

A STUDY OF MARKET SEGMENTATION  
MANAGEMENT IN THE HOTEL INDUSTRY:  
A CUSTOMER EQUITY APPROACH

By

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## CHAPTER I

### INTRODUCTION

#### **Introduction**

A new paradigm exists in marketing which emphasizes customized services and relies on knowledge and information about a customer to build strong relationships (Rust & Kannan, 2003). Providing customized services requires an understanding of different types of customers through the acquisition of knowledge and information such as purchasing patterns of customers and responsiveness to marketing efforts. One of the methods researchers use for gathering this information is segmentation. It is one of the most used strategic approaches in marketing for customizing products and services (Blocker & Flint, 2007; Palmer & Millier, 2004; Raynor & Weinberg, 2004; Wedel, 2001). For the last four decades, the marketing literature has been focused on the notion of segmentation. Companies believed that if they obtained more information about customers through segmentation and applied it properly, then segmentation would guide them in effectively selling their products and services (Yankelovich & Meer, 2006). However, business practitioners have realized that marketing programs are not as effective using the market segmentation approaches despite decades of marketing research because of the difficulty in accumulating complete and relevant information about the market segments (Yankelovich & Meer, 2006).

More recently marketing literature has taken a new view about segmentation by narrowly focusing on individuals rather than a segment or a homogenous group (Hyatt, 2005; Precision Marketing, 2006; Rust & Kannan, 2003). This trend has evolved over the last decade, shifting market research from product to customer-centered orientation (Dent, 1991; Rust & Kannan, 2003). According to Dent's (1991) study, in the 1960s, the trend was "mass marketing," by the 1970s researchers were focusing on "market segmentation." During the 1980s, businesses concentrated on "niche marketing," and in the 1990s on "individualized marketing." This individualized marketing trend has continued in the 2000s and beyond. According to Precision Marketing (2006), the trend from mass marketing to personalization and individualization was discussed at a recent roundtable convened by BroadSystem. Hyatt (2005) mentioned in his article *This Time, It's Personal* that "customization is everywhere" (p. 128). This customization or individualization trend is also apparent in businesses in the electronic environment, changing specific paradigms from traditional e-commerce to e-service (customer-centric concept), such as from commodities to customization, from mass marketing to one-to-one marketing, and from brand equity to Customer Equity (Rust & Kannan, 2003).

In the hospitality industry, developing effective marketing techniques has become even more important because of the proliferation of businesses, which has resulted in increased competition for consumer dollars. Even though marketers have been able to attract customers through product manipulation, the current turbulent business environment calls for a more customer-oriented perspective and practice to retain customers. In order to do this, companies are treating every customer as a separate segment and matching companies' products and services precisely to individual needs

(Dent, 1991). Since customer needs are becoming more unique, a firm's promotion and marketing efforts must become better targeted in order to minimize wasteful development (Dent, 1991).

Recent market segmentation efforts focused on personalized marketing strategies that distinctively fit consumers. With the increased importance of individualization and customization, the Customer Equity (CE) approach to marketing has become a significant research topic during the recent past (Bayon, Gutsche, & Bauer, 2002; Hansotia, 2004; Kumar & George, 2006; Rust, Lemon, & Zeithaml, 2004; Wiesel, Skiera, & Villanueva, 2008). The Customer Equity approach is a revolutionary process that makes companies focus on individuals rather than on groups or masses. This current study focused on Customer Equity as a process in which the company considers the customer as "the asset" (Kumar & George, 2006). According to Rust, Lemon, and Zeithaml's (2004) study, CE is defined as "the total of the discounted lifetime values summed over all of the firm's current and potential customers" (p. 110). Therefore, Customer Lifetime Value (CLV) is fundamental to measuring Customer Equity. CLV is defined as "the net profit a company accrues from transactions with a given customer during the time that the customer has a relationship with the company" (Rust, Zeithaml, & Lemon, 2004, p. 113). To measure financial feasibility in business, Dent (1991) stated that calculating the average lifetime purchases and profitability of a customer (The Lifetime Value of a customer) is "the only way to measure the return on individualized marketing efforts" (p. 43). Therefore, the individualized approach entails determining CLV in order to measure CE, and companies should focus on maximizing CE.

Rust, Zeithaml, and Lemon (2004) suggested that companies should concentrate on Customer Equity, “the sum of the lifetime values of all the firm's customers, across all the firm's brands,” (p. 113) rather than only brand equity, “the sum of customers' assessments of a brand's intangible qualities, positive or negative” (p. 113). Because 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 the customers, marketing researchers and practitioners have considered this new approach to measuring (Rust et al., 2004) and maximizing Customer Equity (Hansotia, 2004) by capitalizing on their Customer Lifetime Value.

This current research applied the Customer Equity approach to marketing segmentation. This is referred to throughout the dissertation as the “Customer Equity-based segmentation” approach. In this project, Customer Equity was computed in advance based on the survey data collected from a sample of hotel customers. Consequently, on the basis of the CE-based segmentation that was utilized, the Customer Equity Management (CEM) approach is presented for the purpose of developing practical strategies and action plans for maximizing Customer Equity. The CEM process is “a comprehensive management approach that focuses on the efforts of the firm by increasing the lifetime value of individual customers (i.e., the firm's customer assets) in a way that maximizes Customer Equity (Hogan, Lemon, & Rust, 2002, p. 5).” Hogan et al. (2002) suggested that the CEM process was required to understand the role of Customer Equity in marketing.

With the increasing significance of the new Customer Equity approach, several studies have researched how the management of CE is gaining traction (Bell, Deighton,

Reinartz, Rust, & Swartz, 2002; Bruhn, Georgi, & Hadwich, 2008; Dong, Swain, & Berger, 2007). However, recent studies regarding the conceptualization and measurement of Customer Equity do not show practical and specific ways for management to identify strategies and action plans (Bell et al., 2002; Blattberg & Deighton, 1996; Dong et al., 2007; Hansotia, 2004; Hogan et al., 2002; Kumar & George, 2006; Lemon, Rust, & Zeithaml, 2001; Richards & Jones, 2008).

This study, therefore, aims at filling this conceptual gap in the literature. It is argued that through understanding Customer Equity, a core necessity to any firm, management practice and method can be improved. Thus, the shift in marketing from product to a customer-centered orientation implies that research should also make a similar shift in order for businesses to compete better in the current environment.

### **Statement of the Problem**

The traditional segmentation method used to satisfy individual customers' needs was based on socio-demographics, psychographics, and other general customer characteristics (Neal & Wurst, 2001; Yankelovich, 1964; Yankelovich & Meer, 2006). More recently, the CE-based segmentation was found to provide more meaningful results and applications (Voohees, 2006). Several Customer Equity studies have been undertaken (Bell et al., 2002; Blattberg & Deighton, 1996; Dong et al., 2007; Hansotia, 2004; Hogan et al., 2002; Kumar & George, 2006; Lemon et al., 2001; Rust, Lemon, & Zeithaml, 2004; Rust, Zeithaml, & Lemon, 2004) in the past that have applied the CE concept in various ways. Customer Equity based on customer orientation at the individual marketing level is a reasonable and practical way of advancing the regeneration and growth process in companies. Rust, Zeithaml, and Lemon (2004)

suggested that CE as an individual approach is the best marketing practice since it analyzes the sub-drivers of Customer Equity which are mainly value equity, brand equity, and retention equity.

In spite of the popularity of the CE approach, previous researchers measured CE but failed to report strategies and action plans in marketing (Bell et al., 2002; Blattberg & Deighton, 1996; Dong et al., 2007; Hansotia, 2004; Hogan et al., 2002; Kumar & George, 2006; Lemon et al., 2001; Richards & Jones, 2008). This holistic approach of considering segmentation, along with potential strategies and action plans, comes under the umbrella of CEM. However, there is uncertainty as to how CEM could be conducted in order to maximize profits or CE even though CEM entailed a logical flow from analysis, to strategy, to action plans (Bruhn et al., 2008). Therefore, there is a desperate need to apply this holistic approach and consider the entire CEM process with the intent of suggesting a methodology for maximizing CE. The problem is even more apparent in the hotel industry where there has been limited application of the CEM approach to managing profitability.

### **Purposes of the Study**

The focus of the current study was to evaluate whether the CE-based segmentation approach has an effect on Customer Equity in hotels. In order to achieve the highest possible Customer Equity, the study suggested the following CEM process: (a) analyze marketing efforts, (b) evaluate marketing strategies, and (c) recommend action plans.

The specific objectives of the research were as follows:

1. Determine the core Customer Equity drivers in the hotel industry;

2. Examine the impact of CE-based segmentations in order to measure Customer Equity in the hotel industry;
3. Utilize the CEM process through CE-based segmentation to maximize Customer Equity in the hotel industry.

### **Research Questions**

To further demonstrate how three research objectives are incorporated into current research, the following specific research questions were addressed:

1. What are the core Customer Equity drivers for segmentation of the hotel industry?
2. How do the CE-based customer segments respond to marketing effort?
3. Which of the drivers maximize the Return-On-Investment (ROI) of marketing effort exerted by a hotel?

### **Research Model**

The research model for this study suggests that CE-based segmentation in the hotel industry may better highlight the customers' responsiveness to marketing effort compared to the traditional segmentation approach. Consequently, the CE-based segmentation was performed using the importance of CE drivers from the perspectives of the hotel customers. The assumption is that the importance of the CE drivers will vary by each customer and for each type of hotel they consider. Therefore, all analyses were performed at each of the CE-based segments and hotel type. This CE-based



segmentation influences the measurement of CE and further, the development of the CEM process at the end of this study.

In the next stage, the CEM process was applied. The CEM process had three steps: analysis, strategy, and action plans. The underlying premise of the analytical model is that the marketing effort responsiveness is different for each of the market segment being targeted. In effect, a company could see a differential in its Customer Equity by segmenting its markets using different criteria. This differential in CE arose because changes in the marketing effort performed by a company influenced customers' choice of hotel brands (brand switching), which in turn influenced the present value of all potential future revenue streams (Customer Lifetime Value) the company may obtain from the customers.

This difference, designated with a " $\Delta$  CE" in the model, is the driver for strategic decision-making suggested in this paper. Through an analysis of the variations in  $\Delta$  CE, strategies and specific action plans were suggested for each of the market segments within each type of hotel considered in this study. The conceptual model for this study is shown in Figure 1.

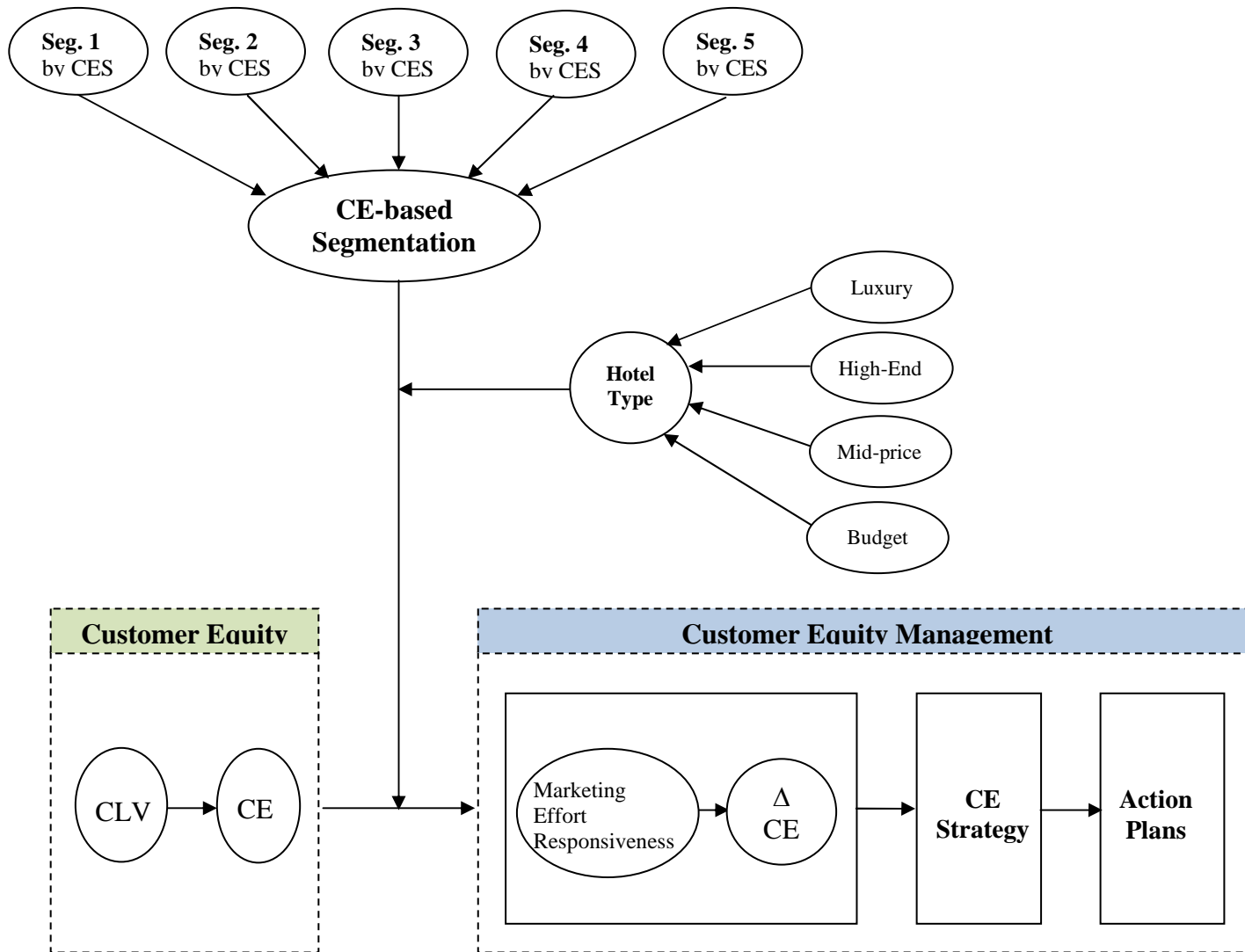


Figure 1. Conceptual Model

## **Research Propositions**

Three global research propositions act as a framework to guide the research. The first and second research propositions derived five hypotheses respectively. The detailed hypotheses are presented in Chapters 2 and 3. The third research proposition provided the process of CEM through three steps. The marketing literature justifies each proposition listed in Chapter 2 and the procedure for testing each proposition as outlined in Chapter 3. The results of analyses about each proposition are presented in Chapter 4 and discussed in Chapter 5 respectively. The research propositions of the study are identified as follows:

### ***Proposition 1:***

Determine the core Customer Equity drivers for segmentation of the hotel industry.

### ***Proposition 2:***

Demonstrate the significant CE drivers that are responsive to marketing effort for each of the CE-based segments and hotel type.

### ***Proposition 3:***

- (a) Determine the CE drivers that maximize the Return-On-Investment (ROI) of marketing effort exerted by a hotel in terms of the change in CE, and
- (b) Suggest an effective marketing action plan for each of the CE-based segments and hotel type.

## **Significance of the Study**

This study incorporated significant streams in the marketing literature (i.e., relationship marketing, service quality, brand equity, etc.) and suggested practical

application of strategies that may have profound implication on how segmentation is conducted in the hotel industry this is itself is one of the most significant contributions of this research.

The individualized marketing approach has required companies to consider how well they perform in terms of satisfying individual customers' needs and wants (Eusebio, Andreu, & Belbeze, 2006). Rust, Zeithaml, and Lemon (2004) proposed that CE is the best way to comprehend individual customers' characteristics. Therefore, by applying the CE approach to the hotel industry, the researcher provides a basis for an additional stream of research in this emerging area. Furthermore, by demonstrating the concept of Customer Lifetime Value (CLV) in the hotel industry, the researcher brings to light practical applications of seemingly esoteric research models into reality.

Unlike other studies on CE, this study takes a more holistic approach and applies the entire Customer Equity Management (CEM) process by using a CE-based segmentation approach and by developing practical strategies and specific action plans for each of the market segments and hotel type separately in the hotel industry. The CE-based segmentation approach could more specifically identify the needs of an individual customer compared to the traditional segmentation approach (i.e., socio-demographics, psychographics, etc.). Therefore, the CEM process may assist practitioners to better understand the needs of individual customers. The research model could also assist companies in improving their service quality, in retaining customers, and ultimately in improving their profitability. This study adds to the strategic customer segmentation literature by incorporating a new type of analysis based on Customer Equity (CE). By demonstrating a computer simulation approach to partly conduct the analysis, this study

gives a proactive approach for industry practitioners to develop market development strategies and action plans in the hotel industry.

### **Limitations of the Research**

Despite the significance of the study, limitations to this research exist. The measurement of CE can be obtained through several existing models yet, this research applied Rust, Zeithaml, and Lemon's (2000) and Rust, Lemon, and Zeithaml's (2004) approaches which have been successfully used in many industries such as the airline, the hotels, and the retail industries. In spite of its wide application, the model does not take into account other CE-related factors such as cost of acquisition and retention of customers, direct cost of marketing, and so forth. In addition, the model applied takes a "snapshot" approach to brand switching and assumes that the brand-switching probability of the customers remain constant with time and as determined by the one-time survey conducted for this study. This of course may not reflect reality since the customers' preferences for a hotel brand may depend on many factors that may have not been completely considered in this study.

Another limitation of this research is that it does not also consider cultural and ethnic differences in hotel purchasing habits of customers and therefore, the results may not be applicable globally. Although customer demographics were collected for this study, the data were not inculcated into the model to limit the scope of the research. Future research using this data will suggest a fuller model that will include the customers' socio-demographic characteristics.

## **Scope of the Research**

By design, the measurement of CE in this study was only based on the expected future cash-flows of the customers and did not consider the cost of obtaining and retaining such customers. It is assumed that the gross profit expected from the customers already considers all such costs related to the customers.

This result of this study is limited to frequent travelers in the United States only since all the respondents to the survey were obtained from a commercially available database of frequent travelers in the U.S. By definition, a frequent traveler is considered to be a person who completes at least 10 “trips” for business or pleasure during each calendar year as compared to about two such trips for the entire U.S. population. A “trip” is any travel for business or pleasure of more than 100 miles from home that is completed by the respondents for non-commuting purposes and that may/may not involve an overnight stay. Needless to say, the hotel buying characteristics of frequent travelers may be different than an average hotel customer. However, the focus of this study was on the high-end of the market in terms of the frequency of travel.

## **Definition of Concepts, Constructs and Industry Terms**

The following are the definition of key terms used in this study;

- ***Customers***: Travelers who have stayed in any commercially available accommodation facilities such as motel or hotel as guests during the previous 12 months.
- ***Customer Equity*** (CE): The total of the discounted lifetime values of all the firm’s customers, describing the key three drivers of Customer Equity; value equity, brand equity, and relationship equity (Rust, Zeithaml, & Lemon, 2000).

