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Calculating tourists' customer equity and maximizing the hotel's ROI

Yumi Park Kim[a,*], Soyoung Boo[b], Hailin Qu[c]

[a] Center for Hospitality and Tourism Research, School of Hospitality and Tourism Management, Oklahoma State University, 365 Human Sciences, Stillwater, OK 74078, USA
[b] The Cecil B. Day School of Hospitality Administration, J. Mack Robinson College of Business, Georgia State University, 35 Broad Street NW #215, Atlanta, GA 30303, USA
[c] School of Hospitality and Tourism Management, Oklahoma State University, 365 Human Sciences, Stillwater, OK 74078, USA

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ABSTRACT

This study is the first attempt to calculate customer equity (CE) and to project the marketing return on investment (ROI) by using risk simulation in the context of tourism and hospitality. Based on the results from focus groups and an online survey of tourists, the study identified the five CE drivers, the CE-based market segments, and demonstrated the calculation of CE related to tourists' CE segments and hotel type. The marketing effort responsiveness for each hotel profile was measured by using the three input variables for calculating customer lifetime value (CLV) and CE. Findings include that the tourists' five CE segments have different financial impact of CE drivers according to the hotel type and high-end hotels have the largest success regarding significant CE drivers in terms of ROI and CE. Theoretical and managerial implications were suggested regarding the application of the CE and its measurement.

1. Introduction

The customer equity (CE) approach in marketing has become prominently noted in current research topics throughout business industries, leading to significant awareness for customization (Benedetto & Kim, 2016; Martin, 2015; Wiesel, Skiera, & Villanueva, 2008). Rust, Lemon, and Zeithaml (2004) defined CE as “the total of the discounted lifetime values summed over all of the firm's current and potential customers.” (p.110) and argued that this approach enables companies to focus on individual customers. The importance of CE has gained notoriety since it is a potent intermediary outcome that contributes to both top-line (growth) and the bottom-line (return on investment) for a business (Matsuno, Zhu, & Rice, 2014). Ultimately, the asset of a company is not derived only from the customers' assessments of the intangible features, but also from the net present values of all customers (Rust et al., 2004; Hansotia, 2004). Thus, marketing researchers now regard CE as an important data set to the firms' financial equity (Rust et al., 2004; Hansotia, 2004).

In the context of tourism, very little knowledge about CE is available and relevant topic discussions are lacking. Most previous studies focused on customer-based “brand equity” in relation to tourism destination (Bianchi, Pike, & Lings, 2014; Boo, Busser, & Baloglu, 2009; Horng, Liu, Chou, & Tsai, 2012; Tasci, 2016, 2018), travel intentions/motivation (Hutchinson, Lai, & Wang, 2009; Liu & Chou, 2016), hotel brands (Huang & Cai, 2015), and chain restaurants (Kim & Kim, 2005). Since CE is an umbrella concept, and brand equity is one part of CE (Rust et al., 2004), further exploration of CE is necessary to broaden the scope of knowledge about customer management in the context of tourism. The more that tourists feel connected to a certain tourism offering, the more value customer equity may have.

Currently, there is scant empirical research on CE specific to subsectors in tourism and hospitality industry such as airlines (Rust, Zeithaml, & Lemon, 2000; Voorhees, 2006), hotels (Liu, Wu, Yeh, & Chen, 2015; Voorhees, 2006), restaurants (Hyun, 2009; Voorhees, 2006), and the convention industry (Severt & Palakurthi, 2008). These previous studies were based on Rust et al.'s (2000) CE theory and only applied three drivers of CE (i.e., value equity, brand equity, and relationship equity) to the service markets. Some research has been done concerning CE drivers; however, further research needs to be conducted to explore and measure CE, which is considered one of the methods to assess marketing efforts for customers (Rust et al., 2000).

The CE approach, as it is utilized (Kahreh, Tive, Babania, & Hesan, 2014), can estimate the customer lifetime value (CLV) by increasing availability of customer transaction data and the real values of each segment of customer. This approach attempts to estimate CLV based on information about marketing programs, to acquire and retain customers, to recognize customers' purchasing pattern, and to predict their future purchase behavior (Gupta et al., 2006). Hence, Berger and Nasr-

* Corresponding author.
E-mail addresses: kodesh1@hotmail.com (Y.P. Kim), sboo@gsu.edu (S. Boo), h.qu@okstate.edu (H. Qu).

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Bechwati (2001) suggest the maximization of CE is a critical objective in customer-company relationship management.

Earlier studies on CE in the field of tourism and hospitality applied the CE theory to service markets, and then tested the model to better understand the effect of CE drivers (Hyun, 2009; Severt & Palakurthi, 2008; Voorhees, 2006). These researchers failed to obtain the financial impact of each CE driver because they did not present the calculation of CE, and then predict the simulations in view of each CE driver. Accordingly, the goals of the study are 1) to determine the key CE drivers, 2) segment the customers based on CE, 3) demonstrate the significant CE drivers, 4) calculate CE, and 5) develop the practical marketing strategies that are necessary for maximizing ROI through calculating CE in the tourism and hotel industry. After calculating CE and maximizing ROI, ultimately, the important elements of marketing strategies through hotel distribution channels can be achieved in terms of the CE approach.

