

UNDERSTANDING MEGA-EVENTS SUCCESS AND CUSTOMER SATISFACTION

ELENI MICHOPOULOU AND CHIARA GIULIANO

University of Derby, Buxton, UK

The events industry is growing every year, the number of events is increasing, and their role in society is becoming more significant. Satisfied participants are the key to successful events and the main objective of event organizers. The aim of the article is to understand what costumers consider more important when attending mega-events. A quantitative survey design was adopted by deploying the American customer satisfaction index (ACSI) that included an event specific customer value package in the context of the EXPO Milan 2015 mega-event. Results demonstrate that expectations of visitors, staff, and volunteers vary considerably, and so do the levels of satisfaction. They also highlight that, alongside other customers' priorities such as cleanliness and safety, capacity plays a role in determining satisfaction. This article presents the summarized findings of a broader study.

**Key words: Satisfaction; Mega-events; Universal exposition; Capacity;
Customer value package; Attributes; Survey**

Introduction

Events are considered as a fundamental part of society and a complex phenomenon (Moufakkir & Pernecky, 2014). According to Quinn (2013), the awareness of events is growing as an extended concept in the “special, socio-cultural, political and environment context” (p. 490). It is estimated that a billion events take place every year, having a significant impact on the countries' genuine progress indicator (GPI) (Silvers, 2008; Tassiopoulos, 2010). Mega-events can be sport, cultural, or business events, which engage many participants and have a significant impact on the reputation of the host

destination (Tassiopoulos, 2010). Koo, Byon, and Baker (2014) suggested that mega-events can be described as short-term events but with long-term consequences. In 1987, the AIEST (Congress of the Association Internationale d'Experts Scientifique du Tourisme) suggested that to be defined as such, mega-events need to have at least 1 million visitors, capital costs of at least DM750 (£570 million), and the must-see factor (Quinn, 2013). However, further research is needed to understand the meaning of “large scale,” regarding impact, investment, and spatial reach.

Studies demonstrate that mega-events (such as Olympic Games) can contribute to the development

Address correspondence to Dr. Eleni (Elina) Michopoulou, Senior Lecturer in Business Management, HRSM, University of Derby, 1 Devonshire Road, Buxton SK17 6RY, UK. E-mail: E.Michopoulou@derby.ac.uk

of tourism destinations and their economic growth (Wicker, Hallmann, Breuer, & Feiler, 2012). By studying factors of events' success, it is possible to identify the key contributing elements to focus on when organizing future events. In fact, satisfied customers should be the first objective of an event organizer (Crompton & McKay, 1997; Kaplanidou, Kerwin, & Karadakis, 2013). Yet, there is no consensus over a worldwide recognized model to analyze the satisfaction of participants of a mega-event. Therefore, this research aims to apply the ACSI (American customer satisfaction index) on a case study mega-event to assess participants' satisfaction. The former index has been widely used to compare satisfaction among various industries even with enormous differences (Fornell, 2007). Creating a complete overall index entails identifying the factors that satisfy customers' needs (Naumann & Giel, 1995). To evaluate the overall experience customers will be influenced by a wide range of additional factors, the totality of those factors is called the "customer value package," and to be efficient it should include all the factors that construct a product or service within a specific context (Hill & Alexander, 2000). For this reason, the index analyzes the customer value packages, which differ between sectors (Hill & Alexander, 2000). As there is no consensus over an established satisfaction index currently existing particularly for mega-events, this study will deploy a well-defined and validated customer satisfaction index and apply it and contextualize it within the events field. Within this framework and the concept of a customer value package for events, capacity is also considered as a possible factor within the list of satisfaction determinants (customer value package). This study looks at what customers value the most when attending a mega-event as well as key factors that influence participants' satisfaction.

Theoretical Background

Customer satisfaction was examined more than 200 years ago when Adam Smith explored how the free market works because the customers are loyal to whom they perceived as the best (Hill, Roche, & Allen, 2007). Getz (2005) expressed the importance of studying visitors' satisfaction more than the economic impact, and Grigoroudis and Siskos (2010)

added that the measurement of customer satisfaction is considered within the five most important factors of management, because it contributes to understanding, to analyze, and to improve the business. However, carrying a satisfaction analysis based on the idea of "let's just ask the customers" is reductive and inexact (Fornell, 2007), and often assumes relationships values and assumptions based on the fact that seem right or obvious (Fornell, 2007). Hence, although customer satisfaction has been widely researched (Grigoroudis & Siskos, 2010; Kim, Duncan, & Chung, 2014; Koo et al., 2014), there has not been one recognized model (Sanchez-Gutierrez, Gonzalez-Urbe, & Coton, 2011) as multiple definitions exist.