- **Value equity:** “The customer’s objective assessment of the utility of a brand, based on perceptions of what is given up for what is received” (Lemon, Rust, & Zeithaml, 2001, p. 22).
- **Brand equity:** “Subjective assessment of brand intangibles” (Lemon et al., 2001, p. 22).
- **Retention equity:** “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).
- **Customer Lifetime Value (CLV):** “The net present value (NPV) of the profit a firm stands to realize on the average new customer during a given number of years” (Pitt, Ewing, & Berthon, 2000, p. 14). CLV is a key component used in calculation of Customer Equity.
- **Market Segmentation:** To break down markets from one group to several sub-groups based on common needs as one of the most powerful tools in marketing strategy (Blocker & Flint, 2007).
- **Traditional segmentation:** Method of breaking down markets using socio-demographic variables.
- **Individualized segmentation:** Process of breaking down a market at the individual level which can lead to more efficient marketing and enhanced profitability than use of traditional segmentation methods (Neal & Wurst, 2001).
- **CE-based segmentation (CES):** Breaking down a market on the basis of Customer Equity.

- ***Customer Equity Management*** (CEM): All activities to maximize Customer Equity consisting of three dimensions: analysis, strategy, and actions (Bruhn, Georgi, & Hadwich, 2008).
- ***Marketing effectiveness***: A firm's marketing ability, given its organizational capabilities, its competition, its consumer preferences, and its other environmental constraints (Kerin & Peterson, 1998).



## CHAPTER II

### REVIEW OF LITERATURE

#### **Customer Equity**

##### **Roots of Customer Equity**

The concept of a 'customer-centered' approach in marketing theory and practice was introduced for the first time by Kotler (1967). Since the 1960s the customer-centered approach has had an impact on mainstream marketing theories like direct/database marketing (Hughes, 2000), relationship marketing (Hogan et al., 2002), customer satisfaction, (Oliver, 1980, 1997; Voorhees, 2006), service quality (Brady & Cronin, 2001; Parasuraman, Zeithaml, & Berry, 1988; Voorhees, 2006), and brand equity (Aaker, 1991; Hogan et al., 2002; Keller, 1993; Voorhees, 2006). Each of these streams in marketing has contributed substantially to a more effective approach to managing customer assets. However, taken alone, none of these approaches provide a complete solution for firms to suitably market to each customer (Hogan et al., 2002).

The conceptual roots of Customer Equity overlap with more than just an extension of any single research stream. Direct/database marketing, one of these conceptual roots, was based on understanding purchase information in individual customer information files. Originally, direct marketers used Customer Lifetime Value assessments for marketing strategy (Hughes, 2000).

However, this direct marketing stream failed to maximize the value of the customer relationship as it did not consider other operational issues such as pricing, product quality, or customer service (Hogan et al., 2002; Hughes, 2000). Typically, this research concentrated on communication and responses to individual customer transactions rather than the value of the relationship as a whole, unlike relationship marketing (Hogan et al., 2002).

Relationship marketing first focused on customer relationships as strategic assets (Hakansson, 1982). This research stream connected the interpersonal model as the focal constructs (i.e., trust, commitment, or shared values) to profitability (Hakansson, 1982; Storbacka, 1994). Brodie, Glynn and Van Durme (2002) reviewed the link between customer relationship and profitability by integrating relationship thinking with financial thinking. Nevertheless, this relationship marketing failed to result in significant economic gains. That all customer relationships eventually led to long-term commitment from a customer appeared to be inconsistent. Companies found that the subject of their company-to-customer interactions was not entirely successful because not all customers wanted a committed relationship with a company (Hogan et al., 2002).

A third marketing perspective based on customer satisfaction and service quality focused on satisfying customers' needs rather than dealing with relationships on a transactional level (Hogan et al., 2002). Research on service quality has identified the causal linkages between antecedents of service quality and Customer Lifetime Values (Anderson, Fornell, & Lehmann, 1994; Rust, Zahorick, & Keiningham, 1995). Ultimately, the service quality perspective impacted customer satisfaction and customer retention (Bolton & Lemon, 1999; Verhoef, Franses, & Hoeskstra, 2001). Service quality

contributed to the Customer Equity approach since the quality issue was one of actionable sub-drivers of value equity, which is one driver of Customer Equity (Rust et al., 2000). However, this research stream did not cover Customer Equity as a whole and it also did not account for other aspects of marketing such as the tangible product, communications, and channel distribution (Hogan et al., 2002). These other aspects of the marketing mix were significant in the process of Customer Equity Management (Hogan et al., 2002).

Research on brand equity is another marketing stream that has made a substantial contribution to the Customer Equity approach (Hogan et al., 2002). This research stream has provided substantial insights into the relationship between a firm and its consumers. This stream has been recognized as “a measurable asset that should be included in a firm’s financial statements” (p. 6), which underlines its importance (Hogan et al., 2002). However, since brand equity traditionally focused on the brand of the products (Ambler, Bhattacharya, Edell, Keller, Lemon, & Mittal, 2002), it underrepresented the financial contribution of the customer (Hogan et al., 2002).

Each of these earlier research streams showed the importance of managing the customer as an asset of the firm, yet each stream presented limited support for the Customer Equity theory as a whole. These streams did not cover all aspects of Customer Equity to establish effective strategies. The current study introduces this issue and Customer Equity research as a derivative from all of the main research streams in marketing. Managing customers as assets is a primary goal of Customer Equity in this study. This is done by examining the actual financial contribution of the customers.

Furthermore, this study develops a competitive strategy through the process of Customer Equity Management in terms of channel distribution.

### **Definition of Customer Equity**

Several researchers have defined Customer Equity (CE) since the concept gained importance (Blattberg & Deighton, 1996; Blattberg, Getz, & Thomas, 2001; Bruhn et al., 2008; Dong et al., 2007; Dorsch & Carlson, 1996; Hogan et al., 2002; Kumar, & George, 2006; Rust et al., 2000; Rust, Lemon, & Zeithaml, 2004; Rust, Zeithaml, & Lemon, 2004). Blattberg and Deighton (1996) defined the term as “the sum of the discounted, expected contributions of all current customers” (p. 138). Dorsch and Carlson (1996) mentioned that CE is “the value of those resources that customers supply to a retailer even though they (i.e., the customer) retain property rights to (ownership of) the resources” (p. 255). In the book *Driving Customer Equity: How Customer Lifetime Value is reshaping corporate strategy*, CE was defined as “the total of the discounted lifetime values of all the firm’s customers (Rust et al., 2000, p. 54). These authors went on to state that “a firm is only as good as its customers think it will be the next time they do business with that firm” (p. 54). Lemon et al. (2001) added that Customer Equity is “the key to long-term success” (p. 21). According to Rust et al.’s (2000) study, the key drivers of CE for a firm’s growth were described as value, brand, and relationship equity. These authors redefined CE as “the total of the discounted lifetime values summed over all of the firm’s current and potential customers” (Rust, Lemon, & Zeithaml, 2004, p. 110).

Bayon et al. (2002) defined CE as “the sum of the discounted cash surpluses generated by present and future customers (within a certain planning period) for the duration of the time they remain loyal to a company, i.e. the sum of individual Customer Lifetime Values from the company’s point of view” (p. 213). Hogan et al. (2002) suggested that CE is “a combination of the value of a firm’s current customer’s assets (those customers who currently buy from them) and the value of the firm’s potential customer’s assets (those customers who currently do not buy from the firm because they buy from a competitor or because they are not yet in the market)” (p. 7). Additionally, Hogan et al. (2002) mentioned that tangible (e.g., plant and equipment) and intangible assets (e.g., brands, channel relationships) of the firm do not account for the total value of all assets of the firm unless Customer Equity is included.

Kumar and George (2006) considered CE as “the asset value of customers and it can be measured using different aggregate and disaggregate level approaches” (p. 157). Dong et al. (2007) explained CE as “the present value of the expected benefits (e.g., gross margin) less the burdens (e.g., direct costs of servicing and communicating) related to the customers” (p. 1243). This description was based on Dwyer’s (1997) definition of CE. Wiesel et al. (2008) mentioned that CE was “the sum of the Customer Lifetime Values (after marketing expenditures) of all the firm’s current customers during a time period  $t$ .” (p. 4). The description of Wiesel et al.’s (2008) study was also derived from Blattberg and Deighton’s (1996) definition.

Finally, Bruhn et al. (2008) referred to CE as “the value of a firm's entire customer-base or the aggregate of the customers' individual value (in the sense of Customer Lifetime Value)” (p. 1). Richards and Jones (2008) defined Customer Equity

as “the discounted sum of each customer's CLV less any on-going investments required maintaining customer relationships” (p. 122). They explained CLV as a primary component for measuring CE.

After taking the prior definitions into consideration, CE was defined as the total of the discounted lifetime values (or net present values) of all the customers of a firm. Some researchers identify all the customers as a combination of current and potential consumers (Bayon et al., 2002; Hogan et al., 2002). Therefore, this current study defines CE as the sum of the net worth of each customer as represented by the net present value (NPV) of the streams of revenues that a firm can accurately estimate over the expected life of the customer.

### **Customer Lifetime Value**

From the company’s point of view, CE is the sum of individual Customer Lifetime Values (CLV) generated by present and future customers within a certain period (Bayon et al., 2002). Past research on CE demonstrated the importance of considering CLV as a key component to calculating Customer Equity (Bayon et al., 2002; Berger & Nasr-Bechwati, 2001; Blattberg & Deighton, 1996; Hanssens, Thorpe, & Finkbeiner, 2008; Kumar & George, 2006; Pitt, Ewing, & Berthon, 2000; Rust, Lemon, & Zeithaml, 2004; Wiesel et al., 2008). Each study has defined CLV similarly, with slight variations.

Dent (1991) stated that “the only way to measure the return on individualized marketing efforts is to calculate the average lifetime purchases and profitability of a customer, or the Lifetime Value of a Customer” (p. 43). Tirenni, Labbi, Berrospi, Elisseff, Bhoose, Pauro, and Poyhonen (2007) defined CLV as “the sum of the discounted cash flows that a customer generates during his/her relationship with the company” (p.

554). The description of CLV was adapted from a definition by Berger and Nasr (1998). Pitt et al. (2000) also defined CLV as “the net present value of the profit a firm stands to realize on the average new customer during a given number of years” (p. 14). Berger and Nasr-Bechwati’s (2001) study used Customer Equity and Customer Lifetime Value interchangeably because CLV was used to quantify and measure Customer Equity. Rust, Lemon, and Narayandas (2004) defined CLV as “a measure of the future profit flow from the customer to the firm, adjusted for the customer’s future probability of purchasing from the firm, and appropriately discounted to the present” (p. 23). In addition, Venkatesan and Kumar (2004) referred to CLV as “a metric to acquire, grow, and retain the ‘right’ customers” (p. 106). Gupta, Hanssens, Hardie, Kahn, Lin, and Ravishanker (2006) defined CLV as “the present value of all future profits obtained from a customer over his or her life of relationship with a firm” (p. 141). Richards and Jones (2008) explained CLV as “the net present value of a single customer's value” (p. 122). Individual Customer Lifetime Values led to estimating CE, which in turn can be used to measure Return-on-Investment (ROI) in marketing efforts (Richards & Jones, 2008). Therefore, it seemed that CLV is the net present value of all future profits obtained from a customer during his or her lifetime relationship with a firm.

After recognizing the importance of CLV, research turned to quantifying its significance (Berger & Nasr, 1998; Dwyer, 1997; Hughes & Wang, 1995; Wang & Splegel, 1994). Several CLV modeling approaches have been suggested to calculate CLV by sequentially measuring CE (Gupta et al., 2006; Wangenheim, 2005). Gupta et al. (2006) reviewed several implementable types of CLV modeling such as RFM models, Probability Models, Econometric Models, Persistence Models, and other models. Despite

various CLV modeling approaches, most researchers used the fundamental formula to calculate CLV (Reinartz & Kumar, 2003). The fundamental CLV formula consists of the combination of ‘price paid by a customer at time  $t$  ( $p_t$ ),’ ‘direct cost of servicing the customer at time  $t$  ( $c_t$ ),’ ‘discount rate or cost of capital for the firm ( $i$ ),’ ‘probability of customer repeat buying or being “alive” at time  $t$  ( $r_t$ ),’ ‘acquisition cost (AC),’ and ‘time horizon for estimating CLV ( $T$ ).’ Appendix B presents a summary of various CLV formulas.

This study utilized the fundamentals of CLV and applied Rust et al.’s (2000) and Rust, Lemon, and Zeithaml’s (2004) methods in order to calculate CLV. CLV was pre-calculated to measure CE. Rust, Lemon, and Zeithaml’s (2004) approach used common components of the fundamentals of CLV such as the amount of purchase, the number of purchases, discount rate, and contribution margin. The specific components and formula for calculating CLV is described in the methodology section of this paper.

### **Measurement of Customer Equity**

Several studies describe the measurement of CE on the basis of calculating CLV. Overall, the measurement of CE can be divided into aggregate and disaggregate level approaches (Kumar & George, 2006). The aggregate level approach is a top-down approach computed using firm level measures (Kumar & George, 2006). In this aggregate level, an average CLV of a firm’s customer who is available is used for measuring CE. On the other hand, the 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; Blattberg & Deighton, 1996; Hansotia, 2004; Hanssens et al., 2008; Rust, Lemon, & Zeithaml, 2004). Similar steps were taken to quantify CE. The first step measured expected contribution of each customer toward offsetting the company's fixed costs over the expected life of that customer. The second step discounted the expected contributions to a net present value at the company's target rate of return for marketing investments. Finally, the discounted, expected contributions of all current customers were added together (Blattberg & Deighton, 1996). Under this aggregate level approach, Blattberg and Deighton (1996) calculated the optimal acquisition and retention rate by identifying the shape of the acquisition curve and finding the acquisition rate where CE is maximized. Then, they incorporated two rates to optimize CE (Blattberg & Deighton, 1996). In order to maximize CE, add-on sales and cross-selling were considered as additional sales continuously enhance the value of the customer relationship. Furthermore, Blattberg and Deighton (1996) suggested that CE gains and losses against marketing programs should be tracked and separate marketing plans for acquisition and retention efforts should be developed (Blattberg & Deighton, 1996).

Using the aggregate level approach, Berger and Nasr-Bechwati's (2001) study had a similar concept to Blattberg and Deighton's (1996) approach in which acquisition and retention were considered and integrated. Berger and Nasr-Bechwati (2001) developed a general approach to the optimal allocation of promotion budget which "optimally allocated an already set promotion budget under different market conditions, focusing on the acquisition (*of new customers*)/retention (*of existing customers*)

allocation” (p. 50) through a combination of the two concepts of decision calculus and customer equity.

Berger and Nasr-Bechwati (2001) adopted the procedure used by Blattberg and Deighton (1996) in which Customer Equity is measured as the sum of two net present values: (a) the return from acquisition spending, and (b) the return from retention spending. In a similar study, Hansotia (2004) considered customers new (i.e., the acquisition) and veteran (i.e., the retention) customers. Hansotia (2004) discusses how customer metrics should be organized by new and veteran customer data to manage and increase CE successfully. He argued that an ‘*activity-or process-based marketing organizational structure*’ is that the marketing organization should be established with two line divisions (e.g., customer acquisition and veteran customer management) and three staff divisions (e.g., finance & customer metrics, marketing services, and product management) for enhancing CE (Hansotia, 2004).

Rust, Lemon, and Zeithaml (2004) also used the aggregate level method. Their approach incorporated customer-specific brand switching matrices by taking the average CLV of a firm’s customers (Rust et al., 2000; Rust, Lemon, & Zeithaml, 2004). In their research, information about the focal brand and the competing brand was used to model acquisition and retention of customers in terms of brand switching (Kumar & George, 2006). They presented a unified strategic framework on the basis of projected financial return, which dealt with the change in CE relative to the incremental expenditure necessary to produce the change (Rust, Lemon, & Zeithaml, 2004). Rust, Lemon, and Zeithaml (2004) additionally examined a customer’s probability of switching from one brand to another. The probability of brand switching contributed to maximize CE by

applying the issue of whether customers are willing to choose a different brand or purchase the same brand. Eventually, Rust, Lemon, and Zeithaml, (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.

Under the aggregate level approach, classifying customers into a different customer matrix was the same. Hanssens et al. (2008) broke down their study into three major measurable components: customer acquisition, customer retention, and cross- or up-selling to existing customers. Previous research failed to identify specific shortages in attracting various customers within defined marketing mixes of marketing activities (Hanssens et al., 2008). To keep various customers, Hanssens et al.'s (2008) study analyzed the Wachovia Company and how its management focused on maximizing its economic value using customers' lifetimes. The expert team from a leading market research firm, TNS and from UCLA's Anderson School of Management gathered data and presented models, which were a reliable basis for making future allocation decisions. Using these models assisted Wachovia to make better marketing investment decisions (Hanssens et al., 2008). This aggregate level approach aided in maximizing CE by improving the drivers of CE while the disaggregate level approach aided in maximizing CLV by implementing customer-level strategies (Kumar & George, 2006).

Several researchers used this disaggregate level approach in order to maximize CE (Bayon, et al., 2002; Venkatesan & Kumar, 2004; Wiesel et al., 2008). Bayon et al. (2002) analyzed CE through three steps: (a) They determined industry-specific direct and indirect CLV drivers; (b) they integrated both direct CLV drivers and indirect drivers which described variables in the customer database for individual customers; (c) they

operationalized general CLV and Customer Equity calculation models. This marketing practice added CE as the key driver of shareholder value from business activity (Bayon et al., 2002).

According to Bayon et al.'s (2002) study, CE is the monetary value potential of a company's current and future customers. Therefore, the adequate marketing approach enhanced this value potential of the company (Bayon et al., 2002). In terms of segmentation, Bayon et al. (2002) clustered customers in segments with similar values for the CLV drivers indicated in the database. The average customer retention was estimated and individual CLV for the customer base was calculated. Bayon et al. (2002) determined the mean value and standard deviation of the CLV in the different segments. The disaggregate level did not use an average CLV at the level of a firm but rather individual CLV at a customer level.

In another study, Venkatesan and Kumar (2004) used CLV as a metric for customer selection and marketing resource allocation. The authors selected customers on the basis of their lifetime value. They chose customers whose lifetime values offered higher profits in future periods (Venkatesan & Kumar, 2004). Venkatesan and Kumar (2004) suggested that the predicted purchase frequency influences total profit with marketing costs and contribution margin. The predicted purchase frequency was comprised of *switching costs* (e.g., upgrading and cross-buying), *involvement* (e.g., bidirectional communication, number of returns, and number of web-based contacts) and *previous behavior* (e.g., product category purchased). The predicted purchase frequency was used to calculate CLV. Their study analyzed a potential for improved profits by allocating marketing resources efficiently (Venkatesan & Kumar, 2004). Ultimately, this

dynamic framework assisted to maintain or improve relationships between customers and the firm (Venkatesan & Kumar, 2004).

Recently, Wiesel et al. (2008) researched CE in terms of financial reporting, which differs from previous research which approached CE at different levels by a customer's matrix. Wiesel et al. (2008) broke down three customer value metrics: *customer's cash flows* (CLV before marketing expenditures), *acquisition expenditures* (lifetime acquisition expenditures), and *retention expenditures* (lifetime retention expenditures). They argued that it is appropriate to combine these three customer value metrics with the discount rate to measure CE since the measures of retention and acquisition expenditures per customer should reflect the investments. The goal of Wiesel et al.'s (2008) study was to provide information to assist current and potential investors, creditors, and other users to assess the amounts, timing, and uncertainty of prospective cash receipts on the basis of financial statements from the International Accounting Standards Board [IASB] (2004). However, realistically financial statements including balance sheets, profit and loss statements, and notes did not derive practical applications for the objective of financial reporting. Therefore, Wiesel et al.'s (2008) approach tried to bridge the gap between what financial statements are able to achieve and the objective of financial reporting by adding information about the main factors that emphasized a firm's performance (IASB, 2005).

