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Developing and validating a multidimensional quality scale for mega-events

Jin-Soo Lee [a], Choong-Ki Lee [b,*], Chang-Kyu Park [c]

[a] School of Hotel and Tourism Management, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong
[b] College of Hotel & Tourism, Kyung Hee University, 1 Hoegi-dong, Dongdaemun-gu, Seoul 130-701, South Korea
[c] Department of Hotel Tourism Culture, Jeonnam Provincial College, 152 Juknokwon-ro, Damyang-Gun, Jeonnam 517-802, South Korea

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ABSTRACT

The concept of quality is central to research on consumer behavior and marketing. Despite the well-recognized importance of quality in the hospitality literature, little research is designed to explore quality in the event literature, particularly in the area of quality scale development. Besides, prior research lacks a rigid psychometric test in developing and validating scales. The current study aims to develop and validate multidimensional measures for assessing the quality attributes of mega-event Expo with a rigorous method. The testing of validity, reliability, and method biases establishes the validity and reliability of the quality scales of the Expo. The resulting scales include 40 items with a 10-factor structure. Researchers can integrate the validated measures of this study into other concepts in marketing/consumer behavior to examine the unexplored aspect of event visitor behavior. Theoretical and practical implications are discussed.

1. Introduction

Mega-event research has steadily grown in number and diversity because of the tremendous influence of mega-events on the economy and image of host destinations. Mega-events (e.g., the Olympics, FIFA World Cup, and Expos) are large-scale cultural, commercial, and sport events (Roche, 2000) that boost the urban regeneration, political and economic status, and international media exposure of the host country (Getz, 2008). Mega-events require substantial investment in infrastructure development and the involvement of various stakeholders from its initiation to its completion (Reid and Arcodia, 2002) and thus act as powerful means to upgrade the profile of host cities, including their hospitality and tourism industries (Lee et al., 2008a). Consequently, mega-events aid cities in significantly renewing urban competitiveness and winning the bid for future mega-events (Bramwell, 1997).

The positive aspect of mega-events naturally leads the mega-event literature to focus on the economic effect of these events, namely, demand forecasting, economic costs and effects, and tourist arrivals (e.g., Fourie and Santana-Gallego, 2011; Glos, 2005; Kasimati, 2003; Lee et al., 2008a,b; Lee and Taylor, 2005). Another mainstream research on mega-events centers on host residents' perceptions of mega-events, examining residents' support, community participation, and residents' perception of the effects and benefits of such events (e.g., Gursoy and Kendall, 2006; Lamberti et al., 2011; Mihalik, 2001; Zhou and Ap, 2009). Drawing on this stream of research, the Expo literature has evolved to explore the forecasting of Expo tourism (Lee et al., 2008a,b), residents' perceptions of the benefits, costs, and support of Expos (Boo et al., 2011), Expos as drivers of community participation in developing countries (Lamberti et al., 2011), and visitors' motivations to attend Expos (Lee et al., 2013). Prior research significantly assists in gaining insights into the diverse implications of Expos.

The concept of quality is critical to research on consumer behavior and marketing because it predicts value, satisfaction, and behavioral intention or loyalty (e.g., Crompton, 2003; Oliver, 1997; Parasuraman et al., 1994). Despite the well-recognized importance of quality in the hospitality and tourism literature, little research is designed to explore quality in the event literature, particularly in the area of quality scale development. The scale development and validation of quality is central to understanding the property of quality and facilitating subsequent research associated with the notion of quality. A few studies in the event literature (e.g., Lee et al., 2008a,b; Yan et al., 2012) develop event quality scale and prompt more research to explore quality, thereby significantly contributing to the body of event literature. The previous studies, however, lack a rigorous psychometric test in

* Corresponding author. Tel.: +82 2 961 9430; fax: +82 2 964 2537.
E-mail address: cklee@khu.ac.kr (C.-K. Lee).

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developing and validating scale. For example, some study does not report construct validity, non-response bias, common method variance, or other method biases (This methodological issue is further discussed in the literature review.). A stringent method is essential to developing and validating scale. Besides, quality dimensions are unique to a study setting and vary across the types of industries (Buttle, 1996; Cronin and Taylor, 1994). Given that no prior research explores the quality dimensions of a mega-event, it is worthwhile to delve into Expo quality with a rigid psychometric test, further enhancing the understanding of mega-event quality.

In response to the aforementioned research gap, this study is to develop and validate multidimensional measures for assessing the quality attributes of mega-event Expo 2012 in Yeosu, Korea. A study of the scale development of the quality attributes of Expo benefits event researchers and practitioners in several ways. First, the scale development of quality attributes enables the identification of underlying dimensions of Expo quality and the validation (reliability and construct validity) of a multidimensional quality scale. Quality measures developed with rigorous psychometric tests provide a foundation for subsequent research to examine the Expo phenomenon from the perspective of visitor behavior and marketing. Second, this study identifies the underlying quality dimensions of an Expo. Quality is a direct antecedent of visitor satisfaction. The verification of quality dimensions aids event organizers in strategically managing visitor satisfaction. Third, this study investigates what quality dimensions most and least significantly contribute to visitor satisfaction and behavioral intentions. Expos are periodically held in host cities by the international governing body of Expos, Bureau International des Expositions (BIE), which is in charge of the bidding, selection of host cities, and organization of Expos. Identifying the association of quality dimensions with satisfaction and behavioral intentions enables host cities to effectively manage quality attributes from the preparation to the shutdown stages.