Several authors have defined satisfaction in many different ways. Grigoroudis and Siskos (2010) originally differentiated the definitions of customer satisfaction in two different approaches: it can be seen as an outcome or as a process. The first interpretation considers satisfaction as a final result of the experience and the second one as a process of evaluation and perception. Other studies see customer satisfaction as a consequence of expectations (Grigoroudis & Siskos, 2010). It has also been defined as the enjoyment through an overall evaluation of the service or product relative to the consumer's expectations (Engel, Blackwell, & Miniard, 1990; Koo et al., 2014). Satisfaction can be considered as how positive participants perceived the experience (Anderson, Fornell, & Lehmann, 1994; Anil, 2012; Kim et al., 2014; Spreng, Mackenzie, & Olshavsky, 1996) or also as the result of what feelings the service has caused you in relation to expectations (Kim et al., 2014). For example, Oliver (2010) defined it as "pleasurable fulfilment" or also as: "An evaluation rendered that the experience was at least as good as it was supposed to be" (p. 6). Getz (2005) defined evaluation as "the subjective determination of worth—to place a value on something" (p. 378). This becomes particularly important considering the important role customers play in shaping the experience due to the synergy between production and consumption in the service sector (Grönroos, 2015). Counting attendees is now widely overcome because the focus is not just on economic impact but on visitors' satisfaction (Getz, 2008).

One of the most prolific, worldwide recognized, and widely used models for comparing, evaluating,

and understanding customer satisfaction among industries and countries is the American customer satisfaction index (ACSI) (Anderson & Fornell, 2000). Many countries and industries have adopted it “as is,” and some have created their own version in collaboration with the American Society, such as the case of UK with the NCSI (the UK national customer satisfaction index) (The ACSI, 2016). The model is based on three variables: overall satisfaction, satisfaction compared to expectations, and satisfaction compared to an ideal organization (Angelova & Zekiri, 2011). The full model includes customer retention and loyalty, which are not covered in the applied index due to the uniqueness of the event. Usually, the index compares the overall satisfaction, considering different variables of the experience (Hill, Brierley, & MacDougall, 1999). To ensure that the index focuses on the right factors, it needs to analyze what has value for the customer, and therefore an exploratory survey can be used to identify customer requirements and weight them according to impact and importance (Hill et al., 2007).

Customer Value Package

In order to evaluate the overall experience customers will be influenced by a wide range of additional factors, the totality of those factors is called the “customer value package” (Hill & Alexander, 2000). To gather the data either internal or external sources can be used (Naumann & Giel, 1995). Once identified, the customer value package is meaningful to understand their priorities (Hill & Alexander, 2000). Due to the lack of a predefined customers’ value package focusing on mega-events, a set of the different evaluations was taken into account. Hence, to create a customized “customer value package” relevant for events, and more specifically for mega-events, a review of the literature is essential to identify factors used in models applied in events and similar industries aimed at understanding customer experiences and satisfaction.

Kaplanidou et al. (2013) identified 13 themes contributing to sports event success. Those are a sense of community, pride, organization, infrastructures, cleanliness, proximity, sport, involvement, knowledge development, health, business, potential attendance, and tourism development.

According to Fornell (2007), regardless of the kind of product three factors influence satisfaction: expectations, quality, and price. Williams and Page (2011) claimed the willingness to pay can vary according to the age segment. Different authors from the hospitality field agree that the main contributors to satisfaction are food, physical environment, and service quality (Ha & Jang, 2010; Wall & Berry, 2007; Zhang, Jiang & Li, 2013). Sanchez-Gutierrez et al. (2011) added the price factor, as the perception of having “return on investment” has a significant impact on overall satisfaction. According to Kim et al. (2014), perceived value or value for money is an important factor to consider because if visitors perceive a higher value compared to the price they paid it will lead to greater satisfaction. Even when the product is described as intangible, valuable attributes of the overall experience are physical factors such as infrastructures, the appearance of personnel, representation of the service, and other customer facilities (Panda & Das, 2014). Bitner (1992) defined “servicescape” as the place where the service is assembled and delivered, and it includes physical surroundings; it has three dimensions: ambient condition, special layout, signs and symbols. These dimensions affect the five senses of customers and so their perceptions. Lee, Lee, Lee, and Babin (2008) highlighted the importance of “festivalscape” over servicescape as the general atmosphere experienced at a festival. The four additional dimensions of food, souvenirs, convenience, and information availability are also central to recognizing the “festivalscape” (Anil, 2012; Bitner, 1992).

A multiattributes model was used many times by Schewe, Scott, and Frederick (1978), conducting analysis in which consumers need to state both the importance and an evaluation of the value, through which strengths and weaknesses of the service or product and consumers preferences can be found (Schofield, 2001). Schofield’s research aimed to create a list of attributes to evaluate a day trip in Castlefield, Manchester but considering the lack of studies in that field he borrowed value from similar studies. Using a model from Howard and Jagdish (1969) he conducted a pilot research asking participants to list the first 10 words linked to “day trip,” which resulted in a set of 74 attributes. Although many of the 74 attributes to evaluate a day trip could

be useful for evaluating a mega-event, not all the values are applicable or suitable. For instance, “all year attraction” becomes irrelevant as events tend to be time bound, or “boat trip,” which is a location specific element. In the research conducted by Schofield (2001), the element of convenient location is one of the primary aspects of the population of his research. Different researchers prioritize various elements, souvenirs, program, food, and facilities (Bitner, 1992; Zhang et al., 2013). Facilities have a dominant role but also relaxation opportunities and parking space cannot be underestimated (Yoon, Lee, & Lee, 2010). According to Wahlers and Bach (2014), the educational impact that mega-events can have is undeniable, not just on the attendees but the hosting population and community as well. Smith (1993) introduced the idea that weather is an important variable even if the importance may vary according to the type of event; Scott and Lemieux (2010) reinforced his idea confirming that some events take place at a certain time of the year due to the role of weather on the event, such as the Winter Olympics. In addition, the International Festival and Events Association found out that weather scored first out of eight external factors for customers when attending an event (Scott & Lemieux, 2010). Pizam, Neumann, and Reichel (1978) considered the relevant factors to be price, hospitality, eating and drinking, and environment; however, they specify that these results should not be generalized because they appeared to be influenced by the destination in which the survey was conducted.