Upon taking into consideration all of these different levels of approaches, the current study approached the aggregate level by using an average CLV of available customers at a firm's level as well as at a segment level. Additionally, this study

computed CLVs of available single customer and then calculated an average CLV in terms of the CE-based segments and hotel type.

### **Brand Switching Matrix**

Studies on brand switching behavior or brand switching modeling have been conducted by many researchers over a long period of time indicating to its importance for evaluating marketing mix, and for identifying marketing strategies (Carpenter & Lehmann, 1985; Colombo & Morrison, 1989; Deighton, Henderson, & Neslin, 1994; Heerde, Gupta, & Wittink, 2003; Hsu & Chang, 2003; Morgan & Dev, 1994; Sun, Neslin, & Srinivasan, 2003). Knowing about customers' brand switching behavior is critical for a firm for its survival, and to hold its existing customers (Hsu & Chang, 2003).

Hsu and Chang (2003) identified the importance of advertising as one of the key components of a marketing mix plan. Customers who are sensitive to advertising and promotion may be inclined to switch brands (Hsu & Chang, 2003). Hsu and Chang (2003) classified consumers by segmenting individuals according to different levels of advertising perceptions (e.g., attraction, function, brand, promotion, celebrity, and package) and compared them with their brand switching behavior. Deighton, Henderson, and Neslin (1994) examined brand switching and repeat purchasing behavior which are affected by advertising. In other words, advertising has an impact on customers' decision to stay with a brand (Deighton et al., 1994). Additionally, Deighton et al. noted that advertising can increase the probability of brand switching.

Morgan and Dev (1994) suggested that branding switching is influenced by three categories of variables: (a) context variables, changes in usage context or situation (e.g.,

destination, method of payment, purpose of travel, etc.); (b) control variables, marketing mix variables (e.g., price, satisfaction, etc.) which are directly controlled by the firm; (c) customer variables, customer background variables (e.g., socio-demographic characteristics). High probability of brand switching is often controlled by these three categories of variables (Morgan & Dev, 1994).

From the perspective of the hotel industry, the context variables have an impact on travelers' or guests' selection of lodging accommodations since they may switch hotel brands depending on these changes in the usage context or situation during their stay (Morgan & Dev, 1994). The control variables were also of importance when guests chose the list of accommodations that they wish to add to their hotel membership or travel club membership based on points or bonuses (Morgan & Dev, 1994). Additionally, the customer variables directly influenced guests' decision in selecting hotels (Morgan & Dev, 1994).

Sun, Neslin, and Srinivasan (2003) examined whether brand switching elasticities derived from using logit modeling techniques were better or worse than using structural models. The over and under estimation of the models on promotional impact was calculated. It was concluded that reduced-form model estimates of brand-switching elasticities can be overestimated and a dynamic structural model is best for mitigating the problem (Sun et al., 2003).

Bucklin, Russell, and Srinivasan (1998) examined the relationship between market share elasticities and brand switching probabilities. Bucklin et al. (1998) defined that brand switching probabilities are "estimated from a panel or survey data either as cross-classification probabilities (proportion of times brand *i* and *j* are purchased on two

adjacent occasions), or as row-conditional switching probabilities (of those who purchased brand *i* last time, the proportion purchasing brand *j* during the next purchase occasion)” (p. 99). Additionally, the study discussed that brand switching probabilities are assessed correctly even though brand switching probabilities are not derived from the direct managerial actions (Bucklin et al., 1998). Consequently, research on brand switching may have significant practical implications for managers in reality (Bucklin et al., 1998).

An example application of brand switching related to CLV is described (see Table 1). Suppose that a customer stays at “Hotel A” once per month, on average, and pays an average of \$100 per stay in the hotel. Suppose that the customer recently stayed at “Hotel A.” Suppose that the customer’s switching matrix is such that 60% of the time he will re-stay at “Hotel A,” given that he stayed at “Hotel A” last time, and 40% of the time he will stay at “Hotel B.” Suppose that whenever the customer last stayed at “Hotel B” he has a 50% chance of staying at “Hotel A” the next time and a 50% chance of staying at “Hotel B.” Consider the customer’s next hotel stay.

Table 1. Brand Switching Matrix Probability

|         | Probability of First Stay | Probability of Second Stay |
|---------|---------------------------|----------------------------|
| Hotel A | 60%                       | 50%                        |
| Hotel B | 40%                       | 50%                        |
| Total   | 100%                      | 100%                       |

Note:

<sup>a.</sup> Switching matrix is such that the customer stays at Hotel A 60% of time.

<sup>b.</sup> Probability of selecting Hotel A = {(Switching probability of the customer) × (Probability of first stay at hotel A)} + {(1-switching probability of the customer)\*(probability of second stay at hotel A)}

<sup>c.</sup> Probability of selecting Hotel B = {(Switching probability of the customer) × (Probability of first stay at hotel B)} + {(1-switching probability of the customer)\*(probability of second stay at hotel B)}

<sup>d.</sup> If there are regular relationship maintenance expenditures, they need to be discounted separately and subtracted from the CLV.



The customer most recently stayed at Hotel A; thus, the probability of the customer's staying at Hotel A in the next stay is .6, and the probability of him or her stay at Hotel B is .4. To obtain the probabilities for the customer's next stay; we simply multiply the probabilities by the switching matrix. The probability of staying at Hotel A becomes  $(.6 \times .6) + (.4 \times .5) = .56$ , and the probability of staying at Hotel B becomes  $(.6 \times .4) + (.4 \times .5) = .44$ . Thus, we can calculate the probabilities of the customer's stay at Hotel A and Hotel B as many stays as we choose by successive multiplication by the switching matrix. The summation of these across all stays (to infinity or, more likely, to a finite time horizon) yields the customer's CLV for each hotel.

### **Drivers of Customer Equity**

With the growing importance of Customer Equity, many recent studies have indentified the actionable drivers of CE (Berger & Nasr-Bechwati, 2001; Blattberg & Deighton, 1996; Blattberg, Getz, & Thomas, 2001; Bruhn et al., 2008; Dong et al., 2007; Kumar & George, 2006; Dorsch & Carlson, 1996; Hansotia, 2004; Hanssens et al., 2008; Hogan et al., 2002; Rust et al., 2000; Rust, Lemon, & Zeithmal, 2004; Wiesel et al., 2008). The predominant drivers of CE were value, brand, and relationship equity (Lemon et al., 2001; Rust et al., 2000; Rust et al., 2004). Each of these key drivers within itself can play a significant role to increase CE as well as to increase the connection between these key drivers and CE, and to provide a strategy for firms to appropriately respond and develop to changing customer needs. This section describes these key drivers of CE based on previous research of Lemon et al. (2001) and Rust et al. (2000). Figure 2 illustrates CE.

There are three key drivers: (a) Value equity is the customer's *objective* evaluation of the firm's offerings; (b) brand equity is the customer's *subjective* view of the firm and its offerings; and (c) retention (relationship) equity is the customer's view of the strength of the *relationship* between the customer and the firm (Rust et al., 2000, p. 55).

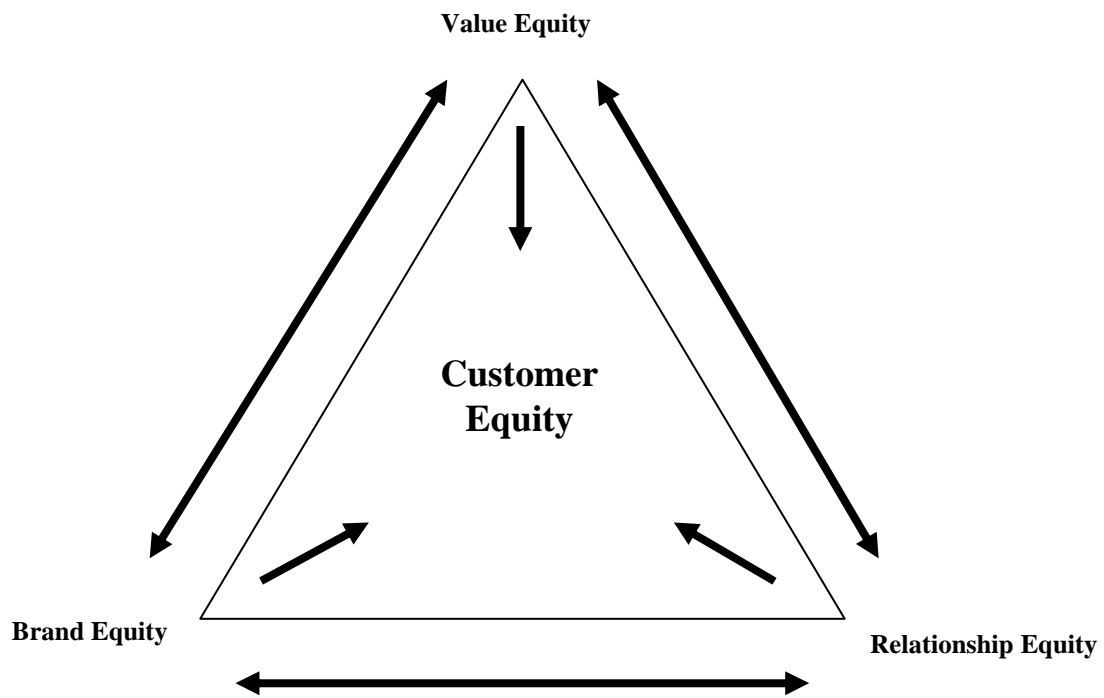


Figure 2. Customer Equity Defined (Rust, Zeithaml, & Lemon, 2000)

### ***Value Equity Driver***

The value equity driver is the foundation of a customer's relationship with a firm. Lemon et al. (2001) defined value equity as "the customer's objective assessment of the utility of a brand, based on perceptions of what is given up for what is received" (p. 22). According to the research of Lemon et al. (2001) and Rust et al. (2000), value equity is influenced by three factors: (a) *quality* (a combination of objective physical and non-

physical aspects of the products and services), (b) *price* (the cost which the firm requires the customer to pay for the products and services), and (c) *convenience* (the actions that reduce the customers' time costs associated with search and efforts to do business with the firm).

Quality, price, and convenience, the sub-drivers that influence value equity, each plays a role in the customer's relationship with the firm. Previous research on service quality suggest that firms can increase the benefits that the customers receive by improving *quality*, a sub-driver of value equity (Anderson & Sullivan, 1993; Cronin, Brady, & Hult 2000; Gazzoli, Hancer, & Park, 2009; Harris & Goode, 2004; Parasuraman et al., 1988; Parasuraman, Berry, & Zeithaml, 1991; Taylor, 1997; Voohees, 2006). Another sub-driver of value equity is *price*. Several researchers have proposed that *price* is important when a firm improves buyers' perceptions about the quality of its products with respect to its selling price (value) (Dodds, Monroe, & Grewal 1991; Grewal, Monroe, & Krishnan, 1998; Zeithaml, 1988). Firms control price by reducing the cost that customers have to pay when receiving service (Voohees, 2006, p. 24). The third sub-driver of value equity is *convenience* which is defined as, "resources such as time, opportunity, and energy that consumers give up to buy goods and services" (Berry, Seiders, & Grewal, 2002, p. 2). Kelly (1958) and Kotler and Zaltman (1971) proposed that convenience is an attribute that reduces the nonmonetary price of a product. Brown (1990) suggested that convenience may be seen as a multinational construct to underline the strategic and tactical marketing opportunities in a firm. Therefore, quality, price, and convenience are key sub-drivers of value equity because firms can use them to influence customers who purchase their products and services.

As one key driver of CE, value equity also has characteristics which are central for influencing purchases made among competing products (Rust et al., 2000). In order to improve value equity, a key factor should be found to regenerate mature products since a firm provides better products and services to customers (Lemon et al., 2001). Therefore, these three sub-drivers of value equity are considered significant factors during customers' hotel selection in the hospitality industry in terms of CE (Voohees, 2006). Figure 3 illustrates value equity.

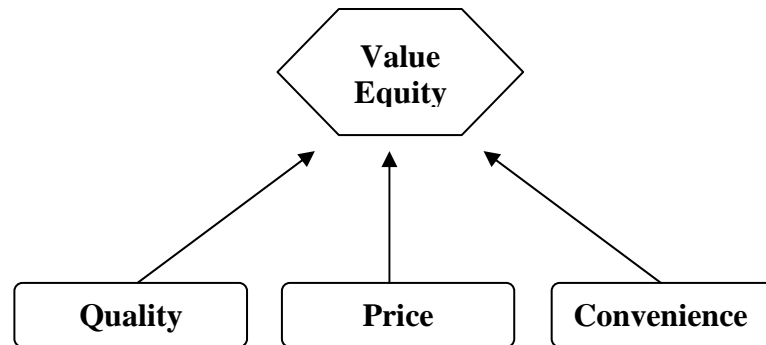


Figure 3. Actionable Drivers of Value Equity (Rust, Zeithaml, & Lemon, 2000)

### ***Brand Equity Driver***

The other driver of CE is brand equity. Brand is one of the significant concepts of marketing literature since consumers consider the relationship between brands and companies to be important (de Chernatony, 1999). To interrelate and integrate brands and firms implied that companies should differentiate oneself in business and communicate emotionally with customers in providing and performing their products and services (Berry, 2000). Thus, it is necessary to comprehend the role which brand associations play in the consumers' evaluation process (Supphellen, 2000). Brands

uniquely contribute to the marketing of a firm (Keller, 1998). Consumers invariably have a brand image in their brand knowledge structure (Hoeffler & Keller, 2003). At the same time, brand equity is significant in order for companies to understand CE.

Value equity is a customer's objective evaluation of the firm's products and services while brand equity is the customer's subjective view. The brand equity driver was built through image as a magnet to attract new customers to the firm, and it is a reminder to customers about the firm's products and services (Lemon et al., 2001). It is therefore also the customer's emotional tie to the firm. Consequently, brand equity is created when customers have positive perceptions about products and services a firm has to offer. Lemon et al. (2001) defined brand equity "as the customer's subjective and intangible assessment of the brand, above and beyond its objectively perceived value" (p. 22).

Many researchers have studied brand's impact and significance in marketing (Aaker & Keller, 1990; Grewal, Krishnan, Baker, & Borin, 1998; Hoeffler & Keller, 2003; Keller, 1998; Yoo & Donthu, 2001). According to Lemon et al. (2001) and Rust et al. (2000), brand equity had three actionable sub-drivers: *brand awareness*, *attitude toward the brand*, and *corporate ethics*. However, Yoo and Donthu (2001) proposed that brand equity has four dimensions; *brand loyalty*, *brand awareness*, *perceived quality of brand*, and *brand associations*. Keller (1998) classified brand equity in two broad categories: *brand awareness* and *brand image* as brand knowledge. The first category, brand awareness consisted of *brand recall* and *brand recognition*. The second category, brand image included *types*, *favorability*, *strength*, and *uniqueness of brand associations*.

Keller (1998) categorized *brand association* into attributes, benefits, and attitudes. Berry (2000) categorized brand equity into *brand awareness* and *brand meaning/image*.

Based on previous classifications of brand equity, it can be comprised of brand awareness, brand loyalty, brand image. These dimensions were mostly used to explore the findings of marketing and consumer behavior research in relation to brand equity (Barwise, 1993). The current study based brand equity construct on the research of Lemon et al. (2001) and Rust et al. (2000). Other actionable sub-drivers of brand equity, *brand image* and *brand loyalty* were also added. These actionable sub-drivers were developed as brand equity in order to understand CE.

*Brand awareness* refers to “the tools under the firm’s control that can influence and enhance brand awareness, particularly marketing communications” (Lemon et al., 2001, p. 22). Aaker (1991) defined brand awareness as “the ability for a buyer to recognize or recall that a brand is a member of a certain product category” (p. 61). Some researchers proposed that brand awareness consists of brand recognition and recall (Keller, 1993; Rossiter & Percy, 1987). *Brand loyalty* was defined as “the attachment that a customer has to a brand” (Aaker, 1991, p. 39). Brand loyalty refers to the tendency to be loyal to a focal brand, which is demonstrated by the intention to buy the brand as a primary choice (Oliver, 1997). *Attitude toward the brand* refers to “the extent to which the firm is able to create close connections or emotional ties with the consumers” (Lemon et al., 2001, p. 22). Attitude toward the brand in turn is influenced by the specific character of the media campaigns and direct marketing used by the firm. There are several studies on consumer attitude in consumer behavior (Ajzen & Fishbein, 1977; Oliver, 1980, 1981; Sheppard, Hartwick, & Warshaw 1998). A study by Yoo and

Donthu (2001) presented brand loyalty as “the tendency to be loyal to a focal brand, which is demonstrated by the intention to buy the brand as a primary choice” (p. 3). The current study’s definition of attitude is based on Oliver’s (1997) study. Brand loyalty is often considered to be similar to attitude toward a brand.

*Corporate ethics* is another factor that affects a customer’s perception of brand. It can be defined as the specific actions a company takes such as: community sponsorships or donations; firm privacy policy; and employee relations that can have a positive impact on customers’ perceptions of the firm (Lemon et al., 2001; Rust et al., 2000). There are several studies on corporate ethics in several industries (Mitchell, 1994; Lagace, Dahlstrom, & Gassenheimer, 1991; Robertson & Anderson, 1993). Mitchell (1994) suggested that customers have increasing concern for the environment and corporate ethics. Customers may focus on their trust in the product or service provider, and not just on the brand. In other words, customers consider other things such as sponsorships and charity in the community as being critical to the evaluation of the brand (Mitchell, 1994). Figure 4 illustrates brand equity.

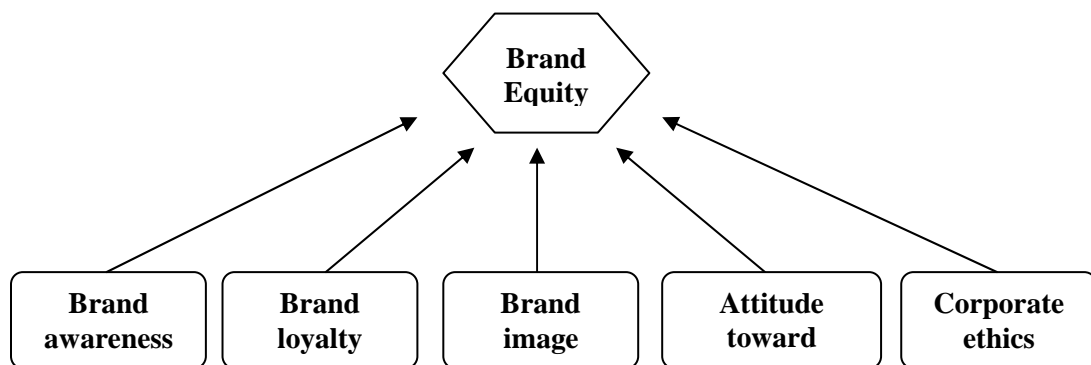


Figure 4. Actionable Drivers of Brand Equity

Lemon et al. (2001) discussed brand equity as the most important driver to attract low-involvement customers, to increase existing customers re-purchase, and to recommend the products and services to others who have no experiences with the products and services of the firm. One important consensus among the definitions of brand equity is that it is the incremental value of a product due to the brand name (Marketing Science Institute, 1991). Collectively, brand equity consisted of brand awareness, brand loyalty, brand image, attitude toward the brand, and corporate ethics. These actionable specific dimensions may be helpful in understanding brand equity in terms of CE; thus, this study considers brand equity as one of the key drivers of CE in order to capitalize CE.