2. Literature review

2.1. Customer equity (CE) in the tourism and hospitality industry

The increasing recognition of the importance of CE has caused researchers to identify specific actionable CE drivers (Chae, Ko, & Han, 2015; Wiesel et al., 2008). The three key drivers are value equity, brand equity, and relationship equity (Lemon, Rust, & Zeithaml, 2001; Rust et al., 2000). Value equity is "the customer's objective assessment of the utility of a brand, based on perceptions of what is given up for what is received (Lemon et al., 2001, p. 22)." The three influencing factors of value equity are quality, price, and convenience (Lemon et al., 2001; Rust et al., 2000). The brand equity is "the customer's subjective and intangible assessment of the brand, above and beyond its objectively perceived value (Lemon et al., 2001, p. 22)." The three sub-drivers of brand equity are brand awareness, attitude toward the brand, and corporate ethics (Rust et al., 2000). Relationship equity is "the tendency of the customer to stick with a brand, above and beyond the customer's objective and subjective assessments of the brand (Lemon et al., 2001, p. 22)." The relationship equity driver consists of a firm's loyalty reward programs, an affinity program/emotional connection program (Bolton, Kannan, & Bramlett, 2000). Each of these drivers works interdependently, increasing CE as well as providing an appropriate strategy for firms to respond to changing customer needs.

In the context of tourism and hospitality, previous studies applied the three CE drivers of Rust et al. (2000)'s study which compared the performance profiles among American, Delta, United, and Southwest Airlines in terms of CE. Segmentation is critical, but some marketing strategies differ in the service markets. Voorhees (2006) examined the effect of CE on consumers' behavioral intentions and behavior in four service markets (airline, hotel, retail grocery, and restaurant). Hyun (2009) tested a proposed model of CE for chain restaurant brand formation, and Severt and Palakurthi (2008) determined the CE focusing on convention industry. Previous studies discuss the applicability of the CE theory in tourism and hospitality services and provide insights into increasing CE using the three CE drivers.

Although research stream from brand equity to customer equity draws on wider discussions on increasing CE and maximizing ROI in general marketing, most of the previous research on the related subject matter in tourism and hospitality remains focused on brand equity, rather than customer equity. The majority of studies focus on identifying dimensions which are composed of brand equity (Camarero, Garrido, & Vicente, 2010; Liu & Chou, 2016; Wong & Wickham, 2015). Recently researchers also widened the brand equity model and included various dimensions and proxies to evaluate brand equity such as revenue, web and social media analytics, benchmarking, and visibility (Zavattaro, Daspit, & Adams, 2015).

2.2. Measurement of customer equity

CE can be measured by using two approaches. An aggregate level approach is a top-down approach computed using firm level measures and an average CLV of a firm's customer base is used for measuring CE (Kumar & George, 2006). On the other hand, a disaggregate level approach is a bottom-up approach, first computing CLVs of every single customer, and then aggregating all customers' CLVs together (Kumar & George, 2006).

Most studies on measuring CE used the aggregate level approach (Berger & Nasr-Bechwati, 2001; Hanssens, Thorpe, & Finkbeiner, 2008). For example, Rust et al. (2004) calculated the average CLV of a firm's customers and then used customer-specific brand switching matrices. In addition, Kumar and George (2006) examined customers' probability of switching from one brand to another; this information was used to generate the acquisition and retention of customer model. The probability of brand switching contributed to maximizing CE by applying the issue of whether customers are willing to choose a different brand or to purchase the same brand. In light of discussing benefits of CE measurement, Rust et al. (2004) proposed that firms can analyze components of the greatest impact, comparing their performance with that of competitors, and project the return on investment (ROI) through improvements.

Considering these two approaches, the current study approached the aggregate level by using an average CLV of customers at the firm's level and at a segmented level after computing CLVs from each individual customer.

2.2.1. Customer lifetime value

Customer lifetime value (CLV) is the total of the discounted lifetime values summed over all of the firm's current and potential customers (Rust et al., 2004). From the company's perspective, CE is the sum of the individual CLV produced by present and future customers within a certain period (Bayon, Gutsche, & Bauer, 2002). CLV is the net present value of all future profits obtained from a customer during his or her lifetime relationship with a firm (Gupta et al., 2006).

CE, a market-based asset, offers direct benefits to marketing managers through the quantification of CLV performance into marketing programs. Hence, marketing managers consider CLV a tool to manage their business and marketing plans (Gupta et al., 2006). Past research on CE demonstrated the importance of considering CLV as a key component to calculating CE (Hanssens et al., 2008; Wiesel et al., 2008). Each study has presented the similar definition of CLV with slight variations.

This current study utilized the fundamentals of CLV and used the method which pre-calculated CLV and then measured CE (Rust et al., 2004). Their approach used the common components of the fundamentals of CLV; the amount of purchase, the number of purchases, the discount rate, the contribution margin, and the brand switching matrices (Rust et al., 2004). The specific components and formula of CLV are described in the methodology section.

2.2.2. Brand switching matrix

Many researchers have studied brand switching matrix because it affects the evaluation of marketing mix and marketing strategies (Heerde, Gupta, & Wittink, 2003; Sun, Neslin, & Srinivasan, 2003). Understanding customers' brand switching behavior is critical for a firm and its survival, but also to retain existing customers in the business (Hsu & Chang, 2003). Deighton, Henderson, and Neslin (1994) suggested the importance of advertising by examining "brand switching" and "repeat purchasing behavior"; advertisement has an impact on customers' decision to stay with a brand.

In the tourism and hospitality industry, Diokoa, Sob, and Harrill (2013) examined visitors' likelihood of staying at the same hotel service level and explored how observed brand switching behavior is likely concomitant to structural macro-level factors. Morgan and Dev (1994)