2. Literature review

2.1. Quality scale development in the service industry

Zeithaml (1988, p. 3) defines perceived quality as "the consumer's subjective judgment about a product's overall excellence or superiority." Subjective judgment indicates that the assessment of quality is affected by personal product experiences, unique needs, and consumption situations. Therefore, perceived quality is a user-based attribute (Garvin, 1983) rather than a manufacturing-based one with a predetermined standard. Similarly, quality is signified in the tourism context by performance quality that refers to service attributes under the primary control of a tourism provider (Baker and Crompton, 2000). Thus, tourists base their judgment of quality performance on their perception of provider performance.

The perceived quality in the service industry is extensively reviewed and discussed with service quality models. The original service quality model is introduced by Grönroos (1984) who compares expected service with perceived service to judge service quality. Grönroos's (1984) service quality model (Nordic Model) is based on the two quality dimensions: technical quality and functional quality. Technical quality concerns the actual outcome of the service after customers experience their interactions with service suppliers. Functional quality refers to the process by which consumers evaluate service interaction during service delivery. However, the Nordic Model is not detailed to present what is perceived by customers given that the combined technical and functional quality results in image. Building on the Nordic Model, Parasuraman et al. (1985) develop the Gaps Model, wherein service quality is measured by the discrepancy between perceived and expected service. Parasuraman et al. (1985) initially identify the ten dimensions of service quality that are later reduced to five dimensions (tangible, reliability, responsiveness, assurance, and empathy), known as the SERVQUAL model (Parasuraman et al., 1988).

Cronin and Taylor (1992), however, criticize that the operationalization of SERVQUAL is not adequate to measure service quality. They suggest that it is unnecessary to capture the gap between expected and perceived service for the assessment of service quality. Similarly, Buttle (1996) argues that SERVQUAL relies on a disconfirmation rather than an attitude and fails to build on psychological theory. The SERVQUAL is also criticized for being service process-oriented; it does not reflect the outcome of service experience while focusing on the process of service interaction (Buttle, 1996). Furthermore, other critics point out the problematic aspect of indirect difference score from SERVQUAL that causes poor reliability and restricted variance (Brown et al., 1993; Peter et al., 1993). The difference score is found to undermine theoretical reliability of measures, and restricted variance arises from the difference between two direct scales, aggravating the predictive validity of the conceptual model.

To address the criticism, several researchers modify SERVQUAL model. Rust and Oliver (1994) develop the three-component model of service quality that includes service quality (technical quality), service delivery (functional quality), and physical environment quality. Drawing upon the three-component model, Brady and Cronin (2001) propose a third-order factor model to capture service quality. This model builds on three dimensions: interaction quality (functional quality), outcome quality (technical quality), and physical environment quality (service environment). Each dimension comprises three sub-dimensions, contributing to the integrated view and conceptualization of quality in the various service settings.

Although SERVQUAL receives critical comments, this concept acts as a basis to understand quality in the hospitality industry (e.g., Bojanic and Rosen, 1994; Ekinici et al., 1998; Getty and Thompson, 1994; Knutson et al., 1995; Patton et al., 1994). For example, based on SERVQUAL, Mei et al. (1999) develop scales to evaluate quality in the hotel industry, finding that hotel quality is operationalized as three dimensions: employees, tangibles, and reliability. The dimension of employees is found to be the best quality predictor among the three factors. Akbaba (2006) explores the quality dimensions of a business hotel and confirms the five dimensional structure of SERVQUAL. However, the identified dimensions are somewhat different from SERVQUAL, representing the different nature of service quality in the hotel industry, such as adequacy in service supply, understanding and caring, and convenience. Albacete-Saez et al. (2007) also develop and validate quality measurement of rural accommodation, ending up with five dimensions (personnel response, complimentary offer, tourist relations, tangible elements, and empathy) slightly different from SERVQUAL. The aforementioned findings support the view that quality factor structure is context-specific and varies with the features and types of industries (Buttle, 1996; Cronin and Taylor, 1994).

The hospitality studies on quality scale development and validation contribute to further extending conceptualization concerned, but most of them are vulnerable to methodological issues in testing psychometric properties of quality scales. First, many of the studies do not go through a stringent qualitative process to generate items. Churchill (1979) and DeVellis (1991) suggest that measures are developed by the literature review, in-depth interviews, focus groups, and expert reviews. Little research completes the comprehensive qualitative approach before finalizing a survey instrument. Second, much research confirms scales by exploratory factor analysis (EFA) and/or confirmatory factor analysis (CFA) without carefully considering scale validity and biases. Some