### ***Relationship (Retention) Equity Driver***

The relationship of a firm with its customers is another important driver that has to coexist with designed brand equity and value equity (Lemon et al., 2001). Relationship equity is intended to enhance the “stickiness” of the relationship with the customers. That is, even though firms may be able to attract new customers to its product with its strong brand, it is not enough to retain existing customers or to acquire new customers (Lemon et al., 2001).

Lemon et al. (2001) defined relationship equity as “the tendency of the customer to stick with a brand, above and beyond the customer’s objective and subjective assessments of the brand” (p. 22). The primary goal of building programs for retention equity was to maximize both the likelihood and size of repeat future purchases, while minimizing the likelihood that a customer may purchase from or switch to a competitor



(Rust et al., 2000). As actionable sub-drivers of relationship equity, this study focused on *loyalty programs, special recognition and treatment programs, affinity and emotional connection programs, and community-building programs* as developed by Lemon et al., (2001) and Rust et al. (2000).

Since the customer-centered approach was presented in the literature by Kotler (1967), many researchers in marketing have focused on consumer satisfaction and loyalty (Bendapudi & Berry, 1997; Bolton, 1998; Bolton, Kannan, & Bramlett, 2000; Keh & Lee, 2006; Oliver, 1980, 1997; Rust et al., 2000). Bolton et al. (2000) proposed that a firm's *loyalty reward programs* may have a positive effect on customer evaluations, and buying behavior for the long term. Several researchers suggested that loyalty programs assist customers to increase their satisfaction level and have a positive influence on the long-term financial performance of the firm (Anderson et al., 1994). O'Brien and Jones (1995) pointed the importance of the loyalty program as they will increase the usage of a firm's products or services. Consequently, Bolton et al. (2000) proposed that firms must quantify such loyalty program's influence on future purchase behavior in order to determine their long-term efficacy. Loyalty programs appeared to reward or compensate customers for their purchase behavior (Rust et al., 2000).

However, the firm's best customers can value other types of benefits more than monetary rewards. *Special recognition and treatment programs* can be provided as an example of that appeared in the airline industry. Many airlines had a "platinum" level membership program which has benefits such as early boarding and calling the customer by name at check-in. These treatments were appreciated as highly as the loyalty (reward) programs such as double frequent flyer miles and upgrades to first class (Rust et al.,

2000). One such program, the Sears Best Customer Program, utilized a program that gave customers a special *Sears credit card* identifying them as a *Sears Best Customer* when they spent more than a certain dollar amount (Durham, 1996). This program reported that the best customers preferred the nonmonetary benefits such as better treatment service rather than extra discounts and sales offers (Durham, 1996; Lemon et al., 2001).

*Affinity and emotional connection programs* is another nonmonetary customer commitment program. These programs encouraged group affinity to tap into a customer's interests and thereby strengthen the emotional connection to the firm (Rust et al., 2000). The success of an affinity program/emotional connection program depended on the ability of the firm to identify and access a key customer interest or emotional link (Rust et al., 2000). Companies should target the affinity group members to be acutely interested in a firm's products and services and to invest time and effort in understanding more about the affinity group (Johnson, 1998).

The other actionable sub-driver of relationship equity is *community-building programs*. These programs gave firms the opportunity to build upon the brand personality to create a customer community. Depending on a firm's products and services this influenced the creation of a customer community. However, creating the customer community was dependent on the "personality" of the firm and the motivations of its customers (Rust et al., 2000). This equity was improved to the same extent when the firm is viewed positively in the community (Lemon et al., 2001). Figure 5 illustrates relationship equity.

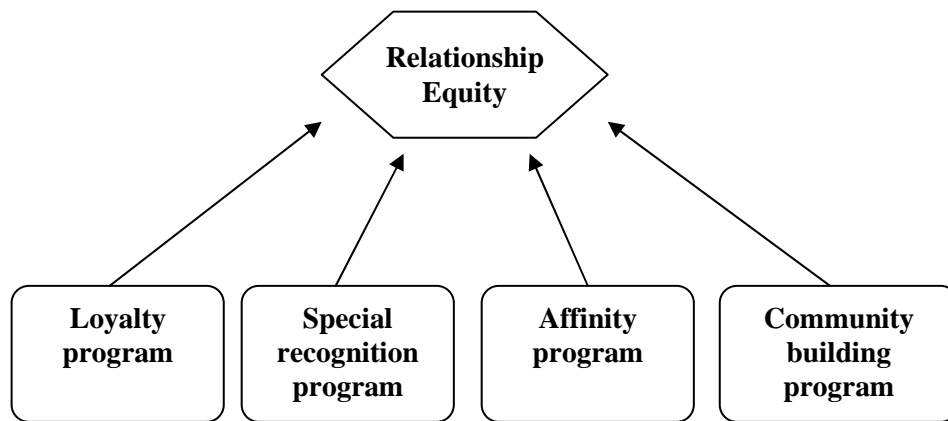


Figure 5. Actionable Drivers of Relationship Equity

Ultimately, these programs for relationship equity may make the company increase profitability (Lemon et al., 2001). Pearson and Gessner (1999) emphasized the importance of customer retention (relationship between a customer and a company) like loyalty. A 5% improvement in customer retention could result in an 85% increase in profits in the banking industry, according to their article in the Harvard Business Review (Pearson & Gessner, 1999). Similarly, the Council on Financial Competition reported that a 5% increase in customer retention could result in an 80% increase in profits (Pearson & Gessner, 1999). Therefore, customer retention is also important to measuring CE since retention increases profitability by increasing the number of streams of revenue from customized products and services.

Customer Equity became more significant in the business of marketing through key sub-drivers: *value equity* (i.e., quality, price, and convenience), *brand equity* (i.e., brand awareness, brand loyalty, brand image, attitude toward the brand, and corporate

ethics), and *relationship equity* (i.e., loyalty program, affinity and emotional connection program, and community building program).

The fundamental goal of this study is to understand the needs of an individual customer through actionable sub-drivers of CE. Therefore, it is necessary to use an approach in which firms should measure CE as a whole rather than only value, brand, and relationship equity, respectively, because CE incorporates all these angles of each equity driver in order to accurately understand individual customers' needs. Additionally, this study finds practical strategies and action plans in terms of segmentation based on CE. Eventually, a firm that serves the market more effectively and satisfies its consumers' needs fosters a flow of successful business towards itself (Robertson & Barich, 1992). In the next section, market segmentation is presented with the importance of an individual customer's needs.

### **Market Segmentation**

Customization or individualization has been one of the main streams in marketing for businesses over the past decade (Hyatt, 2005; Precision Marketing, 2006; Rust & Kannan, 2003). Market segmentation is also one of the most used strategic approaches in marketing for customizing products and services (Blocker & Flint, 2007; Palmer & Millier, 2004; Raynor & Weinberg, 2004; Wedel, 2001). According to Rust and Kannan (2003), to obtain customization or individualization strategic approaches are needed to build Customer Equity, to provide personalized and customized offerings, to implement self-service strategies, and to develop privacy and security risk management. In the

current study, the CE approach in terms of segmentation is for individualized marketing strategies.

The main purpose of market segmentation is to break down markets from one group to several sub-groups based on common needs (Blocker & Flint, 2007). Since the pioneering study of Smith (1956), for decades, the concept of market segmentation has been widely acknowledged among researchers and practitioners (Anderson & Narus, 1999; Blocker & Flint, 2007; Moriarty & Reibstein, 1986; Raynor & Weinberg, 2004; Webster & Wind, 1972; Weinstein, 2006; Wind, 1978). It has also been tested to aid in the understanding of customers (Albert, 2003).

Segments played an important role in creating opportunities for innovations based on meeting customer's specific needs more precisely (Raynor & Weinberg, 2004). Identifying profitable segments and meeting the common needs of customers is another key role of segmentation (Blocker & Flint, 2007). Competent segmentation assisted in targeting profitable customers (Beane & Ennis, 1987; Berrigan & Finkbeiner, 1992; Tapp & Clowes, 2002) and in maintaining a competitive advantage (Palmer & Miller, 2004).

There have been several different approaches to segmentation over the years. Traditional segmentation used socio-demographic variables such as age, income, and education as its basis (Yankelovich, 1964). Subsequently, the base for segmentation included personality and lifestyle, attitude, behavior, product usage, and purchase pattern variables (Kotler, 1980). Market researchers have also used economic and behavioral theories and sophisticated analytical techniques for better understanding of market segmentation (Dickson & Ginter, 1987). Continuously, researchers have studied segmentation on the basis of a single set of socio-demographics, psychographics, and

other general customer characteristics (i.e., product category-related attitudes, and product usage-related behaviors, etc.) (Neal & Wurst, 2001; Yankelovich & Meer, 2006).

However, these segmentations may have limited applications because these methods use only one type of variable although varying segments have different needs (Neals & Wrust, 2001). Thus, Neals and Wrust (2001) suggested that it is necessary to segment on a combination of more than one type of variable, using different standards. Since most criteria actually determined buyers' response to product offerings, these requirements were invariably multidimensional encompassing attitudes, needs, values, benefits, means, occasions, and prior experiences, depending on the product or service category and the buyer (Neals & Wrust, 2001). Segmentation based on non-demographic traits such as values, tastes, and preferences offered vast information compared to that of traditional demographic traits (Neals & Wrust, 2001). These traditional segmentation traits have been found to be weak determinants of consumer buying behavior (Yankelovich & Meer, 2006).

Examining segments in hotels was particularly important because detailed segments provided specific information about consumer purchasing patterns to managers in the hotel industry (Bowen, 1998; Hing, McCabe, Lewis, & Leiper, 1998; Moskowitz & Krieger, 2003; Palakurthi & Parks, 2000;). The goal of the current study is to better understand how sophisticated segmentations are represented in relation to the consumer purchasing behavior in the hotel industry. Thus, the following section describes the theoretical work on traditional market segmentation in the hospitality industry as well as introducing a new approach, CE-based segmentation. Eventually, managers in hotels

may be interested in this new CE-based segmentation and utilize it to discover precise information of each segment group as well as each individual customer.

### **Segmentation in the Hospitality Industry**

In the hospitality industry, segmentation has been used as a long term strategy by companies (Bowen, 1997; Bowen, 1998; Davis, 1987; Dev & Hubbard, 1989; Hing et al., 1998; Moskowitz & Krieger, 2003; Palakurthi & Parks, 2000; Voohees, 2006).

Numerous research studies have identified segmentation as an important concept in hospitality marketing. Most of these studies applied the traditional segmentation approach where customers' socio-demographic, geographic, psychographic, and behavioral characteristics were used for segmentation (Hing et al., 1998; Moskowitz & Krieger, 2003; Palakurthi & Parks, 2000).

According to a meta-analysis of market segmentation research published between 1990 and 1998 in the hospitality and tourism industry, Bowen (1998) identified three streams: market segmentation, market targeting, and marketing positioning. According to Kotler, Bowen, and Makens's (1999) study, market segmentation was the first step that categorizes customers in a market into sub-groups, which might require different products and marketing mix plans. Bowen (1998) summarized that the variables traditionally used for segmentation are demographics (e.g., age, gender, family life cycle, income, occupation, education, religion, race, and nationality), geographic (e.g., region, zip codes), psychographic (e.g., likes and dislikes) and behavioural variables (e.g., consumer needs, wants, and usage rates).

Another traditional segmentation study, Mehta and Vera (1990) segmented the hotel's market in Singapore into a group segment and an individual segment. These

segments were analyzed by three variables: income, nationality, and purpose of visit as socio-demographics. The *Group segment* consisted of group tours, conventions, corporate meetings, and airline crews; while the *individual segment* was comprised of corporate travelers, FTP (frequency-traveler program), GIT (segment of group inclusive tours), and full rate & miscellaneous (Mehta & Vera, 1990). Such a segmentation approach can assist a hotel to provide appropriate products and services to meet its targeted customers' needs depending on group or individual segment (Mehta & Vera, 1990). Since each hotel must have an effective segmentation approach for indentifying business opportunities, the hotel examined the unique needs of different customer groups (Mehta & Vera, 1990). Mehta and Vera (1990) investigated the importance of various attributes that the hotel perceived when targeting the market. Additionally, Mehta and Vera (1990) found differences between various target markets in both customers' choice criteria and hotel evaluation. Mehta and Vera (1990) concluded that the individual segments are more attractive than the group segment.

Kee, Ghosh, Mehta, and Vera (1990) also examined hotels in Singapore to examine the challenges of reformulating strategies on the basis of theoretical analysis. Hotels have not done well when compared to others in nearby destinations in spite of their competitive pricing and an ideal location (Kee et al., 1990). Thus, SWOT analysis techniques on the basis of critical success factors identified were applied to hotels in order to find the specific segments in the hotel industry (Kee et al., 1990).

In yet another traditional segmentation study, Palakurthi and Parks (2000) conducted socio-demographic market segmentation in the lodging industry. The researchers developed models for determining aggregate lodging demand by estimating



the demand for each market segment individually (Palakurthi & Parks, 2000). The aggregate lodging demand was defined as “the number of rooms required satisfying the accommodation needs of all business and pleasure travelers in the USA during a year” (Palakurthi & Parks, 2000, p. 136). This approach found that the important variables influencing aggregate lodging demand in the USA were socio-demographic factors such as age distribution, income distribution, occupation, and gender (Palakurthi & Parks, 2000). Unlike methods used in previous research, their study used regression models with aggregate lodging demand as the dependent variable and the dummy variables describing the socio-demographic market segments as the independent variables (Palakurthi & Parks, 2000). Palakurthi and Parks (2000) analyzed the socio-demographic variables one at a time (i.e., age and income) and analyzed differences between socio-demographic variables (i.e., the difference between age and income, the difference between age and occupation, etc.). The researchers found significant relationships between selected socio-demographic variables and aggregate lodging demand in the USA (Palakurthi & Parks, 2000).

In Moskowitz and Krieger’s (2003) study, the researchers categorized hotel customers in a mid-priced hotel into four segments according to customers’ staying patterns and preferences: segment 1, *interested but not responsive*; segment 2, *room as office*; segment 3, *pampers*; and segment 4, *room as vacation*. The characteristics of each segment are follows: *Segment 1* was very interested in the mid-priced hotel, and had almost no positive utility values; *segment 2* was very interested in the hotel room as an office away from the office, and the utility values for the nine elements were very high; *segment 3* presented modest basic interest in the hotel’s features that communicated

'pampering,' but did not respond as strongly to the hotel's best elements; and *segment 4* considered hotel rooms as the center of vacationing, and had exceptionally low basic interests in the hotel elements. The criterion of segmenting customers was based not on their demographics and socio-demographics, but their purpose of staying and behavior. Moskowitz and Krieger (2003) also found nine key elements, which customers consider important during their stay. These included customer service, business amenities, room amenities, convenience, leisure amenities, emotional benefits, customer satisfaction, incentives, and taglines (Moskowitz & Krieger, 2003).

This traditional segmentation approach aided in understanding customers in the marketing literature (Albert, 2003) and it was used as a strategic approach by companies (Dev & Hubbard, 1989; Hing et al., 1998; Moskowitz & Krieger, 2003). Nevertheless, this traditional approach was not enough to better understand customized segmentations. The Customer Equity approach is better suited to understand precise consumer buying behaviors, which is why the current study adopted the CE-based segmentation in order to obtain more information than would be obtained using the traditional segmentation approach. The following section describes CE-based segmentation. In this study, the CE-based segmentation means that researchers segment the market in terms of the Customer Equity approach.

### **Customer Equity based Segmentation**

Recognizing the deficiencies of the traditional segmentation approach, recent research in marketing has been utilizing a more sophisticated and meaningful segmentation approach to obtain enough information about consumers' characteristics

(Voohees, 2006; Yankelovich & Meer, 2006). Meaningful segmentation involved collecting of relevant data on emerging social, economic, and technological trends and using it to identify segments properly (Yankelovich & Meer, 2006). Voohees (2006) agreed that meaningful segmentation is important because it allows companies to discover a customer's actual buying behavioral patterns. To find meaningful segmentation, Jaworski and Jocz (2002) suggested that market segmentation should be done in terms of individualization. It incorporates a broader range of data than traditional segmentation approaches.

According to Yankelovich and Meer's (2006) study, behavioral characteristics and attitude were added to traditional segmentation research such as demographics, in order to find more meaningful information than the previous traditional segmentation approach. They emphasized that demographics, behavioral characteristics, and attitude are key variables to corporate profitability (Yankelovich & Meer, 2006). These three dimensions combined with segmentation research provide a better understanding of Customer Lifetime Values (Yankelovich & Meer, 2006).

Voohees (2006) conducted a Customer Equity-based segmentation in order to better understand the characteristics of each group. He collected data from four different types of industries: airline, hotel, grocery, and restaurant (Voohees, 2006). Voohees (2006) demonstrated the efficacy of segmenting customers based on their perceptions of the CE drivers (Voohees, 2006). The identified CE drivers of Voohees's (2006) study were as follows: *value equity* (i.e., service quality, physical goods quality, convenience, satisfaction, price, value), *brand equity* (i.e., brand awareness, attitude toward the firm, service provider image, corporate citizenship, corporate ethics, brand equity), and

*retention equity* (i.e., trust, enduring commitment, affective commitment, switching costs, preferential treatment, and quality of the loyalty programs) (Voohees, 2006). Based on all of these CE drivers, consumers in hotel samples were clustered into four segment groups (Voohees, 2006). Each segment group had a different impact on these sub-drivers of CE depending on multiple outcomes variables (i.e., share of wallet, exclusive consideration, identification, advocacy, and switching intentions). Finally, Voohees (2006) found that the CE-based segmentation approach is meaningful to divide the markets because specific information about customers from different segment groups was derived from these sub-drivers of CE.

The CE-based segmentation approach was required to better understand the needs of an individual customer and to recognize precisely his or her characteristics about buying patterns (Voohees, 2006). Segmenting in terms of the CE approach can generate more information about each group than using only socio-demographics of customers (Voohees, 2006). Therefore, the CE-based segmentation approach produces sophisticated information that is a necessary for marketing effectiveness.

Ultimately, customized segmentation encouraged customers to spend more as services are better customized to suit their needs (Wedel, 2001). This new approach to segmentation can lead to more efficient marketing and enhanced profitability (Neal & Wurst, 2001). Yankelovich and Meer (2006) stated that customer-oriented segmentation can identify customers who are profitable to the company, and assist the company to focus on them for marketing purposes. This customized approach made market segmentation successful because segments responded differently in the marketing mix (Neal & Wurst, 2001). Eventually, companies increased their financial worth through

effective marketing segmentation at the individual level. Therefore, marketing segmentation needs to be narrowed down to individual level (Hyatt, 2005) and this new paradigm is called customized services (Rust & Kannan, 2003). CE may be the proper approach to accomplish this customization because it aids firms in accurately understanding the customer and in satisfying the customers' needs.

