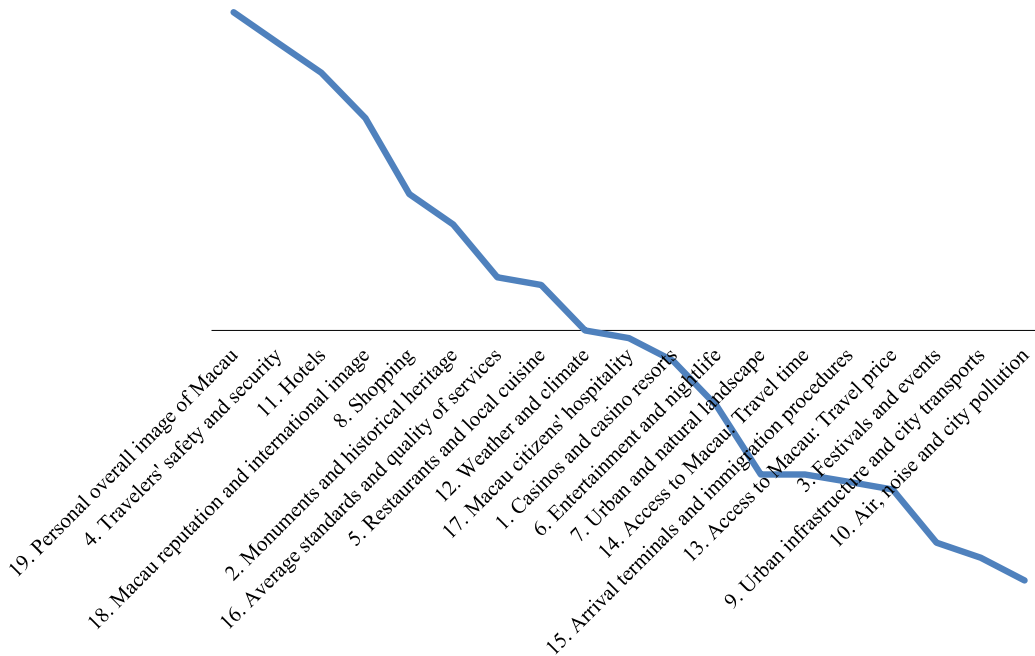
	<i>Standard Z 2013</i>
19. Personal overall image of Macau	0.42
4. Travelers' safety and security	0.38
11. Hotels	0.34
18. Macau reputation and international image	0.28
8. Shopping	0.18
2. Monuments and historical heritage	0.14
16. Average standards and quality of services	0.07
5. Restaurants and local cuisine	0.06
12. Weather and climate	0.00
17. Macau citizens' hospitality	-0.01
1. Casinos and casino resorts	-0.04
6. Entertainment and nightlife	-0.10
7. Urban and natural landscape	-0.19
14. Access to Macau: Travel time	-0.19
15. Arrival terminals and immigration procedures	-0.20
13. Access to Macau: Travel price	-0.21
3. Festivals and events	-0.28
9. Urban infrastructure and city transports	-0.30
10. Air, noise and city pollution	-0.33

The set of indicators on the positive range for 2012 and 2013 were *'Travelers' safety and security'*, *'Hotels'*, *'Restaurants and local cuisine'*, *'Shopping'*, *'Monuments and historical heritage'*, *'Personal overall image of Macau'*, *'Macau reputation and international image'*, *'Average standards and quality of services'*.

**Figure 2. Variables standard Z 2012**



**Figure 3. Variables standard Z 2013**



The set of indicators on the negative range for 2012 and 2013 were '*Access to Macau: Travel time*', '*Access to Macau: Travel price*', '*Urban and natural landscape*', '*Festivals and events*', '*Entertainment and nightlife*', '*Casinos and casino resorts*', '*Arrival terminals and immigration procedures*', '*Urban infrastructure and city transports*', '*Air, noise and city pollution*'.

Considering the means of 2012 and 2013, the variables can be integrated in two categories, with the 4th integer as the frontier line between the higher rankings and the lower rankings categories (Table 4, Figure 4). The lower category includes the items with scores lower than four, items that show a higher pressure for development and should be considered priority. The higher category includes the items with scores equal or higher than four, already considered as the most positive factors of the destination.