It becomes clear that to create a value package for mega-events, a wide variety of elements need to be considered, some of which need to be contextualized to the particular physical and time boundaries of each case. Hence, additional context-related factors can be considered for inclusion. Therefore, it can be assumed that to better understand the satisfaction from events experiences that take place within a given space and place, factors such as capacity are pertinent for further consideration.

Capacity

Capacity is defined as how many people are tolerable in a destination or venue (Massiani & Santoro, 2012). The capacity of a venue is calculated according to the space available for people,

considering stewards, emergency exit, and the site line to view the entertainment (The Purple Guide, 2014). Carrying capacity refers to the maximum number of people that can use the same space at the same time and manage to “enjoy” the experience (Lime & Stankey, 1973). There has been a lot of criticism with regards to the existing and dominant way of measuring capacity (Buckley, 2015; McCool & Lime, 2001; Wall & Berry, 2007). In particular, the fact that the concept of capacity has traditionally excluded elements of participants’ experience, it has limitations in both conceptualization as well as its operationalization (Lindberg & McCool, 1998; McCool & Lime, 2001). Lime and Stankey (1973) introduced the concept of “recreational carrying capacity.” and its aim is to magnify the visitor satisfaction considering all the political, environmental, and economic restrictions.

Capacity management is seen as part of the operational plan; in fact, the development of a capacity strategy is of primary importance considering the impact on visitors’ experience, employee satisfaction, and sustainability. Hence, a wrong calculation of capacity could lead to unsatisfied consumers, an overcrowded situation, and deterioration of facilities (Rathnayake, 2015). Radojevic, Stanisic, and Stani (2015) demonstrated that capacity could not just influence satisfaction, but the willingness to pay, decreasing the price customers are ready to spend. Many times, the carrying capacity is calculated considering the physical space and enjoyment is sacrificed over different variables, with only a few studies considering visitors enjoyment and carrying capacity (Lime & Stankey, 1973; Pullman & Rodgers, 2010). Hence, this study examines capacity as a determinant of customer satisfaction in mega-events.

Internal and External Customers

The traditional approach defines the customer as the person who buys the product or service from an organization. On the other hand, the quality approach defines the customer as the person who estimates the quality of the offered product or service (Grigoroudis & Siskos, 2010). Gallarza, Arteaga, and Gil-Saura (2013) described customers as the people that receive the work output. According to this process-oriented approach, customers are divided into internal clients (including all the

staff) and external customers (the buyers or users of the final service or product). Becket-Camarate, Camarate, and Barker (1998) claimed that in addition to the traditional perspective (where just external buyers are considered customers), employees should also be considered as customers. Stasiowski and Burstein (1994) introduced the concept of Next Operation As a Customer (NOAC). It presents the idea of the internal customer in which every operation is both a receiver and a provider. Furthermore, the performance needs to be evaluated not just by the external customers but from the internal ones as well. For this reason having a multiperspective point of view and to be able to receive feedback from internal customers is essential in a view to improving the service for external customers.

This study built on the idea of customers as both internal and external, so in the research both the internal (staff) and the external (attendees) are involved. In addition, the volunteers were also considered in the sample because, as customers, both produce and consume at the same time, bringing a valuable point of view (Gallarza et al., 2013). Considering that the involvement of volunteers in mega-events has become a key factor in success, it is valuable to include them in the analysis (Stone & Millan, 2011). As different customers perceive success in a variety of ways, and considering that many definitions of success refer to “meeting of visitors’ expectation,” it is important to examine different motivations for attending or working in a mega-event.

One of the primary motivations that drive staff to accept a place in a short-term event is the kind of experience they gain (Xing & Chalip, 2009). However, usually event organizers hire local workers at entry level, who do not have any experience in events management (Hanlon & Jago, 2004). Also, the work conditions are particularly challenging in a new and stressful environment and different factors contribute to negative expectations about the event (Xing & Chalip, 2009). The framework by Crompton and McKay (1997) described the seven reasons for participants to attend an event: seeking novelty, socialization, prestige status, relaxation, intellectual enrichment, enhance family relationships, and regression. All the factors stated previously are what visitors expected to see at an event. Therefore, an assumption can be made that events that cover those factors should be successful,

highlighting the complexity of addressing considerably variant expectations. Additionally, volunteers are also driven to take part in events by motives such as being part of a team, be involved in the community, personal development, friendship, and enjoyment (Stone & Millan, 2011). However, there is an important distinction in motivations between the two groups. Although in attendees’ motivations to participate in an event the “self” dimension is important, for volunteers the “other” dimension (the attention and care for other volunteers and participants) is crucial (Gallarza et al., 2013). The experience of volunteering is often grounded in the satisfaction gained by addressing others’ needs and desire to help others (Gallarza et al., 2013). Hence, by recognizing the wide range of staff, attendees, and volunteer expectations, it becomes clear perceptions of success can vary significantly.