Hence, the current study segmented using the Customer Equity approach, not the traditional segmentation approach. The ultimate aim of the CE-based segmentation approach is to improve a firm's performance and keep the positive relationship between customers and companies for marketing effectiveness in the long term. For an effective strategy on the basis of the CE-based segmentation, the following session describes the development of the effective CE marketing strategy through the process of Customer Equity Management (CEM). Eventually, this study develops effective and practical action plans for CE marketing.

## **Customer Equity Management**

### **Justification of Customer Equity Management**

Customer Equity (CE) is eventually the dominant paradigm, guiding management in marketing (Bell et al., 2002). Research on CE has considered its maximization a critical objective of customer-company relationship management (Berger & Nasr, 1998; Berger & Nasr-Bechwati, 2001; Dong et al., 2007; Venkatesan & Kumar, 2004). Its effective management encouraged a firm to explicitly understand the factor which contributes to the maximization of measuring customer value and enhancing the understanding of interactions among them (Desai & Mahajan, 1998; Dong et al., 2007;

Pfeifer & Carraway, 2000; Reinartz, Thomas, & Kumar, 2005). Therefore, Customer Equity Management (CEM) encompassed all activities that firms need to effectively and efficiently maximize Customer Equity (Bell et al., 2002; Bruhn et al., 2008; Hogan et al., 2002). Various elements of marketing efforts were of important to the company since these marketing efforts made firms improve each driver of CE in order to advance in the contribution margin and eventually, in CE (Kumar & George, 2006). After finding important elements of marketing efforts, therefore, CEM provides specific marketing strategies and action plans; ultimately, marketing effectiveness can be achieved in terms of the CE approach.

Globally, firms have tried to pay more attention to understanding and improving their marketing effectiveness (Appiah-Adu, 1999; Eusebio, Andreu, & Belbeze, 2006; Ghosh, Schoch, Taylor, Kwan, & Kim, 1994; Kahn & Myers, 2005; Nwokah & Ahiauzu, 2008; Webster, 1995). Many companies have made efforts to achieve measurable and actionable marketing effectiveness programs (Morgan, Clark, & Gooner, 2002; Kahn & Myers, 2005; Sheth & Sisodia, 2002). Recently, many firms have considered how well they perform at satisfying individual customer' needs and wants (Eusebio et al., 2006). Thus, companies have started to assess the effect of marketing effort on a company's financial statement (Clark, 1999) by allocating the outcomes of individual marketing activities over the financial statements (Kahn & Myers, 2005). Since market analysis provided financial outcomes, it became an innately effective and efficient tool for developing marketing strategies and action plans (Wyner, 2004). Ultimately, this marketing effectiveness had an impact on profitability, growth, and customer-based performance (Appiah-Adu, Fyall, & Singh, 2001).

In service marketing, a customer-oriented measure such as customer retention can be used as a means to evaluate a service firm's performance (Appiah-Adu, 1999; Heskett, Jones, Loveman, Sasser, & Schlesinger, 1994; Reichheld, 1996). Eusebio et al. (2006) found that customer-based measures have a leading role in the evaluation of marketing effectiveness in hospitality and tourism companies. The marketing effectiveness of a company depended on whether management can design a profitable strategy (Webster, 1995). Unless companies developed appropriate marketing strategies, marketing actions did not yield advantageous results (Constantinides, 2006).

To analyze the marketing effectiveness, at first Kotler (1967) suggested that five perspectives (i.e., customer philosophy, integrated marketing organization, adequate marketing information, strategic orientation, and operational efficiency) should be analyzed. One of these perspectives, *strategic orientation* becomes achievable by generating innovative strategies and plans as well as 'operational efficiency' by implementing those strategies and plans for long-run growth and profitability (Kotler, 1967). Recently, Eusebio et al.'s (2006) study used the six categories established by Marketing Science Institute (1999) to measure marketing performance for marketing effectiveness. These six categories are: (a) *financial measures* (i.e., turnover, contribution margin and profit), (b) *competitive market measures* (i.e., market share, advertising and promotional share), (c) *consumer behavior measures* (i.e., consumer penetration, loyalty and customer gained), (d) *consumer intermediate measures* (i.e., brand recognition, satisfaction and purchase intention), (e) *direct customer measures* (i.e., distribution level, profitability of intermediaries and service quality), and (f)

innovativeness measures (i.e., products launched and their revenue) (Marketing Science Institute, 1999; Eusebio et al., 2006).

When built upon the previous research on the measurement of marketing performance, CEM can achieve an effective marketing strategy and action plans for marketing effectiveness because CEM effectively maximizes CE as well as develops practical action plans on the basis of the CE strategy (Bell et al., 2002; Bruhn et al., 2008; Hogan et al., 2002). When a firm managed customers as the firm's strategic asset depending on various elements of marketing efforts (Kumar & George, 2006), CEM created many specific and practical management challenges as now the firm understands each customer's new needs and wants and knows their key marketing efforts (Hogan et al., 2002). The CEM process is significant in hotel companies because it assists to improve their performance, hold existing customers, and acquire new ones. Since the CEM process suggested specific action plans, it ultimately encourages hotels to improve their profitability.

### **Concepts and Process of Customer Equity Management**

CEM dealt with an investment in the customer relationship between customers and companies (Bruhn et al., 2008). The successful CEM process resulted from specific CEM activities (Bruhn et al., 2008). In other words, the specific strategies and action plans through the CEM process led to effective and efficient management of Customer Equity (Bruhn et al., 2008). Moorman and Rust (1999) and Webster (1992) all agreed that the CEM process played a critical role in marketing practices. Wiesel et al. (2008) identified the significance of CEM in context of three levels of customer metrics (i.e.,



customers' cash flows, acquisition expenditures, and retention expenditures) for the effective performance management.

Hogan et al. (2002) presented a conceptual model of CEM to maximize and to achieve profitability by managing CE. The conceptual model of CEM showed the effect of the relationship between the firm's Customer Equity Management skills and two constructs: *value of potential customer assets* and *value of extant customer assets*. These two constructs were influenced by *stock of non-relational assets/skills*. Ultimately, the *value of potential customer assets* and the *value of extant customer assets* also influenced CE (Hogan et al., 2002). In other words, these assets to Customer Equity (e.g., the value of the firm's plant, equipment, brands, etc.) were controlled by the firm's Customer Equity Management skills which arrange them in a way to increase its Customer Equity (Hogan et al., 2002). Hogan et al. (2002) suggested that CEM had implications at all levels of the firm: *the organizational, the strategic business unit, and the operational levels*. At the organizational level, CEM assisted the firm's strategic assets in being matched in the markets (Hogan et al., 2002). It is because of strategic assets that the greatest potential for maximizing Customer Equity, organizational activities, and action plans contribute to the firm's CE (Hogan et al., 2002). At the strategic business unit level, CEM identified the optimal marketing mix to maximize CE in real time through the CEM's model and measurement systems. Finally, at the operational level, CEM developed the systems necessary to deliver the marketing mix for *individual* customers (Hogan et al., 2002).

Bayon et al. (2002) identified CEM as Customer Equity Marketing, which is derived from the value-based marketing approach, instead of Customer Equity

Management. However, the main objective of Customer Equity Marketing was similar to Customer Equity Management. Its purpose was to maximize CE through the management of both acquisition and retention focusing on CLV. Thus, Bayon et al. (2002) defined Customer Equity Marketing as “a management approach for acquisition and retention, geared to individual lifetime values of current and future customers with the aim of continuously increasing Customer Equity” (p. 214).

According to Bayon et al.’s (2002) study, Customer Equity marketing was a process which consists of *analysis, planning, implementation, and control*. First, the *analysis* procedure had eight steps: (a) determination of industry-specific direct and indirect CLV drivers; (b) integration of both direct CLV drivers and indirect drivers as describing variables into the customer database; (c) operationalization of general CLV and CE calculation models, and integration of associated algorithms into the data mining procedures; (d) clustering of the customer base in segments each with similar values for the CLV drivers indicated in the database; (e) estimation of the average customer retention duration for the identified customer segments; (f) calculation of individual Customer Lifetime Values for the customer base through mean value and standard deviation of the CLV in different segments; (g) description of utility structures typical for the segments (e.g., by Conjoint measurement; checking of segments for distinctive utility and socio-demographic variables); and (h) clustering of potential customers in segments each with similar values for direct CLV drivers.

Secondly, Bayon et al. (2002) identified the *planning* procedure of the firm by formulating: (a) a target goal for Customer Equity; (b) segment specific target goals for the key CLV drivers; (c) benefit based planning of products, and additional services for

individual segments; and (d) plan efficient value adding and steering processes focusing on the target objectives for the CLV drivers with *i*) core value adding processes (e.g., information oriented processes, and marketing mix), *ii*) focus processes (e.g., geared to recipient of service, geared to service object, geared to service space, geared to service competition), *iii*) integration processes (e.g., brand management), and *iv*) core steering processes (e.g., strategy development process, measurement planning process, decision-making process, control process).

In addition, Bayon et al.'s (2002) study suggested the *implementation* procedures for Customer Equity Marketing. In the *implementation* procedures, the firm applied segment-specific implementation of the goal system regarding CE and the key CLV drivers. The firm applied the planned value adding and steering processes. Finally, Bayon et al. (2002) proposed the *control* procedure. In the *control* procedure, the firm controlled continuously effectiveness and efficiency of value adding and steering processes through goal performance, benchmarking, and gap analysis. Figure 6 illustrates the CEM process of Bayon et al.'s (2002) study.

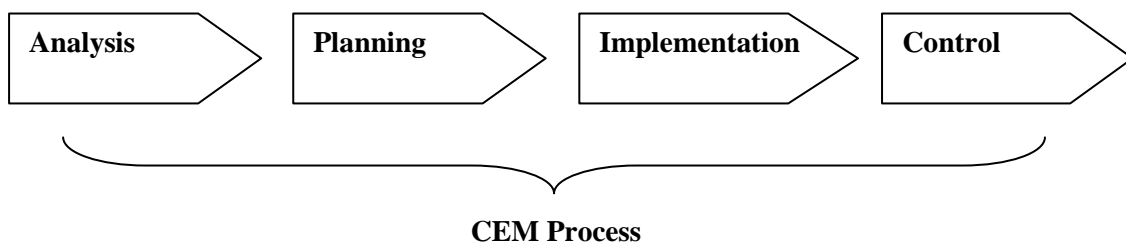


Figure 6. CEM Process (Bayon, Gutsche, & Bauer, 2002)

Bell et al. (2002) evaluated CEM and developed implications for research and practice. Bell et al. (2002) presented seven challenges to CEM, which are as follows: (a) assemble individual-level, industry-wide consumer data; (b) track marketing's effects on the balance sheet, not just the income statement; (c) model future revenues appropriately; (d) maximize CLV, not just measure; (e) align organization with customer management activities; (f) respect the sensitivity of customer information; and (g) evolve chairman from an efficiency tool to a service improvement tool.

Dong et al. (2007) suggested CEM as the role of channel quality. Dong et al.'s (2007) study developed the model of Customer Equity regarding the optimal allocation of marketing resources through acquisition and retention activities. Also, Dong et al. (2007) proposed channel quality as a relevant decision variable which demonstrates the existence of an optimal value. Furthermore, Dong et al. (2007) provided sensitivity analyses that regard changes in the true values of model parameters and inaccuracy in managerial inputs. On the basis of Customer Equity model (Blattberg & Deighton, 1996), Dong et al. (2007) extended Customer Equity modeling in the context of channel quality; channel quality as a decision variable; channel quality and the non-independence of acquisition and retention; shape of acquisition and retention response functions; and non-zero acquisition and retention rates at zero spending. Additionally, decision calculus was presented in Dong et al.'s (2007) study because decision calculus can advance the quality of managerial decision making (Lilien, Rangaswamy, van Bruggen, & Starke, 2004; van Bruggen, Smidts, & Wierenga, 2001).

Bruhn et al. (2008) proposed how to manage CE from a firm's point of view. Bruhn et al. (2008) referred to Customer Equity as the value of a firm's entire customer

base or the aggregation of customers' individual customer values in terms of CLV. Bruhn et al. (2008) also agreed that CEM plans all activities to maximize CE (Bell et al., 2002; Hogan et al., 2002). Bruhn et al. (2008) identified specific CEM activities by a qualitative study (e.g., interviews) which also confirms the definition of CEM from a firm's perspective. Bruhn et al. (2008) categorized three dimensions of CEM: *analysis*, *strategy*, and *actions*. With the result of the qualitative study, Bruhn et al. (2008) identified specific CEM activities through a two-hour workshop with five scientific CEM experts. One of the three dimensions of CEM is Customer Equity Analysis by three activities: a) customer profitability analysis b) economic potential analysis, and c) customer behavior analysis. The other dimension of CEM is Customer Equity Strategy including a) customer segmentation, b) target setting, and c) developing strategies. Another dimension is Customer Equity Actions which firms planned and conducted marketing actions including a) marketing mix management, b) customer segment management, and c) customer contact management (Bruhn et al., 2008). According to a study conducted by Bruhn et al. (2008), three dimensions; analysis, strategy, and actions influence CEM which is evaluated by status of implementation, satisfaction with implementation status, and perceived CEM success. Figure 7 illustrates CEM of Bruhn et al.'s (2008) study.

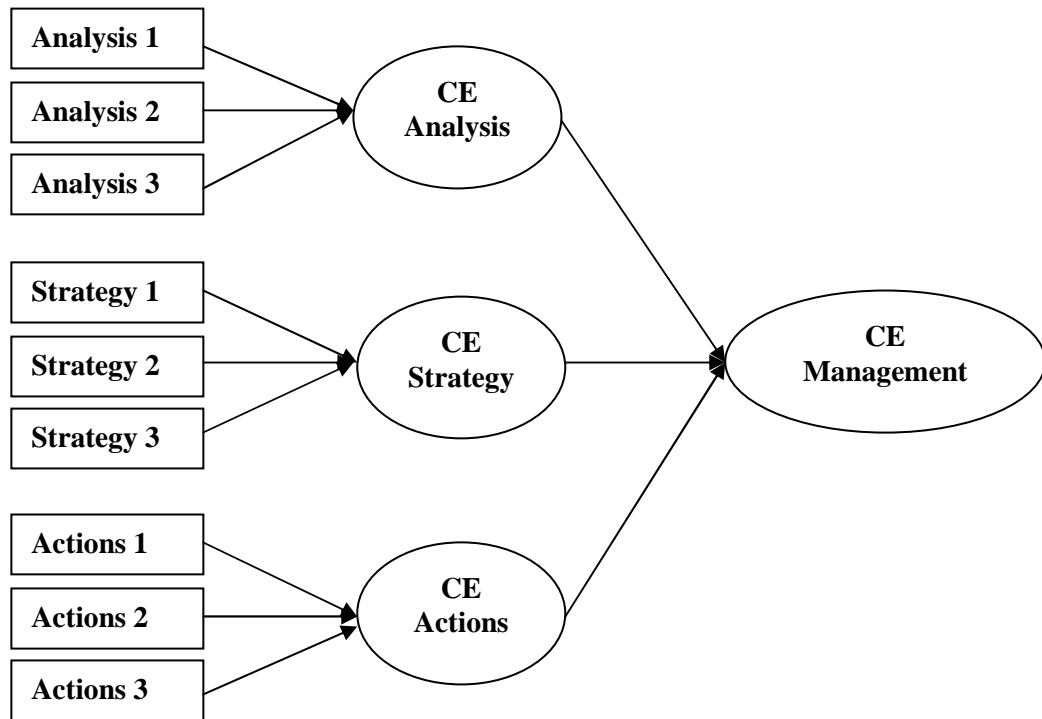


Figure 7. Measurement Model of CEM (Bruhn, Georgi, & Hadwich, 2008)

The current study called it the CEM process. The CEM process in the current study was based on the concept of three dimensions (i.e., analysis, strategy, and actions) from Bruhn et al.'s (2008) study. However, the obvious outcome of strategy was the development of action plans (Smith, 1995). That is, the improvement of effective market segmentation strategy led to the development of effective action plans. These three dimensions were not independent variables influencing CE management, but might result in consequent relationships. Therefore, the CEM process in the current study consists of three steps: analysis, strategy, and action plans. This study presents a CE strategy on the basis of analysis of CE. Depending on marketing efforts responsiveness, specific and practical action plans by each segment were developed from analysis and strategy stages in terms of the CE-based segmentation.

Therefore, the goals of the study are to:

***Proposition 1:***

Determine the core Customer Equity drivers for segmentation of the hotel industry.

***Proposition 2:***

Demonstrate the significant CE drivers responsive to marketing effort for each of the CE-based segments and hotel type.

***Proposition 3:***

- (a) Determine the CE drivers that maximize the Return-On-Investment (ROI) of marketing effort exerted by a hotel in terms of the change in its CE.
- (b) Suggest an effective marketing action plan for each of the CE-based segment within each hotel type.

The first and second research propositions test five main hypotheses each. The third research proposition implements the process of CEM through three steps. The detailed research hypotheses of the study are identified below (see Table 2).

Table 2. Summary of Hypotheses Testing for Proposition1 and 2

| <b>Hypotheses Testing for Propositions</b>  |
|---|
| <b><i>Proposition 1</i></b>   |
| <b><i>H1.</i></b> Considering the Relationship-Seeking Customer Segment (RSCS) for any hotel type, the relationship driver will be significantly more important than the other remaining CE drivers.  |
| <b><i>H2.</i></b> Considering the Convenience-Seeking Customer Segment (CSCS) for any hotel type, the convenience driver will be significantly more important than the other remaining CE drivers.  |
| <b><i>H3.</i></b> Considering the Quality-Seeking Customer Segment (QSCS) for any hotel type, the quality driver will be significantly more important than the other remaining CE drivers.  |
| <b><i>H4.</i></b> Considering the Brand Image-Seeking Customer Segment (BSCS) for any hotel type, the brand image driver will be significantly more important than the other remaining CE drivers.  |
| <b><i>H5.</i></b> Considering the Price-Seeking Customer Segment (PSCS) for any hotel type, the price driver will be significantly more important than the other remaining CE drivers.  |
| <b><i>Proposition 2</i></b>   |
| <b><i>H6.</i></b> Controlling for funding sources and hotel type, customers in the Relationship-Seeking Customer Segment (RSCS), will be significantly more responsive to the relationship driver in terms of their probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to pay. |
| <b><i>H7.</i></b> Controlling for funding sources and hotel type, customers in the Convenience-Seeking Customer Segment (CSCS), will be significantly more responsive to the convenience driver in terms of their probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to pay.   |
| <b><i>H8.</i></b> Controlling for funding sources and hotel type, customers in the Quality-Seeking Customer Segment (QSCS), will be significantly more responsive to quality driver in terms of their probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to pay.               |
| <b><i>H9.</i></b> Controlling for funding sources and hotel type, customers in the Brand Image-Seeking Customer Segment (BSCS), will be significantly more responsive to the brand Image driver in terms of their probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to pay.   |
| <b><i>H10.</i></b> Controlling for funding sources and hotel type, customers in the Price-Seeking Customer Segment (PSCS), will be significantly more responsive to the price driver in terms of their probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to pay.              |

Note:

<sup>a</sup> Each hypotheses has several sub-hypotheses and these sub-hypotheses are presented in Chapter 4.