**Table 4. Variables higher and lower rankings categories 2012-2013**

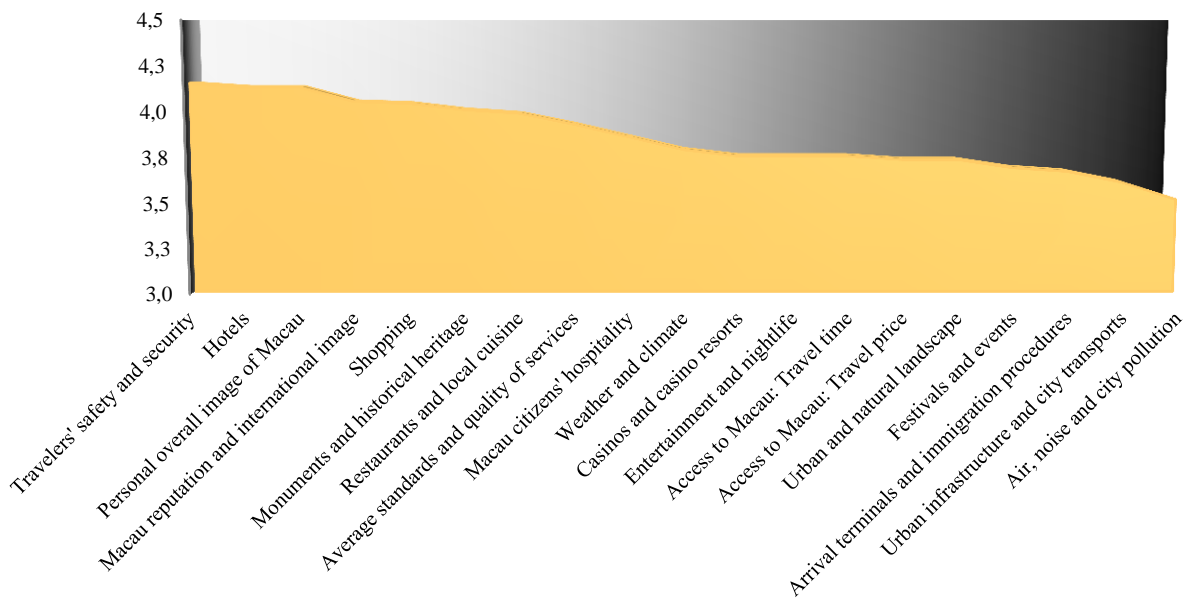
	<i>Mean 2012-2013</i>
<i>Higher rankings category</i>	
4. Travelers' safety and security	4.16
11. Hotels	4.14
19. Personal overall image of Macau	4.14
18. Macau reputation and international image	4.06
8. Shopping	4.05
2. Monuments and historical heritage	4.01
<i>Lower rankings category</i>	
5. Restaurants and local cuisine	3.99
16. Average standards and quality of services	3.93
17. Macau citizens' hospitality	3.86
12. Weather and climate	3.79
1. Casinos and casino resorts	3.76
6. Entertainment and nightlife	3.76
14. Access to Macau: Travel time	3.76
13. Access to Macau: Travel price	3.74
7. Urban and natural landscape	3.74
3. Festivals and events	3.69
15. Arrival terminals and immigration procedures	3.67
9. Urban infrastructure and city transports	3.61
10. Air, noise and city pollution	3.52

The questionnaire included two integrator items: '*Personal overall image of Macau*', and '*Macau reputation and international image*'. The first integrator is theoretically considered to be one of the strongest influences in the travel decisions, a psychological synthesis of specific factors and the ultimate output of the mental processing of all the available information. The second integrator can be considered as the result of the consistent efforts made throughout the years to promote the city as an international destination. A positive indicator is that both integrator items were high positioned in the third and fourth positions respectively. The highest score of the item '*Travelers' safety and security*' is also a very favorable indicator due to the influence of risk perception in travel decisions and patterns of behavior (Moreira, 2008, 2007, 2004a, 2004b). The item '*Hotels*' is the second highest item, reflecting the growth evolution in recent years (according to the latest available government statistics the number of hotels rooms increased nearly 30 percent