Universal Exposition

World Expos are organized every 5 years, can take place everywhere in the world, and always have a huge impact on the destination where they are hosted, with regards to both media interest and urban development (Bie-paris.org, 2016). The Universal Exposition held in Milan in 2015 represented one of the biggest events in the last years in Italy, considering the 16 billion Euros investment and 10 years of planning (Locatelli & Mancini, 2010, 2014). A 1.1 million square meter site was built to host the 140 countries involved, and lasted 6 months from May 1 to October 31, 2015. For every edition a new theme is chosen, and in this case the subject of the exposition was “Feeding the planet, energy for life.” The aim was to create a network to share ideas, find possible solutions to nutrition problems, to find sustainable ways of producing food, and provide an occasion for visitors to try authentic food from all over the world in just one place. According to the official website, in the 6 months of the event it hosted 21 million visitors (Expo S.p.A., 2015).

Methods

This study aimed to understand the factors that contribute to perceived satisfaction of mega-events and EXPO Milan 2015 was used as a case study.

The main steps to meet the aim were to identify determinants of the participant experience and build a customer value package, consider capacity as a critical factor, evaluate the weight of each determinant in terms of importance regarding satisfaction, and to understand the different perceptions of success within the three categories of the sample.

To conduct the research, a survey was adopted and applied to the case study: EXPO Milan 2015. Different methods can be used depending on the scale of the case study; if an international event is selected most likely one method will be involved (Veal & Burton, 2014). A survey seeks to assume something about a population on the basis of the data collected (Brotherton, 2008; Veal & Burton, 2014; Wisker, 2008). Considering that the participants of the survey will be spread all over the world, the questionnaires were sent via the internet (Brotherton, 2008). Online surveys have the advantage of being quicker and easier compared to other methodologies and if the data are collected properly the results can be reliable and generalizable (Altinay & Paraskevas, 2008; Brotherton, 2008, Veal & Burton, 2014). Data collection took place between April and May 2016 for 6 weeks.

The population consisted of visitors, volunteers, and staff who participated in the EXPO 2015, which included approximately 21 million (Expo S.p.A., 2015); for the reason of accessibility to data the type of sampling considered was a non-probability snowball sampling technique (Szwarc, 2005). The questionnaire was distributed to staff, volunteers, and visitors, the starting point being the authors' networks as a volunteer at the event. According to Hill and Alexander (2000), if a sample size of a consumer satisfaction survey exceeds 200 participants, independent from the size of the population, a reasonable level of accuracy is provided; within this number it is possible to work with a $\pm 1\%$ precision and 95% level of confidence (Hill & Alexander, 2000).

The questionnaire was divided into two parts. The first part concerned demographic questions and the role undertaken during the event, which had three options: volunteer, visitor, or staff. It also asked in which period the person visited the EXPO. This last question is particularly relevant to understand if there is a link between satisfaction and capacity because secondary data showed that

the second period of the event (August to October) was busier (Expo S.p.A., 2015). The second part of the questionnaire included the ACSI questions and items from relevant constructs previously examined in the literature; examining overall quality, customer expectations, perceived value, satisfaction, and the event specific customer value package. Two additional items were included in the customer value package to consider space and capacity: "the place was congested" and "the space was used effectively" (see Table 1). The event-specific customer value package included a list of determinants that were examined in terms of relative importance and measured against satisfaction perceived at the selected event. The questionnaire included three different scales, all from 1 to 5 and all verbal—verbal scales are a rating system where each point on the scale is given a verbal description (Rohrmann, 2007).

Results

The survey yielded 325 usable questionnaires (out of 363) as the remainder were not adequately completed to provide meaningful information. The sample inclusion criterion was that they had attended the mega-event, EXPO 2015. Data collection lasted 6 weeks where the survey was available online. Table 2 presents the demographic characteristics of respondents.

With regard to the role of the participants within the EXPO, the sample was fairly evenly spread across Visitors 36% ($N = 117$), Volunteers 32.3% ($N = 105$), and Staff 31.7% ($N = 103$). However, there were some interesting observations within groups. For instance, although the majority of female participants belonged to the volunteer and staff categories, most males were visitors. Also, the considerable majority of the sample 18–29 years old were (perhaps not surprisingly) staff and volunteers. In terms of the period of visit, although the numbers are fairly split between the two terms, it is important to note that most staff and volunteers were deployed during the first term with the lower number of visitors, while during the second term when the visitor numbers were higher, the number of staff and volunteers was decreased (Table 3).