## **Summary**

In this chapter, Customer Equity (CE) and the roles of CE drivers are described. CE is a new approach to measuring a company's marketing effectiveness, in which the customer is considering as an asset of the firm (Kumar & George, 2006). The assets of a company are derived from more than the customer's objective assessments of the firm's



service or products (value equity), customers' assessments of the intangible features in point of their subjective view (brand equity), and customer's relationship between the customer and the firm (relationship equity). The asset of the company can be evaluated by the net present value of all the customers in terms of three drivers, value equity, brand equity, and relationship equity all together (Rust et al., 2000).

Through the measurement of CE, the firm can obtain information about customer buying patterns over their lifetime. Traditionally, market segmentation was one of the methods for gathering this information (Blocker & Flint, 2007; Palmer & Millier, 2004; Wedel, 2001); however, such methods failed to obtain enough information for customizing products and services (Yankelovich & Meer, 2006). Therefore, marketing segmentation needs to be narrowed down to individual level (Hyatt, 2005). This is a new paradigm, called customized services (Rust & Kannan, 2003). CE may be the proper approach to accomplish this customization because it aids firms in accurately understanding the customer and in satisfying the customers' needs, which ultimately results in increasing the firm's profitability. Upon taking into consideration all of these characteristics of CE and CE drivers, market segmentation, and new paradigm (customization), the literature justifies the necessity of the new segmentation approach based on Customer Equity, called the CE-based segmentation.

More recent literature in the field discussed Customer Equity Management (CEM) this holistic approach for segmentation. Previous research on CE discussed the conceptualization and measurement of CE; nevertheless, it was not enough to suggest strategies and action plans in marketing for implementing CE within firms (Blattberg & Deighton, 1996; Kumar & George, 2006; Hogan et al., 2002; Richards & Jones, 2008).

Recently, several researchers presented CEM as a tool for effective and efficient management of CE. The literature on CEM revealed that there was uncertainty as to how CEM could be conducted in order to maximize profits (CE). In the current study, the CEM process through the CE-based segmentation is suggested in order to maximize Customer Equity. Therefore, this study develops the specific and practical strategies and action plans through the application of the CEM process that are necessary for maximizing CE in the hotel industry. The strategies and action plans are discussed in the result chapter for the study. The following chapter delineates the methodology for this research.

## CHAPTER III

### METHODOLOGY

#### **Introduction to the Research Procedures**

##### **Introduction of Research**

This chapter delineates the methodology used to achieve the research objectives introduced in chapter I and reviewed in chapter II. The goal of this chapter is to guide the reader through the research procedure used. This research utilized both qualitative and quantitative studies in two different phases. This chapter consists of five sections. The first section reviews the research objectives and presents the research procedure used for analysis. The second section describes the qualitative study used in Phase I. The third section presents the methodology of the quantitative study used to achieve the research objectives for Customer Equity. The fourth section describes the data analysis techniques. Finally, the fifth section summarizes the methodology for this study.

##### **Research Objectives**

This study focused on a CE-based segmentation approach for strategic marketing purposes. The specific objectives of this study are (a) to determine the core Customer Equity drivers in the hotel industry, (b) to examine the impact of the CE-based segmentation by measuring Customer Equity in the hotel industry, and (c) to utilize

the CEM process through the CE-based segmentation to maximize Customer Equity in the hotel industry. In order to achieve the highest possible Customer Equity, the current study suggested an effective Customer Equity Management (CEM) approach. CEM had three steps: (a) analyzing the marketing effort responsiveness after calculating the Customer Lifetime Value (CLV) and the Customer Equity (CE); (b) developing a CE marketing strategy, and; (c) recommending action plans based on the information gathering sources unique for each CE market segment by hotel type in the hotel industry. The research procedure is illustrated in Figure 8.

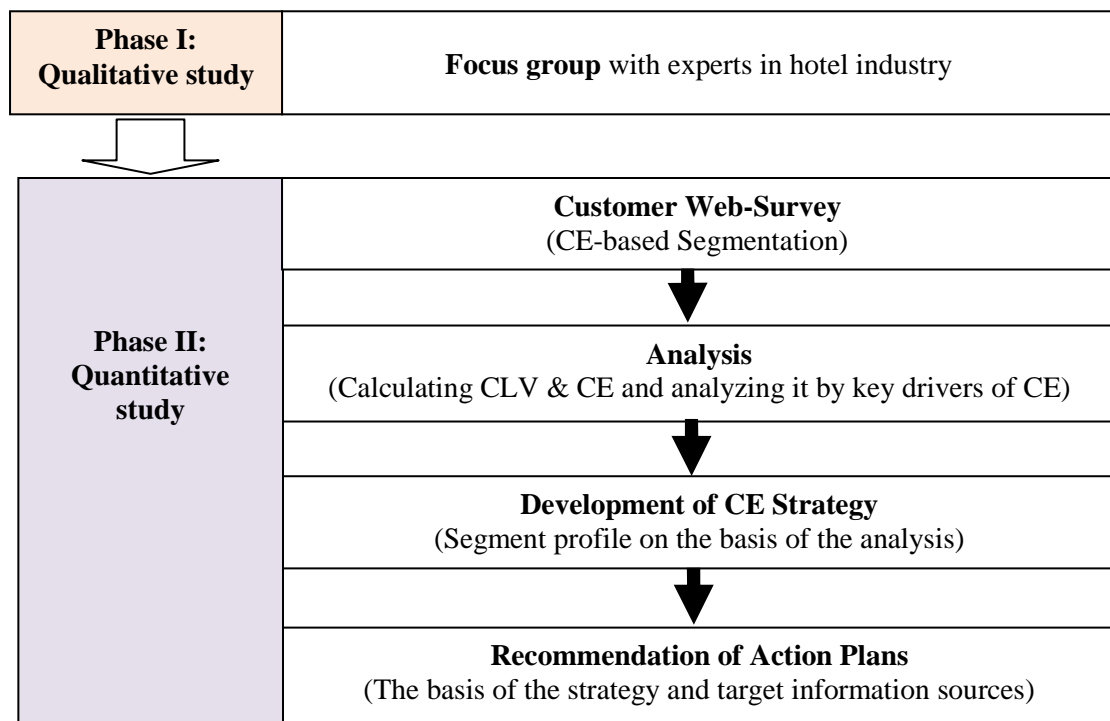


Figure 8. Research Procedure

### Methodological Procedure

As presented above, this study has two phases: qualitative study (Phase I) and quantitative study (Phase II). The overview of methodological procedure is illustrated in Figure 9 in terms of the source, method, and outcome for each phase of the study.

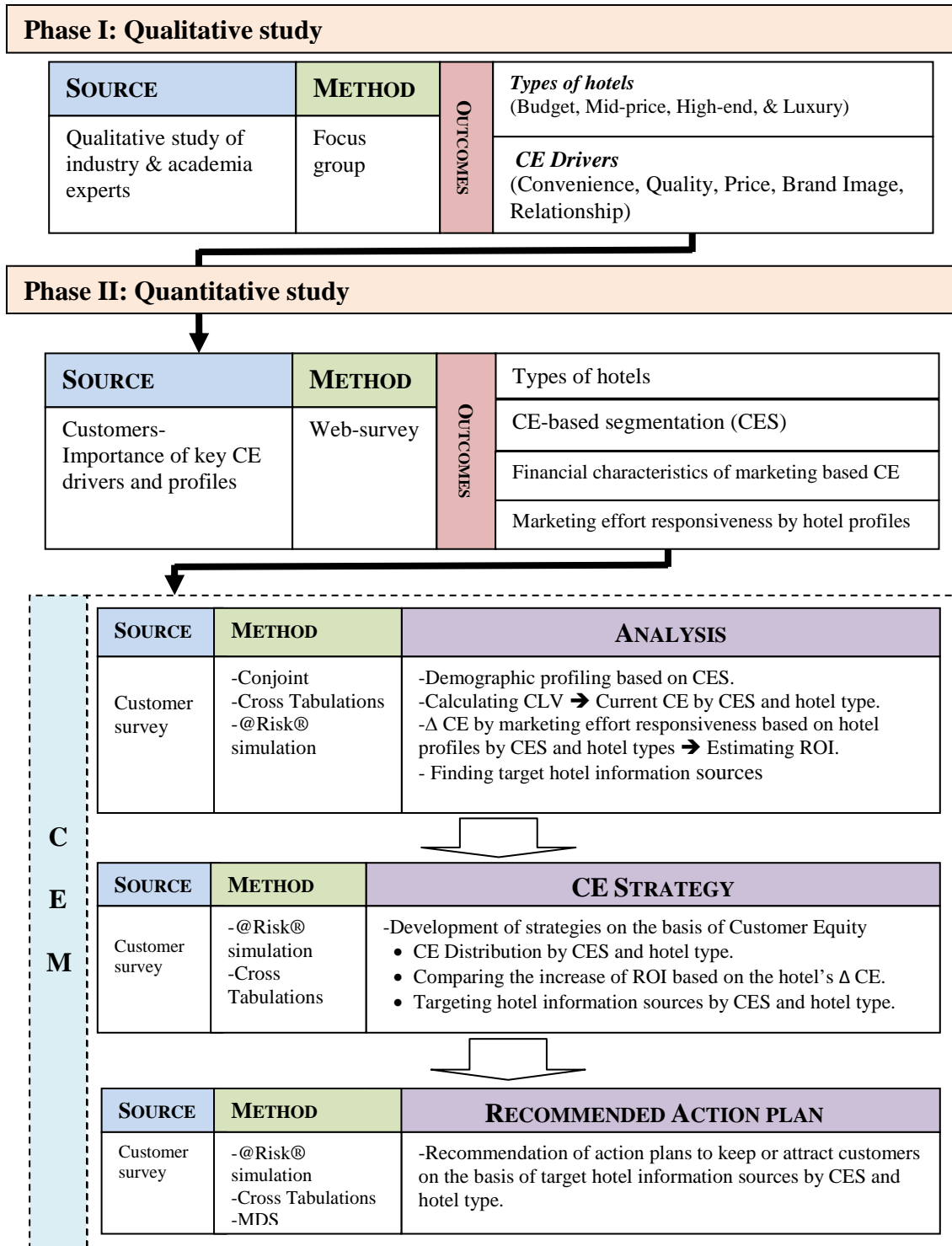


Figure 9. Overview of Methodological Procedure

Phase I of this study entailed performing a qualitative analysis (focus group study) using operational experts in the hotel industry. Through the focus group discussion, key-

drivers of CE for each type of hotel (i.e., budget, mid-price, high-end, and luxury) were determined. In the next phase (Phase II), a quantitative analysis through a customer survey was performed.

An online customer survey was conducted. The survey was based on the key CE drivers, the outcomes of the qualitative study (Phase I). The key CE drivers were used to segment customers in terms of Customer Equity by asking the respondents to rate the importance of the key CE drivers. Also, the customer survey elicited information on (a) types of hotels where customer last stayed, (b) the importance rating of the CE-drivers for the CE-based segmentation (CES), (c) hotel-stay characteristics of respondents for measuring CE, and (d) marketing responsiveness of respondents through Conjoint profiles.

The Customer Equity Management (CEM) process consisted of analysis, CE strategy, and action plans. In the analysis step, the researcher analyzed demographic profiling based on the CE-based segmentation (CES); calculated CLV and CE by CES and hotel type; presented the change in CE by the marketing responsiveness; and determined target hotel information sources. On the basis of analyses in the previous step, CE strategy was developed. In the CE strategy step, the study presented the distribution by CES and hotel type. This CE strategy assisted to develop more specific strategies in terms of CES and hotel type. Finally, in the action plan step, target information sources for selecting hotels were recommended by CES and hotel type. Therefore, the use of the differentiated CES approach is suggested for effective CE marketing strategies and recommended action plans. Consequently, the CEM process maximized the measurement of CE in the long term.

## **Phase I: Qualitative study**

This section describes the method used for the qualitative study. A qualitative study provides a much clearer understanding (Chambers, Lobbl, Butler, & Traill, 2008) of the key sub-drivers of CE which influence the customers' hotel selection decisions. To induce as wide a range of views as possible, a focus group consisting of hotel managerial industry consultants and academicians was used.

### **Focus group**

The focus group methodology has an established pedigree in social anthropology, media/cultural studies and health research (Lockyer, 2006). Employment of a focus group is a critical method for analysis because the methodology encourages participants to respond to specific questions and induces group interactions (Morgan & Krueger, 1993). In this study, the focus group discussions identified the primary sub-drivers of CE that influence the selection of a hotel.

### ***Design***

A focus group explores specific attributes of some subjects and involves a form of collective activity (Kitzinger & Barbour, 1999). Participants can gain insights into their shared understandings of a topic and the ways in which others influence them in a group situation (Neuendorf, 2002). Also, the participants have the opportunity to explore experiences, opinions, wishes and concerns (Chang & Lu, 2007). In addition, the participants can rank their own priorities (Kuzel, 1992), expressing their own opinions, frames and concepts (Kuzel, 1992; Mertens, 1998). During the discussion of the focus group, the moderator or researcher can find different or similar opinions among the participants (Chang & Lu, 2007). That is, the researcher can further explore the

differences of key sub-drivers of CE underlying an issue, and gather information on the severity or frequency of the issue (Chang & Lu, 2007).

In the current study, the goals of the focus group were: (a) to identify key drivers of CE for hotel selection; and (b) to clarify measurement scales that could be used in the subsequent quantitative analysis survey. Participation in the focus group was totally voluntary.

### ***Participants***

Eight experts in the hotel industry participated in the focus group for this study. The demographic characteristics of the focus group participants were as follows (see Table 1); the participants consisted of four managerial experts and four faculty members. The genders were three males and five females. Their age ranged from 30 to 55 years. The education levels achieved were as follows: bachelor degree (50.0%), master degree (12.5%), and Ph. D (37.5%).

Table 3. Demographic Descriptions of Respondents

| Demographic Characteristics |                    | N | Percentage (%) |
|-----------------------------|--------------------|---|----------------|
| Occupation                  | Managerial experts | 4 | 50.0           |
|                             | Faculty members    | 4 | 50.0           |
| Gender                      | Male               | 3 | 37.5           |
|                             | Female             | 5 | 62.5           |
| Age                         | 30~34 years        | 1 | 12.5           |
|                             | 35~39 years        | 2 | 25.0           |
|                             | 40 years and over  | 5 | 62.5           |
| Education                   | Bachelor Degree    | 4 | 50.0           |
|                             | Master Degree      | 1 | 12.5           |
|                             | Ph.D Degree        | 3 | 37.5           |
| Marital Status              | Single             | 1 | 12.5           |
|                             | Married            | 7 | 87.5           |



### *Procedure*

The focus group discussion was initiated and facilitated by the moderator (i.e., the primary researcher). The researcher invited experts in the hotel industry to participate in the study in order to determine the key CE drivers in that industry. An e-mail invitation letter was sent to each participant after he/she was identified as a potential candidate for the study based on their managerial position in the industry or their expertise in the field. After obtaining their agreement to participate, the researcher set up the date and time when the focus group would be held, considering all the participants' availability. The researcher informed participants about the date, time, and venue for the focus group study. The focus group took about two hours. All dialogues were audio-taped with the participants' consent. At the beginning of the discussion, the researcher briefly introduced the concept of Customer Equity and purposes of the focus group. The exact procedure for the focus group was as follow:

- 1) The focus group was held in a conference room within The School of Hotel and Restaurant Administration at Oklahoma State University campus on October 13, 2008. The participants took part in an informal orientation session a few minutes before the focus group discussion in order to reiterate the purpose and objectives of the study.

- 2) The participants were required to sign an informed consent form before entering the appropriate conference room for participation in the study (see Appendix G). They were reminded that the focus group session would be audio-taped. They were required to sign the consent form, agree to be taped, and sign in. Copies of the signed consent form were provided to the participants.

3) The participants were told to relax and speak freely about the issues being discussed. The moderator (i.e., the primary researcher) had a series of open-ended questions that were used as the guideline for the focus group discussion. The purpose of the moderation was to solicit more detailed information by asking probing questions and ensuring that none of the participants monopolized the time. These open-ended questions are follows:

- “In your opinion, as an experienced hotel operator, what factors do you think drives customers to return to a hotel?”
- “What type of issues or factors do hotel customers consider when they think about value including convenience, quality and price?”
- “What type of issues or factors do hotel customers consider when they think about brand including image, awareness, attitude, and perception?”
- “What type of issues or factors do hotel customers considers when they think about retention including loyalty programs, special awards or recognition programs, community building programs, and knowledge building programs?”
- “Are there any other factors that you would consider to be important for making buying decisions in the hotel industry?”

4) The last 15 minutes of the focus group time were spent categorizing all of the hotel selection attributes identified by the group into the five key CE drivers. The focus group participants were able to reach a consensus and categorized all the attributes into the key CE drivers as shown in Table 4.

5) At the end of the session, the participants were given a thank-you card for their time. The participants were provided with the researcher's business card in case they need to get in touch with the researcher again for any reason.

## **Qualitative Study- Data Analysis**

### ***Content Analysis***

Content analysis has been applied successfully to a variety of issues in the social sciences (Manickas & Shea, 1997). This method was adopted to purify the data extracted from the focus-group discussion (Chang & Lu, 2007; Mertens, 1998). The focus group analysis consists of organizing discussion messages, which participants express through words or phrases within a wide range of subjects, by systematically counting them within established categories (Siu & Fung, 1998). Content analysis is an ideal and unobtrusive method of gaining insights (Manickas & Shea, 1997).

In this study, focus group participants first analyzed the data clarifying the associations linking Customer Equity drivers. After the focus group discussion, the primary researcher facilitated a round of consensus building exercises where all the drivers listed were categorized into smaller groups of key drivers by all the participants. The focus group was required to continue discussions until there was a consensus on the categorization of all the drivers identified. This step eliminated the requirement for conducting a complete content analysis of the transcripts compiled from the focus group discussions.

## ***Findings***

According to the focus group discussion, the five key CE drivers were derived; *convenience*, *quality*, *price*, *brand image*, and *relationship* (see Table 4). All participants in the focus group agreed that these five key CE drivers were the significant attributes driving customers' hotel selection decisions.

Each CE driver consisted of several attributes. The '*convenience*' driver of CE included: the ability to access the hotel from an airport, the ability to access local attractions from the hotel, the ability to make reservations easily, the ability to provide various service options, and so forth. The '*quality*' driver of CE included: quality of service performance, quality of room service, quality of technology amenities, quality of service recovery, and so forth. The '*price*' driver of CE included: actual price paid for room, perceived value of the price paid for the room, discounts received because of membership, and so forth. The '*brand image*' driver of CE included: general brand image, brand image of the individual property, impression gained from the hotel website, and so forth. Finally, the '*relationship*' driver of CE was comprised of loyalty programs, non-incentive loyalty, congruency of the hotel with solving social issues, community enrichment programs by the hotel, and so forth. Table 4 summarizes the terms of the sub-drivers nested within each of the key five CE drivers for the hotel industry.