in 2010-2012, from 20091 in 2010 to 26069 in 2012). The fifth rated factor is *'Shopping'*, benefiting both from the development of the commercial sector and from the stable low currency exchange rates for Mainland China, the dominant market share of the destination. Ending the first six positions with ratings above the 4th integer, the last higher rankings category item is *'Monuments and historical heritage'*, a classic attraction of the destination over the years due to the long and consolidated past of interaction between the Chinese and the Portuguese cultures, recognized internationally in 2005 by the inclusion of the Historic Centre of Macau in the World Heritage List of the United Nations Educational, Scientific and Cultural Organization (UNESCO). On the lower ranking category, the lower score items were *'Festivals and events'*, *'Arrival terminals and immigration procedures'*, *'Urban infrastructure and city transports'*, and *'Air, noise and city pollution'*, representing the destination development priorities.

The reliability of the full set of 19 indicators including the integrator variables *'Macau reputation and international image'* and *'Personal overall image of Macau'* was high, with a Cronbach alpha of .89. The estimated alpha values for variable deletion are presented in Table 5.

**Figure 4. Variables higher and lower rankings categories 2012-2013**



The linear regression model considering the integrator variable '*Personal overall image of Macau*' as a target isolated significant factors. The most important effect was from '*Macau reputation and international image*' followed by five other predictors: '*Average standards and quality of services*', '*Macau citizens' hospitality*', '*Hotels*', '*Air, noise and city pollution*', and '*Casinos and casino resorts*' (Table 6). The correlation between the two integrators '*Macau reputation and international image*' and '*Personal overall image of Macau*' was high and significant ( $r=.61$ ,  $t=17.9$ ,  $p<.01$ ), although the effect of the integrators on the number of visits in the last 12 months could not be confirmed as the results for either of the integrators were non significant. Even without an empirical confirmation in this study, the causal effect of destination image on iterated travel behavior remains a plausible theoretical model.

**Table 5. Estimated Cronbach Alpha values for variable deletion**

	<i>Mean</i>	<i>Variance</i>	<i>SD</i>	<i>Alpha</i>
1. Casinos and casino resorts	69.6	86.8	9.3	0.89
2. Monuments and historical heritage	69.3	89.1	9.4	0.89
3. Festivals and events	69.7	87.6	9.4	0.88
4. Travelers' safety and security	69.2	87.5	9.4	0.88
5. Restaurants and local cuisine	69.4	87.0	9.3	0.88
6. Entertainment and nightlife	69.6	88.0	9.4	0.89
7. Urban and natural landscape	69.6	86.2	9.3	0.88
8. Shopping	69.3	87.0	9.3	0.88
9. Urban infrastructure and city transports	69.7	85.1	9.2	0.88
10. Air, noise and city pollution	69.8	85.4	9.2	0.88
11. Hotels	69.2	87.2	9.3	0.88
12. Weather and climate	69.5	87.1	9.3	0.88
13. Access to Macau: Travel price	69.6	86.1	9.3	0.88
14. Access to Macau: Travel time	69.6	86.3	9.3	0.88
15. Arrival terminals and immigration procedures	69.7	87.5	9.4	0.89
16. Average standards and quality of services	69.4	85.7	9.3	0.88
17. Macau citizens' hospitality	69.5	85.1	9.2	0.88
18. Macau reputation and international image	69.3	86.4	9.3	0.88
19. Personal overall image of Macau	69.2	86.9	9.3	0.88

**Table 6. Linear regression model parameter estimates significance levels for the integrator '*Personal overall image of Macau*'**

	<i>t</i>	<i>p</i>
<i>Factors with significant effects on the integrator</i>		
1. Casino and casino resorts	2.5	.01
10. Air, noise and city pollution	3.1	.01
11. Hotels	3.2	.01
16. Average standards and quality of services	4.6	.01
17. Macau citizens' hospitality	3.4	.01
18. Macau reputation and international image	7.1	.01
<i>Factors with the highest scores in 2012-2013</i>		
4. Travelers' safety and security	3.2	.01
11. Hotels	5.2	.01
18. Macau reputation and international image	14.2	.01
<i>Factors with the lowest scores in 2012-2013</i>		
9. Urban infrastructure and city transports	3.4	.01
10. Air, noise and city pollution	7.2	.01
15. Arrival terminals and immigration procedures	4.5	.01