Questions regarding overall quality, expectations, perceived value, and customer satisfaction

Table 1
ACSI and Customer Value Package Items From Literature

Construct/Item Scales	Adapted From
Overall perceived quality	
OPQ1: My overall perception of the event is satisfactory	Anderson and Fornell (2000); Deng et al. (2013); Fornell et al. (1996); Ryzin et al. (2004); Terblanche (2006)
OPQ2: The event's offering was customized to meet my needs	
OPQ3: The event's offering was as promised	
Customer expectations	
CE1: The event met my overall expectations of quality	Anderson and Fornell (2000); Fornell et al. (1996); Terblanche (2006); Ryzin et al. (2004)
CE2: The event was above my expectations	
CE3: The event was below my expectations	
Perceived value	
PV1: The event had a good price under given quality	Anderson Fornell (2000); Deng et al. (2013); Fornell et al. (1996)
PV2: The event had a good quality under given price	
Customer satisfaction	
CS1: I feel satisfied with the overall event performance	Anderson and Fornell (2000); Deng et al. (2013); Fornell et al. (1996); Ryzin et al. (2004); Terblanche (2006)
CS2: The event has met my expectation	
CS3: The satisfaction level of event is quite close to my ideal visit to such events	
Customer value package	
CVP1: A busy place	Schofield (2001)
CVP2: A fun place	Schofield (2001); Um and Crompton (1990)
CVP3: A lot going on	Schofield (2001); Um and Crompton (1990)
CVP4: Appealing to old	Schofield (2001)
CVP5: Appealing to young	Schofield (2001)
CVP6: Appearance of personnel	Panda and Das (2014)
CVP7: Attractive buildings	Glasson (1994); Pizam et al. (1978); Schofield (2001)
CVP8: Change from usual	Driscoll et al. (1994); Haahti (1986); Schofield (2001)
CVP9: Clean environment	Chon (1991); Glasson (1994); Pizam et al. (1978); Schofield (2001); Um and Crompton (1990)
CVP10: Clean toilets	Glasson (1994); Schofield (2001)
CVP11: Convenience	Bitner (1992); Driscoll et al. (1994); Haahti (1986); Pizam et al. (1978)
CVP12: Convenient location	Driscoll et al. (1994); Pizam et al. (1978); Schofield (2001)
CVP13: Customer facilities	Haahti (1986); Panda and Das (2014); Pizam et al. (1978)
CVP14: Disabled facilities	Glasson (1994); Schofield (2001)
CVP15: Educational value	Chon (1991); Driscoll et al. (1994); Haahti (1986); Schofield (2001)
CVP16: Enhance togetherness	Schofield (2001); Um and Crompton (1990)
CVP17: Entertainment	Haahti (1986); Driscoll et al. (1994); Schofield (2001)
CVP18: Exciting	Schofield (2001)
CVP19: Food	Ha and Jang (2010); Wall and Berry (2007); Zhang et al. (2013)
CVP20: Good atmosphere	Glasson (1994); Schofield (2001)
CVP21: Good car parking	Pizam et al. (1978); Schofield (2001)
CVP22: Good eating and drinking	Pizam et al. (1978); Schofield (2001)
CVP23: Good public transport	Chon (1991); Schofield (2001)
CVP24: Good reputation	Schofield (2001)
CVP25: Green areas	Schofield (2001)
CVP26: Information availability	Bitner (1992)
CVP27: Many interesting things	Schofield (2001)
CVP28: Nightlife	Driscoll et al. (1994); Haahti (1986); Schofield (2001)
CVP29: Not Overcrowded	Glasson (1994); Schofield (2001)
CVP30: Open spaces	Schofield (2001)

(continued)

Table 1 (Continued)

Construct/Item Scales	Adapted From
CVP31: Overcrowded	Glasson (1994); Schofield (2001)
CVP32: Participation opportunities	Schofield (2001)
CVP33: Physical environment	Driscoll et al. (1994); Glasson (1994); Ha and Jang (2010); Pizam et al. (1978); Wall and Berry (2007); Zhang et al. (2013)
CVP34: Physical facilities	Panda and Das (2014)
CVP35: Price	Fornell (2007)
CVP36: Quality attractions	Chon (1991); Schofield (2001)
CVP37: Quality of information	Glasson (1994); Pizam et al. (1978); Schofield (2001)
CVP38: Quality of promotion	Schofield (2001); Um and Crompton (1990)
CVP39: Quality shopping facilities	Chon (1991); Glasson (1994); Pizam et al. (1978); Schofield (2001)
CVP40: Relaxation opportunities	Schofield (2001); Um and Crompton (1990); Yoon et al. (2009)
CVP41: Safety	Chon (1991); Driscoll et al. (1994); Schofield (2001); Um and Crompton (1990)
CVP42: Scenic beauty	Chon (1991); Haahti (1986); Pizam et al. (1978); Schofield (2001)
CVP43: Service quality	Ha and Jang (2010); Wall and Berry (2007); Zhang et al. (2013)
CVP44: Something for everyone	Schofield (2001)
CVP45: Souvenirs	Bitner (1992); Yoon et al. (2009)
CVP46: Toilet facilities	Glasson (1994); Schofield (2001)
CVP47: Value for money	Driscoll et al. (1994); Glasson (1994); Haahti (1986); Schofield (2001); Um and Crompton (1990)
CVP48: Variety of activities	Schofield (2001); Um and Crompton (1990)
CVP49: Variety of eating	Glasson (1994); Pizam et al. (1978); Schofield (2001)
CVP50: Weather	Pizam et al. (1978); Schofield (2001); Um and Crompton (1990)