Table 4. Attributes for Selecting a Hotel

| <b>Key drivers of CE</b>                  | <b>Attributes</b>  | <b>Brief descriptions of identified attributes</b>                       |
|---|--|--|
| Convenience                               | Proximity of the hotel to local attractions/shopping areas                       | Close distance between the hotel and local attractions or shopping areas |
|   | Ability to access the hotel by all transportation means                          | Airport shuttle, subway, bus, etc.                                       |
|   | The ability to easily make reservations  | Convenient process of making reservations                                |
|   | The ability to easily order services   | Room service, wake-up call, etc.   |
|   | The ability to provide various service options                                   | Express C/O, TV bill viewing, key-drop vending, etc.                     |
|   | The ability to offer non-standard room supplies on demand                        | Upgraded service such as shaving kits, sewing kits, etc.                 |
|   | The ability to provide various methods for payments                              | C/C, on-line payment, monthly statement, etc.                            |
|   | Convenient physical location   | Airport, suburban, downtown, etc.  |
|   | The ability to offer options to choose smoking and non-smoking rooms             | Option for smoking and non-smoking rooms                                 |
|   | The ability to easily access the facilities' amenities                           | Spa, swimming pool, gym, etc.  |
|   | The ability to easily use technology amenities                                   | Internet   |
|   | The ability to offer options for accessing services for people with disabilities | Elevators, ramps, Braille, etc.  |
| The ability to provide various room types | Suites, king, standard, etc.   |  |
| Quality                                   | Quality of room suppliers  | Soap, shampoo, body lotion, etc.   |
|   | Quality of bedding package   | Sheets, blankets, etc.   |
|   | Quality of room service  | Ordering food, etc.  |
|   | Quality of food options  | Menu of breakfast, etc.  |
|   | Quality of facilities amenities  | Spa, swimming pool, gym, etc.  |
|   | Quality of technology amenities  | Internet   |
|   | Quality of service performance   | Competency, knowledge training, grooming, etc.                           |
|   | Quality of facilities upkeep   | Cleanliness, updated facilities, etc.                                    |
|   | Quality of system/process  | Efficiency, modern technology, etc.                                      |
|   | Quality of service recovery  | Problem solving, problem resolution, etc.                                |

Table 4. Attributes for Selecting a Hotel (*continued*)

| Key drivers of CE | Attributes  | Brief descriptions of identified attributes                |
|-------------------|---|--|
| Price             | Actual price paid for room  | Actual room rate   |
|                   | Who pays for the room   | Corporate, personal funds, etc.                            |
|                   | Perceived value for the price paid for the room                                       | Perceived value for the room                               |
|                   | Additional charges for extra services/facilities                                      | Parking, room services, Internet, etc.                     |
|                   | Discounts received because of membership  | AAA, AARP, entertainment card, etc.                        |
|                   | Perceived value from rewards received   | Airline mileage, prizes, catalog merchandise, etc.         |
| Brand             | Value of image generated through first impressions/experiences                        | First impression   |
|                   | General brand image   | Marriott, Hilton, etc.                                     |
|                   | Image of chain sub-brand  | Residence Inn by Marriott, Courtyard with Marriott, etc.   |
|                   | Brand image of individual property  | Marriott, Hilton, Hyatt, etc.                              |
|                   | Uniqueness of hotel   | Boutique, Art-Deco, etc.                                   |
|                   | Impression gained from online reviews   | Online review  |
|                   | Impression gained from hotel website  | Hotel website  |
|                   | Impression gained from quality assurance programs                                     | Quality assurance programs                                 |
|                   | Impression gained from the reputation of the neighborhood where the hotel is located. | Reputation from the neighborhood                           |
|                   | Impression gained from the quality of room amenities                                  | Quality of room amenities                                  |
|                   | Impression gained from standards of service established                               | Guardian service, French, plate services, buffet, etc.     |
|                   | Impression gained from company advertisements   | Advertisements from newspaper, magazine, TV, etc.          |
|                   | Impression gained from word of mouth  | Recommendation, etc.                                       |
| Relationship      | Loyalty programs  | Frequent stay, reward, etc.                                |
|                   | Non-incentive loyalty   | Emotional attachment to brand, etc.                        |
|                   | Hotel's congruency with solving social issues   | Greenness, homelessness, etc.                              |
|                   | Hotel's participation in referral group programs                                      | Leading hotels of the world, historic hotels, etc.         |
|                   | Hotel's programs to draw personal linkages  | Alumni, Association, etc.                                  |
|                   | Hotel's community enrichment programs   | Back-to-work, Adopt a neighborhood such as food bank, etc. |
|                   | Hotel's programs to cater to visitors from specific nations                           | Japanese, Russian, Chinese                                 |
|                   | Hotel's programs for co-branding  | Standards in hotel rooms, etc.                             |
|                   | Hotel's partnership programs  | American Airline & Best western, etc.                      |
|                   | Enhancing customer knowledge by providing pertinent information                       | Cheapest day to book rooms, best times to visit            |
|                   | Providing options for self-services   | Kiosks, web-ordering, etc.                                 |

## **Phase II: Quantitative Study**

### **Overview**

In the initial stage, the customer survey focused on how the CE-based segmentation (CES) was developed using the importance of attributes of the CE drivers. The customer survey also included several key questions for calculating CE. To measure marketing responsiveness, profiles of hypothetical hotels were described in terms of the key CE drivers and the respondents were asked to evaluate their willingness to stay at such hotels. Following the marketing responsiveness analysis, CE strategy and action plans were developed separately for each of the CE-based segments and hotel type.

The customer survey focused on travelers who had stayed at any type of hotel during the previous 12 months. Respondents were asked to answer several questions about their past experience of their typical hotel stay. For the purpose of this current study, “*a typical hotel stay*” was defined as a type of hotel at which customers most frequently stayed, given their brand preferences and budget constraints for business or leisure purposes. The travelers’ email and mailing database were obtained from The Center for Hospitality and Tourism Research (CHTR) at Oklahoma State University. The online customer survey was administrated in February, 2009.

### **Methodology Model**

Overall, the methodology model for quantitative study had four stages in which each stage consisted of a source, an analysis, and an outcome (see Figure 10). Stage 1 was for segmenting customers in terms of Customer Equity by using the importance ratings of CE drivers. In stage 2, general information about the hotel where customers

stayed typically was sought in order to calculate CLV of each customer. Hotel information sources for the hotel selection were also asked in order to develop strategies and action plans in stage 4. In the study, stage 3 used profiles of hotels based on the five key CE drivers to evaluate the respondents' responsiveness to marketing efforts. In this last stage, the development of strategies and recommendations for action plans were also developed.

Step by step, in stage 1, the key CE drivers for hotel selection were derived through the focus group discussion. Respondents evaluated the importance of the key CE drivers for the purpose of selecting a hotel. Cluster Analysis was conducted to segment the respondents based on the importance of the CE drivers they assign. The CE-based segmentation (CES) was therefore achieved in stage 1.

In stage 2, general information about the last typical hotel stayed at was asked such as: type of hotel; the purpose of visit; average room-nights; average room rate; additional expenses; average times when customers stayed at hotel; and the average life cycle of using hotels. On the basis of the general information, CLV was calculated by average life cycle through @Risk® simulation analysis. Sequentially, CE was measured by current CLV. CE distribution was presented by CES and hotel type. Respondents were asked to rate the importance of each information source for their hotel selection. The hotel information sources were analyzed using cross tabulations and multidimensional scaling (MDS). These target sources assisted to develop strategies and recommend action plans in stage 4.

Stage 3 provided profiles of hypothetical hotels based on five key drivers of CE. Respondents were asked to rate the overall satisfaction of each hypothetical hotel. Also,



they were asked to answer if they would consider switching their stay to the hypothetical hotel. The respondents' percentage of change in room rate that they are willing to pay and the number of room-nights they are willing to stay was calculated for each profile of hypothetical hotels.

Conjoint Analysis was conducted to determine the importance and impact of the five-key CE drivers through profiles of hypothetical hotels. For marketing responsiveness, @Risk® simulation analysis was conducted with the findings of Conjoint Analysis by changing the room-nights and room rate as input variables. Through Conjoint Analysis and @Risk® simulation analysis,  $\Delta$  CLV distributions and  $\Delta$  CE distributions for each CES and hotel type were presented.

In the last stage, specific strategies were developed through the analysis and outcomes of stage 1 through 3. The developed strategies assisted the hotel to develop the action plans on the basis of the outcome of target sources in stage 3. Therefore, the CE-based segmentation approach provided more specific strategies and action plans for the CES.

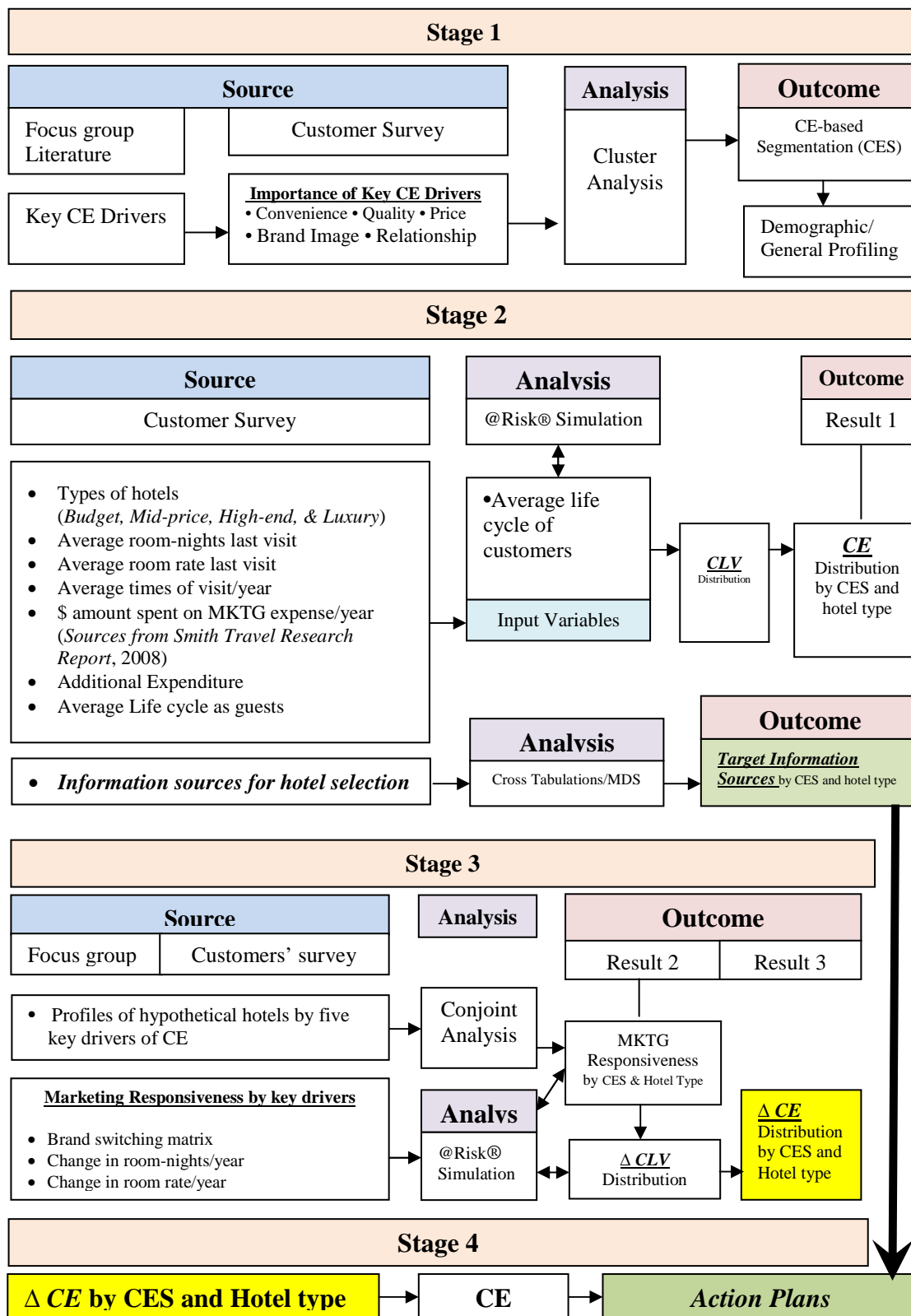


Figure 10. Methodology Model

## Survey

### *Measurements of constructs*

The customer survey consisted of six sections: (a) screening question; (b) general information about the hotel stay; (c) the importance of key CE attributes; (d) the importance of information sources for hotel selection; (e) profiles; and (f) demographics.

*Screening question:* There was one screening question at the beginning of the questionnaire: “Have you stayed at any type of commercial hotel/motel/lodging establishment at least once during the past 12 months?” The current study focused the participants’ responses on a “*typical hotel stay*” in order to obtain precise information about the hotel for measuring CE. For the purpose of this study, *a typical hotel stay* was defined as a type of hotel at which the customer most frequently stayed given their brand preferences and budget constraints either for business or leisure purposes. If, for example, a customer most frequently traveled on business and stayed at a mid-priced hotel such as Holiday Inn or Hampton Inn, then mid-priced hotels would be his/her typical hotel type.

*General information about the hotel stay:* Respondents were asked to answer eight questions about the hotel where they typically stayed. Participants were asked the way they paid for their last typical hotel stay; the hotel type; and the purpose of their visit. The hotel type was categorized into four types such as budget, mid-price, high-end, and luxury hotels. The dollar amount spent on marketing expense for contribution margin was derived from Smith Travel Research (2008) in the current study. For measuring CE, these questions below developed by Rust et al. (2000) and Rust, Lemon, and Zeithaml (2004) were asked as follows:

- “On average, how many nights did you stay during your last visit?”
- “On average, how much did you pay for the room per night during your last visit?”
- “On average, how much did you spend for all other expenses together per person and per night (e.g., Food & Beverage, Movies, Gift shop, Spa, Meetings, etc.) during your last visit?”
- “In all, how many times have you stayed at hotels similar to your typical hotel during the past 12 months?”
- “How long have you been a customer of hotels similar to your typical hotel?”

*The importance of key CE attributes:* According to the focus group discussion in the qualitative study, this study found the five key CE drivers that were considered to be important by customers for selecting a hotel. The five key drivers of CE were convenience, quality, price, brand image, and relationship. The key CE drivers are the key attributes of CE for selecting a hotel. *Convenience driver* included the ability to “easily access the hotel, airport, downtown;” “ease of making reservations;” “ease of ordering services such as room service, wake-up call, etc.” and so forth. *Quality driver* included “quality of service performance (e.g., competency, knowledge training, grooming, etc.);” “quality of amenities (e.g., spa, gym, Internet, etc.);” “quality of room supplies (e.g., shampoo, soap, body lotion etc.),” and so forth. *Price driver* included “perceived value for the price paid for the room”; “additional charges for extra services/facilities (e.g., parking, room services, Internet, etc.);” and “discounts received because of membership and rewards program.” *Brand Image driver* included “general

brand image;” “uniqueness of hotel (e.g., Boutique, Art-Deco, etc.);” “impression gained from on-line reviews or hotel websites,” and so forth. *Relationship driver* included “availability of loyalty programs;” “provision of non-incentive loyalty (e.g., emotional attachment to brand, etc.);” “hotel’s involvement with resolving social issues such as environmental,” and so forth. All key CE drivers were rated for their importance for the CE-based segmentation. Additionally, respondents were asked to allocate points to represent the degree of importance in terms of the five key drivers. All attributes about the five key CE drivers were developed from findings from the focus group discussion and by previous research (i.e. Rust et al., 2000; Lemon, et al., 2001; Rust, Lemon, & Zeithaml, 2004; Rust, Lemon, & Narayandas, 2004). The total attributes of CE were 30 items: The convenience driver consisted of seven items; the quality driver consisted of six items; the price driver consisted of three items; the brand image driver consisted of eight items; and the relationship driver consisted of six items. Respondents were asked to rate each item on a seven-point Likert scale ranging from “1 = *poor*” to “7 = *excellent*.”

*The importance of information sources for hotel selection:* Respondents were also asked to answer “how important are information sources for selecting a hotel?” Each respondent was asked to rate their importance of information sources on a seven-point Likert scale ranging from “1 = *not at all*” to “7 = *extremely important*.” It was used to develop specific action plans to keep existing customers and attract new customers after the importance as hotel information sources for hotel selection data were analyzed. The hotel information sources included 24 items including “Corporate Travel Managers,” “Independent Travel Agents,” “Hotel Marketing Literature,” “Hotel website,” “Direct

mail,” “Newspaper/Magazine Advertisements,” “Recommendation from friends or others (Word-of-Mouth),” and so forth.

*Profiles:* Each respondent was asked to rate his/her willingness. Nine hypothetical profiles were presented to each respondent. Each hypothetical hotel profile was described in terms of the five key CE drivers with three levels each (i.e., below expected, as expected, and above expected). Respondents were asked to rate their perceived overall satisfaction with the identified profile on a seven-point Likert scale ranging from “1 = *strongly dissatisfied*” to “7 = *extremely satisfied*.” The marketing effort responsiveness was measured in terms of three variables compared customers’ past experience at the last typical hotel where they stayed. These three variables are the probability of brand switching, the change in room-nights they desire to stay, and the change in room rate they are willing to pay. This study assumed that the respondents would show different marketing responsiveness depending on the funding sources for paying for the hotel (i.e., personal funds and business funds). Three questions about marketing responsiveness were as follow:

- “What is the probability percentage that you consider switching your stay to the identified hotel?”
- “How much would you be willing to pay for the identified hotel?”
- “How many nights would you desire to stay in the identified hotel if you had no constraints?”

*Socio-Demographics:* Finally, respondents were asked to answer socio-demographic questions including age, gender, occupancy, total annual household income, ethnic background, and level of education for categorization.

### ***Hypotheses Development and Testing***

In this session, the detailed hypotheses and procedures for three research propositions are presented to obtain the objectives of the research.

#### **Proposition 1**

**Determine the core Customer Equity drivers for segmentation of the hotel industry.**

The literature review and results from Phase I suggested the importance of the key CE drivers during customers' hotel selection. Previous research on Customer Equity suggested that value equity, brand equity, and relationship equity were the key CE drivers (Lemon et al., 2001; Rust et al., 2000; Rust, Lemon, & Zeithaml, 2004; Rust, Zeithaml, & Lemon, 2004). As discussed in the literature review, value equity consisted of convenience, quality, and price sub-drivers (Rust et al., 2000). However, in this current study, these sub drivers of value equity were respectively determined in the hotel industry as key drivers, emphasizing the important drivers for selecting a hotel as results of the qualitative study in Phase I. In congruence with previous research and results from the focus group discussion, this study determined the key CE drivers in the hotel industry: convenience, quality, price, brand image, and relationship drivers. This study answers the following research question:

### *Research Question 1*

*“What are the core Customer Equity drivers for segmentation of the hotel industry?”*

Given the findings from the focus group discussion and on the basis of the literature review, five hypotheses for the first research proposition were developed:

- H1.** Considering the Relationship-Seeking Customer Segment (RSCS) for any hotel type, the relationship driver will be significantly more important than the other remaining CE drivers.
- H2.** Considering the Convenience-Seeking Customer Segment (CSCS) for any hotel type, the convenience driver will be significantly more important than the other remaining CE drivers.
- H3.** Considering the Quality-Seeking Customer Segment (QSCS) for any hotel type, the quality driver will be significantly more important than the other remaining CE drivers.
- H4.** Considering the Brand Image-Seeking Customer Segment (BSCS) for any hotel type, the brand image driver will be significantly more important than the other remaining CE drivers.
- H5.** Considering the Price-Seeking Customer Segment (PSCS) for any hotel type, the price driver will be significantly more important than the other remaining CE drivers.