The linear model considering all the 18 factors converging to the integrator '*Personal overall image of Macau*' was significant,  $F(521,18)=31.8$ ,  $p<.01$ , with six factors showing significant results for the parameter estimates. These six factors were the following: '*Casinos and casino resorts*' ( $t=2.5$ ,  $p<.01$ ), '*Air, noise and city pollution*' ( $t=3.1$ ,  $p<.01$ ), '*Hotels*' ( $t=3.2$ ,  $p<.01$ ), '*Average standards and quality of services*' ( $t=4.6$ ,  $p<.01$ ), '*Macau citizens hospitality*' ( $t=3.4$ ,  $p<.01$ ), and '*Macau reputation and international image*' ( $t=7.1$ ,  $p<.01$ ), the one with the highest value as could be anticipated by the high correlation between the integrators.

Finally, the regression analysis towards the destination image integrator '*Personal overall image of Macau*' revealed significant results for the effects of the three factors scoring highest and lowest in both 2012 and 2013 (Table 6). The significance of the parameter estimates for the factors with the highest scores was the following: '*Travelers safety and security*' ( $t=3.2$ ,  $p<.01$ ), '*Hotels*' ( $t=5.2$ ,  $p<.01$ ), '*Macau reputation and international image*' ( $t=14.2$ ,  $p<.01$ ). The ANOVA results for the regression for the factors with the highest scores was also significant,  $F(536,3)=135.0$ ,  $p<.01$ . The significance of the parameter estimates for the factors with the lowest scores was the following: '*Urban infrastructure and city transports*' ( $t=3.4$ ,  $p<.01$ ), '*Air, noise and city pollution*' ( $t=7.2$ ,  $p<.01$ ), '*Arrival terminals and immigration procedures*' ( $t=4.5$ ,  $p<.01$ ). The ANOVA results for the regression for the factors with the lowest scores was also significant,  $F(536,3)=54.2$ ,  $p<.01$ .

## 6. DISCUSSION

No evidence was found of a causal effect of the destination image on the iterated travel behavior. There is strong evidence of the correlation between the two integrators linked to the destination reputation and international image and to the personal image of the destination.

The first integrator, '*Personal overall image of Macau*', is theoretically considered to be one of the strongest influences on the travel decisions, a psychological synthesis of specific factors and the ultimate mental hologram generated by the processing of all the available information. The second integrator, '*Macau reputation and international image*', can be considered as the result of the consistent efforts made throughout the years to promote the city as an international destination.

The ultimate integrator '*Personal overall image of Macau*', the factor closer to the concept of destination image, was confirmed as a target to the strong influence of the factors '*Casinos and casino resorts*', '*Air, noise and city pollution*', '*Hotels*', '*Average standards and quality of services*', '*Macau citizens hospitality*', and '*Macau reputation and international image*', the other integrator. The three factors that scored consistently higher ('*Travelers safety and security*', '*Hotels*', '*Macau reputation and international image*') and lower ('*Urban infrastructure and city transports*', '*Air, noise and city pollution*', '*Arrival terminals and immigration procedures*') in both the 2012 and the 2013 studies were also found to have a strong influence on the integrator '*Personal overall image of Macau*', the factor that ultimately reflected the destination image.

The fact that all the item means were positive is contradicted by increasing media focus and hard evidence that there is negativity in the perception of the city transportation and pollution as an



example, items that on earlier research also scored inside the negative zone (Moreira and Iao, 2014 forthcoming, 2013).

The model allows a wide range of possible applications, including the measurement of positive and negative destination image and destination loyalty, analysis of isolated factors, benchmarking studies, compared studies with more than one destination, and studies investigating the evolution trend of a single factor, a set of factors, and destination loyalty over time frames through longitudinal analysis.

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