brought on average a score superior to 3, and the general response was positive. In order to determine the attributes that are more relevant to visitors when attending a mega-event, respondents were asked to evaluate a list of 50 factors from 1 = *not at all important* to 5 = *very important*. To determine the factors, the means were compared. It was found that all the factors were on average important. These results could be attributed to common acquiescence bias, or perhaps to the fact that an ideal visit (rather than actual) was questioned (Kuru & Pasek, 2016). The results suggested that the four most important factors (those scored more than 4.5, meaning *very important*) for the majority of the population were: “clean environment,” “safety,” “toilet facilities,” and “clean toilets.” The review of the literature implied a major importance in attributes such as price, food, and service quality (Fornell, 2007; Joung, Choi, & Goh, 2011; Sanchez-Gutierrez et al., 2011; Wall & Berry, 2007). It is surprising to see how those were considered more important, and how, for example, price scored

Table 2
Sample Profile

	Percent
Gender	
Female	64.9%
Male	35.7%
Origin	
Italy	94.2%
Rest of Europe	3.1%
America	1.5%
Africa	0.3%
Asia	0.6%
Australia	0.3%
Age	
18–29	64.9%
30–49	23.7%
50–64	10.2%
over 65	1.2%
Role	
Visitors	36.0%
Volunteers	32.3%
Staff	31.7%

Table 3
Visitor, Volunteer, and Staff Demographics

Role at EXPO	Gender		Total	Age				Total	Period of Visit	
	Female	Male		18–29	30–49	50–64	Over 65		May–July	August–October
Visitor	58	59	117	44	42	29	2	117	37	80
Volunteer	75	30	105	96	5	2	2	105	68	37
Staff	76	27	103	71	30	2	0	103	56	47
Total	209	116	325	211	77	33	4	325	161	164

just 3.36, meaning *fairly important*. Therefore, it can be assumed that participants would be less price sensitive but not ready to compromise on factors like safety and cleanliness. Indeed, only a few differences appeared in the analysis for groups; for example, the 30–49-year-old group gave more importance to service quality, while the oldest age group valued the most “enhance togetherness.” Also, the two younger groups (from 18 to 49 years old) were more sensitive to the variable “value for money” compared to the older groups (Table 4).

The respondents were asked not just to state the importance of the attributes but also to state their level of satisfaction. In general, all the factors had a high score between 2.73 and 4.31; this confirms the overall satisfaction rating obtained from the question evaluating the overall satisfaction, where 83.0% of the respondents indicated that they were satisfied or very satisfied with their visit at the event, 14.0% were neutral in their opinions, and 8.7% were dissatisfied or very dissatisfied. Analyzing the means of the factors, no factor scored more than 4.31 and the highest rated factors were “attractive buildings,” “a change from usual,” “scenic beauty,” “facilities,” and “atmosphere.”

A paired *t* test was conducted to detect the differences between the means of the variables. To carry out the analysis, the normality of the distributions was assessed. It was found that for 22 factors the difference between means was not statistically significant ($p > 0.05$). This could be due to two reasons; the determinant was recognized to be both satisfying and important or not satisfying but not relevant either. The analysis focuses on the determinants that had a major discrepancy between means. The four more important factors had all a value of $p = 0.000$, indicating statistical significance (Table 5).

To understand if capacity influences the satisfaction of participants in a mega-event, different items were placed in the questionnaires to analyze the respondents’ perception. With regard to “the place was congested,” 29.9% of the population *strongly agree* and 35.8% *agree* with the statement, while 26.8% remained *neutral*. The mean was 3.87 with a standard deviation of 0.948 and a variance of 0.899. Considering the item “not overcrowded,” results showed that 83.1% of the population stated that it is fairly important, important, or very important that the place is not overcrowded. In the 6 months of the Universal Exposition, the event registered double of the visitors from August to October compared to the first period May to July (Il Giorno, 2015). The relationship between capacity and period was analyzed to verify a possible relationship between the two, by using the Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality linearity and homoscedasticity. There was a positive although small correlation between the variables, $r = 0.19$ and $p = 0.03$, so the period of visit influences the perception of the congested space. Also, the relationship between satisfaction, expectations, and overall performance were analyzed in relation to congestion of the space. For all three variables there was a small negative correlation between the variables, with $r = -0.14$ on average and $p < 0.05$ (Fig. 1).

The results of the ANOVA test were positive, indicating statistically significant differences between the groups through the testing of the ACSI model. The overall questions regarding satisfaction were always more positive for volunteers and more negative for visitors. The descriptive part of the analysis gave higher means, meaning volunteers exhibited higher satisfaction compared to staff and visitors.

Table 4
Factor Importance Rankings

Factor	Mean	SD	Variance
Clean environment	4.62	0.584	0.341
Safety	4.51	0.725	0.526
Toilet facilities	4.50	0.733	0.537
Clean toilets	4.50	0.720	0.518
Service quality	4.46	0.641	0.410
Public transport	4.39	0.767	0.588
Physical facilities	4.34	0.651	0.423
Information availability	4.30	0.813	0.661
Quality of information	4.26	0.767	0.588
Educational value	4.23	0.815	0.665
An interesting place	4.23	0.847	0.717
Many interesting things	4.17	0.784	0.614
Disabled facilities	4.14	1.051	1.105
An exciting environment	4.13	0.807	0.651
Physical environment	4.12	0.759	0.576
Attractions	4.11	0.745	0.555
Customer facilities	4.09	0.830	0.689
A good value for money	4.09	0.819	0.671
Good atmosphere	4.07	0.860	0.740
Green areas	3.99	0.807	0.651
Enhance togetherness	3.97	1.010	1.020
Open spaces	3.92	0.856	0.734
Something everyone	3.91	0.914	0.836
Change from usual	3.90	0.922	0.849
Entertainment	3.90	0.803	0.645
A place appealing to young	3.89	0.941	0.885
A convenient location	3.84	0.921	0.848
A wide variety of activities	3.82	0.811	0.657
Participation opportunity	3.78	0.878	0.771
A good reputation	3.77	0.831	0.690
A good variety of eating and drinking	3.77	0.914	0.835
Scenic beauty	3.75	0.860	0.739
Food	3.73	0.948	0.898
Promotion	3.73	0.940	0.884
A lot going on	3.73	0.903	0.816
Attractive buildings	3.71	0.900	0.810
A fun place	3.61	0.831	0.690
Price	3.60	0.935	0.874
Weather factor	3.59	1.079	1.165
Relax	3.56	0.975	0.951
Variety of eating	3.56	0.986	0.973
Car parking	3.55	1.098	1.205
Appearance of personnel	3.52	1.063	1.130
Not overcrowded	3.44	1.015	1.031
Convenience	3.36	0.958	0.919
Nightlife	3.14	1.103	1.217
Appealing to old	3.05	1.199	1.438
Shopping	2.98	1.027	1.056
Busy place	2.62	1.055	1.112
Overcrowded	2.51	1.167	1.362
Souvenirs	2.28	0.952	0.907

Levene's test for homogeneity showed that there was a statistically significant difference with a value of $p < 0.05$ in the different groups.

Discussion and Conclusions

The focus of this article was to better understand factors that underpin satisfaction at mega-events. To that end the ACSI index was used as a framework and an event-specific customer value package was developed, within which the concept of capacity was introduced as a potential determinant of satisfaction. The study reviewed factors that have appeared in the literature in similar areas when measuring satisfaction, and many authors contributed to the development of the event-specific CVP that was then examined (Anderson & Fornell, 2000; Chon, 1991; Deng, Yeh, & Sung, 2013; Driscoll, Lawson, & Niven, 1994; Fornell, Johnson, Anderson, Cha, & Everitt Bryant, 1996; Hahti, 1986; Ryzin, Muzzio, Immerwahr, Gulick, & Martinez, 2004; Schofield, 2001). However, the concept of building a customer value package has not been explored in the event industry before, particularly considering capacity as one of the determinants.

The analysis of the factors produced results different from what was stated in the literature. The most important factors ("clean environment," "safety," "toilet facilities," and "clean toilets") were basic requirements, while evidence from the hospitality sector (Fornell, 2007; Ha & Jang, 2010; Wall & Berry, 2007) prioritized price and service. It could be assumed that mega-events need more attention to basic requirements compared to the hospitality field, perhaps because there can be higher perceived uncertainty of availability and quality of facilities in a space/place that hosts a nonpermanent and time-constrained experience. Price also scored less than what was assumed by different authors (Fornell, 2007; Ha & Jang, 2010; Sanchez-Gutierrez et al., 2011; Wall & Berry, 2007). This difference could be due to the uniqueness of the event; attendants are willing to pay more to attend a mega-event (none of the previously cited authors studied mega-events). Interestingly, the factor "safety" appeared in the second position and this result could be attributed to the geopolitical situation at the present time. In the past, the security of an event was

Table 5
Key Factor Differences Between Importance and Satisfaction

	Importance Mean	Satisfaction Mean	Paired Differences	<i>T</i>	<i>gf</i>	Sig. (2-tailed)
Clean environment	4.62	4.08	0.541	8.200	217	0.000
Clean toilets	4.51	4.07	0.447	5.860	214	0.000
Safety	4.52	4.13	0.384	5.355	215	0.000
Toilet facilities	4.52	4.08	0.437	6.339	214	0.000

related to dangers associated with the event itself, such as the collapse of a stage (Tarlow, 2002; The Purple Guide, 2014). Today, the concerns related to an event, especially large-scale events, include terrorism attacks and plans of action related to such actions. For example, during the European Championship in France in June and July 2016 stadiums were considered potential targets for terrorism attacks and many additional security plans were put in place to guarantee participants' safety (Hughes, 2016).

Considering "capacity," the analysis confirms the uncertainties of the calculation of capacity raised by Buckley (2015), McCool and Lime (2001), and Wall and Berry (2007). Indeed, a negative relationship between satisfaction and capacity was found. Capacity is calculated following the definition of how many people are acceptable in a destination or venue (The Purple Guide, 2014). Many authors (Lime & Stankey, 1973; Lindberg & McCool, 1998; Massiani & Santoro, 2012) expressed doubts about

this definition and the literature still lacks research about this topic, particularly in understanding the concept of recreational carrying capacity. Lime and Stankey (1973) proposed three variables need to be considered to calculate capacity: management goals, visitors' behavior, and physical resources. This definition highlights the importance of visitors' enjoyment in the calculation of capacity. In this study, most of the participants agreed about the space being congested, but 74.3% of the sample thought that space was used efficiently. This could suggest congestion was not due to the distribution of the space or the attractions, but to the need of a different crowd management plan. As shown by this study and previously by Radojevic (2015), carrying capacity is fundamental for customers' services, and "crowding" could negatively influence customers' experience. One potential option could be to consider reducing the number of visitors or reducing the crowd effect by introducing diversified activities. Sanchez-Gutierrez et al. (2011) considered the



Figure 1. Expectations and satisfaction per participant group.

price factor, and the perception of having “return on investment” impacting on overall satisfaction. Their findings indicated that those who perceived the space to be congested did not see “the return on investment.” The link between capacity, price, and satisfaction should be further investigated to reveal potential first, second, or higher order constructs. A further confirmation of the importance of capacity in a mega-event was found when two thirds of the sample weighted it as *very important* in the list of factors. It is worth mentioning that the 40% of the respondents was dissatisfied with how capacity was handled during this particular case study. These feelings are further confirmed when 12 people mentioned that the capacity could have been handled better as responses to the question “further comments,” or this could even suggest that the calculation of capacity was carried based on factors different from satisfaction or enjoyment of the experience.

Also, when satisfaction and overall performance were looked at in relation to congestion of the space, a small but negative correlation implies that the more participants thought space was congested, the less they enjoyed the experience. Although a link between satisfaction and capacity was found, more studies are needed to further examine this relationship and to test it in different contexts and in diverse conditions. However, capacity should no longer be seen just as a formula that calculates the space available for people (The Purple Guide, 2014), because such conceptual underpinnings jeopardize not just the enjoyment of the experience, but the surroundings as well (Massiani & Santoro, 2014). Thus, this study provides some initial evidence that firmly sets capacity within the human side of performance, rather than place and space, and extends the argument of the importance of visitors’ enjoyment in the calculation of capacity (Lime & Stankey, 1973).

In this study, the definition of customer is not only limited to visitors (Stasiowski & Burstein, 1994), but is extended to staff and volunteers, numbers of whom were fairly equally spread within the responses. With regards to perceived importance and the evaluation data of the CVP factors, no significant differences were observed between groups. However, there were considerable differences with regards to satisfaction. In particular, volunteers were

far more satisfied with the experience, followed by staff and then visitors. A possible explanation for this discrepancy can be due to expectations. Volunteers and employees expect less, considering the reason to attend is mainly to offer a service (regardless of being paid or not), while visitors have higher expectations, considering the fact that they are paying to visit the site (Gallarza et al., 2013; Xing & Chaplin, 2009). Volunteers and staff approach the experience of such events with an attitude shaped on the “other” dimension: focus on sharing, giving, and helping others. On the contrary, visitors lack in this dimension; this could influence the experience in a negative way. The meaning of success is different for the various stakeholders as providers and recipients of the experience; acknowledging this is necessary to understand strategic planning in the event management industry (Kaplanidou et al., 2013). However, understating the details of these discrepancies could help organizations handle this gap better in the future. This expectation justification found in Gallarza et al. (2013) is also consistent with this study’s results as the largest effect—meaning significant discrepancies between means and variances of the different groups—was related to expectations, confirming that visitors were disappointed compared to the satisfied expectations of staff and volunteers.

This study contributes to knowledge in three ways. Firstly, it applied a widely used and validated instrument for measuring satisfaction (the American customer satisfaction index) within the events field, providing an alternative way of examining event satisfaction. Secondly, to deploy the ACSI instrument a customer value package had to be created, tailor made to the (mega)-event context. The customer value package for events was informed by an extensive literature review of factors examined in similar industries, and included 50 (event-relevant only) factors. This could be used to compare different types of events. Thirdly, this study responds to and echoes the call of Lime and Stankey (1973) for considering capacity as more than a people to space ratio, but rather acknowledging the importance of the recreational carrying capacity notion. This study highlights the importance of capacity by placing it firmly into the ACSI customer value package for event satisfaction. It also adds to the questioning of the current dominant paradigm of understanding

and measuring capacity (Buckley, 2015; McCool & Lime, 2001; Wall & Berry, 2007) by providing some indication on the link with satisfaction.

However, there are inherent limitations within the study, including a relatively small sample, data from a sole event, and a new CVP. Further studies should test the American customer satisfaction index as well as the list of factors within the events customer value package, within the mega-events category, but also with events of various sizes and purposes. The analysis of the items could lead to a weighted index, which would allow event organizers to rate the importance score and the satisfaction with the factors on a new customer satisfaction index. It would be particularly interesting to examine whether the importance of each factor changes according to the type and scale of the event. Further research is also needed to investigate what overcrowded means for different people in different events, as it could be assumed that perceptions would vary, for instance, between a concert, a family festival, a mega-event, and a football match.

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