A new variable was created through cluster analysis from the importance ratings of the key CE drivers by the respondents. The descriptions of the CE-based segments were as follows:

***CE-based segments:*** If five clusters are derived, each is coded 1 through 5 in this new variable. The data were split by this variable. For example, in the case of hypothesis 1, as for the relationship-based segment, the relationship driver was compared with other remaining CE-drivers (i.e., quality, price, brand image, and convenience driver).

Similarly, other hypotheses 2, 3, 4, and 5 were tested using the identifying driver for the segment as the anchor and then comparing it with the other remaining CE drivers for each segment.

***Analysis:*** Cluster Analysis was used to segment the customers into five groups based on CE. To determine the key CE drivers for each segment, Conjoint Analysis was



conducted. The initial stage in Conjoint Analysis calculates the utility scores for each attribute level. Levels with the positive utility are preferred over those with negative utility. The range of the utility scores can be calculated for each driver. An attribute with a larger utility range is more important than an attribute with a smaller range (Kuhfeld, 2005; Malhotra, 1996; Njite, 2005). The part-worth utilities show the most and least preferred levels of the attributes (Malhotra, 1996). The importance value is computed from the part-worth utility range for each driver. The predicted utility for a given hotel is the sum of the intercept and the part-worth utilities.

In this study, data were analyzed to compare the CE drivers using one-way Analysis of Variance (ANOVA) to test hypotheses 1, 2, 3, 4, and 5. Post-hoc tests such as Scheffe and Tukey HSD were conducted to see significant differences existed between of the drivers. There are many possible hypotheses by each hotel type (i.e., budget, mid-price, high-end, and luxury hotel). Possible hypotheses by each hotel type were tested within each of the CE-based segments. To test five hypotheses for the first research proposition statistically, the following analytical methods were used (see Table 5).

Table 5. Analysis Methodology of Hypotheses for Proposition 1

| Hypotheses tested        | Variables           |                     | Measurement  | Analysis Method   | Moderating Variables |
|--------------------------|---------------------|---------------------|--|---|----------------------|
| <b>H1</b><br>for<br>RSCS | Relationship driver |                     | Average Importance Scores <sup>a</sup> of Relationship driver × Relationship Weight score <sup>b</sup> | one-way ANOVA<br>→ Post hoc test (Scheffe or Tukey HSD's Test)<br>$\alpha=0.05$ | hotel type           |
|                          | Other CE drivers    | Convenience driver  | Average Importance Scores of Convenience driver × Convenience Weight score                             |   |                      |
|                          |                     | Quality driver      | Average Importance Scores of Quality driver × Quality Weight score                                     |   |                      |
|                          |                     | Price driver        | Average Importance Scores of Price driver × Price Weight score   |   |                      |
|                          |                     | Brand Image driver  | Average Importance Scores of Brand Image driver × Brand Image Weight score                             |   |                      |
| <b>H2</b><br>for<br>CSCS | Convenience driver  |                     | Average Importance Scores of Convenience driver × Convenience Weight score                             | one-way ANOVA<br>→ Post hoc test (Scheffe or Tukey HSD's Test)<br>$\alpha=0.05$ | hotel type           |
|                          | Other CE-drivers    | Quality driver      | Average Importance Scores of Quality driver × Quality Weight score                                     |   |                      |
|                          |                     | Price driver        | Average Importance Scores of Price driver × Price Weight score   |   |                      |
|                          |                     | Brand Image driver  | Average Importance Scores of Brand Image driver × Brand Image Weight score                             |   |                      |
|                          |                     | Relationship driver | Average Importance Scores of Relationship driver × Relationship Weight score                           |   |                      |
| <b>H3</b><br>for<br>QSCS | Quality driver      |                     | Average Importance Scores of Quality driver × Quality Weight score                                     | one-way ANOVA<br>→ Post hoc test (Scheffe or Tukey HSD's Test)<br>$\alpha=0.05$ | hotel type           |
|                          | Other CE-drivers    | Convenience driver  | Average Importance Scores of Convenience driver × Convenience Weight score                             |   |                      |
|                          |                     | Price driver        | Average Importance Scores of Price driver × Price Weight score   |   |                      |
|                          |                     | Brand Image driver  | Average Importance Scores of Brand Image driver × Brand Image Weight score                             |   |                      |
|                          |                     | Relationship driver | Average Importance Scores of Relationship driver × Relationship Weight score                           |   |                      |

Table 5. Analysis Methodology of Hypotheses for Proposition 1 (*continued*)

| Hypotheses tested        | Variables          |                     | Measurement  | Analysis Method   | Moderating Variables |
|--------------------------|--------------------|---------------------|--|---|----------------------|
| <b>H4</b><br>for<br>BSCS | Brand Image driver |                     | Average Importance Scores of Brand Image driver × Brand Image Weight score   | one-way ANOVA<br>→ Post hoc test (Scheffe or Tukey HSD's Test)<br>$\alpha=0.05$ | hotel type           |
|                          | Other CE-drivers   | Convenience driver  | Average Importance Scores of Convenience driver × Convenience Weight score   |   |                      |
|                          |                    | Quality driver      | Average Importance Scores of Quality driver × Quality Weight score           |   |                      |
|                          |                    | Price driver        | Average Importance Scores of Price driver × Price Weight score               |   |                      |
|                          |                    | Relationship driver | Average Importance Scores of Relationship driver × Relationship Weight score |   |                      |
| <b>H5</b><br>for<br>PSCS | Price driver       |                     | Average Importance Scores of Price driver × Price Weight score               | one-way ANOVA<br>→ Post hoc test (Scheffe or Tukey HSD's Test)<br>$\alpha=0.05$ | hotel type           |
|                          | Other CE-drivers   | Convenience driver  | Average Importance Scores of Convenience driver × Convenience Weight score   |   |                      |
|                          |                    | Quality driver      | Average Importance Scores of Quality driver × Quality Weight score           |   |                      |
|                          |                    | Brand Image driver  | Average Importance Scores of Brand Image driver × Brand Image Weight score   |   |                      |
|                          |                    | Relationship driver | Average Importance Scores of Relationship driver × Relationship Weight score |   |                      |

Note:

- <sup>a</sup>. The importance scores of each of the CE drivers were evaluated from the fourth (IV) section of the customer survey (see Appendix A).
- <sup>b</sup>. The weight of each of the CE drivers was evaluated from the third (III) section of the customer survey (see Appendix A).

**Proposition 2**

**Demonstrate the significant CE drivers that are responsive to marketing effort for each of the CE-based segment and hotel type.**

With the shortcomings of the traditional segmentation approach discussed in the literature review, recent research on CE suggests that the CE-based segmentation is a

critical new approach to better understand the characteristics of segments (Yankelovich & Meer, 2006; Voohees, 2006). The CE-based segmentation approach identifies customers more properly than traditional segmentation approach because a researcher collects relevant data on customers' actual buying behavioral patterns (Voohees, 2006). The CE-based segments were expected to be the same as the five key CE drivers. This current study answers the following research question:

### *Research Question 2*

*“How do the CE-based customer segments respond to marketing effort?”*

To investigate the impact of the CE-based segmentation in the hotel industry, this study demonstrated what drivers are responsive to marketing effort. Given the findings from the focus group discussions and on the basis of the literature review, five hypotheses for the second research proposition were developed. Hypotheses 6 to 10 were tested by controlling for funding sources (i.e., personal and business funds) and hotel type.

- H6.** Controlling for funding sources and hotel type, customers in the Relationship-Seeking Customer Segment (RSCS), will be significantly more responsive to the relationship driver in terms of their probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to pay.
- H7.** Controlling for funding sources and hotel type, customers in the Convenience-Seeking Customer Segment (CSCS), will be significantly more responsive to the convenience driver in terms of their probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to pay.
- H8.** Controlling for funding sources and hotel type, customers in the Quality-Seeking Customer Segment (QSCS), will be significantly more responsive to the quality driver in terms of their probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to pay.
- H9.** Controlling for funding sources and hotel type, customers in the Brand Image-Seeking Customer Segment (BSCS), will be significantly more responsive to the brand image driver in terms of their probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to pay.
- H10.** Controlling for funding sources and hotel type, customers in the Price-Seeking

Customer Segment (PSCS), will be significantly more responsive to the price driver in terms of their probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to pay.

Each CE driver related to marketing effort is evaluated as follows:

***Relationship-related marketing effort:*** Customers in each of the CE-based segments were responsive to the identifying driver. For example, in the case of hypothesis 6, customers in the Relationship-Seeking-Customer-Segment will be responsive to the relationship driver. The values for the effectiveness of the relationship driver are derived from the regression standardized coefficients of the dummy variables used to describe the hypothetical profiles used in Conjoint Analysis. In the regression model, the dependent variable is the market responsiveness in terms of (a) the probability of brand switching, (b) the room-nights they desire to stay, and (c) the room rate they are willing to pay. The independent variables are the dummy variables used to describe the respective hotel profiles and their respective part-worth utilities. Similarly, other hypotheses 7, 8, 9, and 10 were tested. Each CE driver was tested by the regression standardized coefficients of market responsiveness in terms of the CE-based segments and hotel type.

***Analysis:*** As a result of Conjoint Analysis, each CE-segment has a regression standardized coefficient. Within each CE-segment, the five CE drivers have regression standardized coefficients. Each of the CE drivers with a larger coefficient is more important than other drivers with a smaller coefficient. The market responsiveness was analyzed in each of the CE-segments. The market responsiveness was measured in three ways: *the probability of brand switching* they would consider switching their stay to

another hotel; *the change in the number of room-nights* they desire to stay; and *the change in room rate* they were willing to pay.

In this study, especially, the hybrid conjoint approach is used to measure more realistic and exact marketing effort. The current study develops the five key CE drivers: Convenience, Quality, Price, Brand Image, and Relationship drivers. However, to measure more precise marketing effort, this study measures these five CE drivers at two levels (i.e., “as expected” and “above expected”) from the perspective of the customers. For example, the convenience drivers have *Convenience (as expected) driver* and *Convenience (above expected) driver*. Thus, the total ten dummy variables were used in conjoint analysis: *Convenience (as expected) driver, Convenience (above expected) driver, Quality (as expected) driver, Quality (above expected) driver, Price (as expected) driver, Price (above expected) driver, Brand Image (as expected) driver, Brand Image (above expected) driver, Relationship (as expected) driver, and Relationship (above expected) driver*. Metric hybrid conjoint analysis was used in order to consider the importance weighted scores of the hotel selection attributes as rated by the customers.

### **Proposition 3**

- (a) Determine the CE drivers that maximize the Return-On-Investment (ROI) of marketing effort exerted by a hotel in terms of the change in CE, and**
- (b) Suggest the effective marketing action plans for each of the CE-based segment and hotel type.**

To develop the CE strategy, this study applied the Customer Equity Management (CEM) process with the goal to maximize Customer Equity. As discussed in the

literature review, the CEM process consists of three steps; analysis, strategy, and action plan (Bruhn et al., 2008). On the basis of the findings of Proposition 1 and 2, the CEM process was developed in Proposition 3. The first step was to calculate CLV of each customer which is a key component in calculating the Customer Equity (CE). Based on the first step, the second step was to determine what drivers maximize the ROI of marketing effort exerted by a hotel in terms of the change in CE. Finally, the third step was to develop what marketing tools (action plans) would be most effective for each of the CE-based segment and hotel type.

Since the CE strategy was developed on the basis of the CE-based segmentation, the CE strategy suggested for the hotel industry may be more precise and meaningful. Research question 3 dealt with the CEM process as described below.

*Research Question 3*

*“Which of the drivers maximize the Return-On-Investment (ROI) of marketing effort exerted by a hotel?”*

***Steps in the CEM process:*** The initial results of the survey provide information for performing further analysis such as calculating CLV of each customer. Further, the results from Conjoint Analysis enable the determination of the responsiveness of marketing effort for each of the CE-based segments and hotel type. The analysis led to the next step. For this step, simulation studies using @Risk® software was performed by changing the customer’s expected lifetime with the hotel and evaluating the resulting changes in CE. Such analysis was performed for each of the CE-based segments and by each hotel type. The overall strategy was developed the following simulation study. In

the last stage, respondents' hotel information sources was evaluated for each of the CE-based segments and hotel type resulting in a suggested potential action plan for targeting each of the CE-based segments. The goal was to identify the most effective action plan on the basis of marketing efforts responsiveness for each of the CE-based segments.

*Analysis for the CEM process:* In the first step, CLV was calculated for each respondent separately. The average CLV was determined for each CE segment and hotel type. In the second step, the marketing effort responsiveness was derived using regression analysis. In the regressions, the dependent variable was the reported market responsiveness in terms of the probability of brand switching, change in the number of room-nights they desire to stay, and the change in the room rate they are willing to pay. The independent variables are dummy variables used in the hotel profiles and their respective part-worth utilities. In the third step, the self-reported importance score for each of the hotel information sources is evaluated for each CE-segments and hotel type. Finally, the specific action plans for each CE-segment and hotel type were developed. Additionally, the ROIs were presented in terms of funding sources (i.e., personal funds and business funds).

Using mean and standard deviation scores, the hotel information source important to each CE segment were determined. The CEM process can assist a hotel to develop specific CE strategies and action plans by the CE segments and hotel type.



## **Quantitative study- Data Analysis**

### *Cluster analysis*

Cluster analysis is a multivariate technique that is used to identify different groups (clusters) within a sample by examining the individuals' common features (Hair, Anderson, Tatham, & Black, 1998). Cluster analysis has been conducted to segment customers into different groups which have common features in order to find a target market or for market positioning in segmentation research (Arabie & Hubert, 1994; Green & Krieger, 1995). Such applications have also been used in the hospitality and tourism industries (Cha, McCleary, & Uysal, 1995; Mazanec, 1984; Pearce & Caltabiano, 1983). Cluster analysis was also called segmentation analysis or taxonomy analysis (Hair, Anderson, et al., 1998). This technique is a statistical tool that classifies objects into a set of groups according to the characteristics of the objects (Hair, Anderson, et al., 1998; Hair, Black, Babin, Anderson, & Tatham, 2006). Cluster analysis identifies a cluster, which both minimize within-group variation and maximize between-group variation (Hair, Black, et al., 2006).

There are two methods in cluster analysis; hierarchic and nonhierarchic methods, to make an initial distinction from Conjoint Analysis (Hair, Anderson, et al., 1998; Hair, Black, et al., 2006). The hierarchical method allows researchers to defer decisions regarding the number of groups they wish to create. On the other hand, with the non-hierarchical method, the number of groups is determined in advance and the individuals involved in each phase are grouped using similarity or distance measurements (Pérez & Nadal, 2005). A non-hierarchical algorithm was used to determine the best number of clusters based on the activity factors (Hair, Anderson, et al., 1998). A non-

hierarchical algorithm was better for reducing the data with a large data set because Conjoint Analysis aims to reduce the data via the creation of homogeneous groups (Hair, Anderson, et al., 1998; Hair, Black, et al., 2006; Pérez & Nadal, 2005). Consequently, this study used a nonhierarchical method. In order to enhance our understanding of the factor structure, a cluster analysis was employed to classify customers into mutually exclusive groups, based on a K-means clustering method. To achieve the CE-based segmentation, this study utilized cluster analysis to segment customers in terms of the importance of the key CE attributes.

### ***Conjoint Analysis***

Conjoint Analysis, sometimes referred to as “trade-off” analysis, has been substantially tested by a useful marketing technique for measuring customer’s trade-offs among multi-attributes products and services (Srinivasan & Shocker, 1973). Because Conjoint Analysis analyzed consumers’ preferences, such models provided an understanding of the value structures that influence consumer decision-making (Green & Srinivasan, 1978). This technique was named Conjoint Analysis as it assumes that several factors *considered jointly* have an impact on consumers’ purchase decision-making rather than a single factor (Malhotra, 1996). Conjoint Analysis is used specifically to understand how respondents develop their preferences for products or services (Hair, Anderson, et al., 1998) by measuring consumers’ responses to descriptions of hypothetical products or services (Dellaert, Prodigalidad, & Louviere, 1998). That is, Conjoint Analysis is used to determine how decisions are likely to be influenced by the inclusion, exclusion, or degree of those factors (Malhotra, 1996).

Conjoint Analysis uses unique terminology that demands an explanation (Njite, 2005). Some of the more common ones are described below.

*Part-worth:* The *part-worth* or *utility* functions describe the utility the consumer/respondent attaches to a given level of each attribute. It is a numerical expression of the value consumers place in an attribute level. Low utility indicates less value; high utility indicates more value.

*Relative importance weights:* The relative importance weights are estimated and indicated which attributes are important in influencing consumer choice. It can be calculated by examining the difference between the lowest and highest utilities across the levels of attributes.

*Attribute levels:* The attribute levels denote the values assumed by the attributes. For example, a service price is an attribute with many levels. Price levels could be below expected, as expected, and above expected as three levels in this study.

*Full-profiles:* Full-profiles or complete profiles are constructed in terms of all the attributes using the attribute levels specified by the design.

*Fractional factorial designs:* These are designs employed to reduce the number of stimuli to be evaluated in the full-profile approach.

*Orthogonal Arrays:* These are a special class of fractional designs that enable the efficient estimation of main effects.

### **Preference modeling**

Conjoint Analysis is based on main effects analysis of variance models and can be performed in a metric or nonmetric form (Kuhfeld, 2005). Kuhfeld (2005) argued that

when all the attributes are nominal the metric Conjoint Analysis is a simple main-effect ANOVA with some specialized input. Conjoint Analysis required preferences and attributes variables which are usually obtained by directly asking the respondents to state their preferred levels within each attribute or by allocating 100 points across the attributes according to their importance. The attributes are the independent variables, and the judgment (also known as ranking/rating or score) is the dependent variable. The ranking or rating score is usually based on overall assessment of a profile. The dummy variables used for describing the profiles can also be used as the independent variables in the regressions.

The parameter estimates from the ANOVA model:

$$Y_{ijk} = \mu + \beta_1 i + \beta_2 j + \beta_3 k$$

Where:

The *part-worth utilities* are the  $\beta$ 's,

$\mu$  is the intercept, and

$\sum \beta_1 i = \sum \beta_2 j = \sum \beta_3 k = 0$ : the utilities add to zero.

If, for example, in this study;

The Conjoint Analysis model for the preference for a hotel with convenience  $i$ , quality  $j$ , price  $r$ , brand image  $k$ , and relationship  $c$  is:

$$Y_{ijrkc} = m + \beta_{1i} + \beta_{2j} + \beta_{3r} + \beta_{4k} + \beta_{5c} + \epsilon_{ijrkc}$$

For any given hotel:  $i = 1, -1$ ;  $j = 1, -1$ ;  $r = 1, -1$ ;  $k = 1, -1$ ;  $c = 1, -1$ ; (1 = Preferred and -1 = Less preferred)

The part-worth utilities for the attribute levels are the parameter estimates

Where:  $\beta_{11} + \beta_{10} = \beta_{21} + \beta_{20} = \beta_{31} + \beta_{30} = \beta_{41} + \beta_{40} = \beta_{51} + \beta_{50} = 0$

The part-worth utilities for the attribute levels are the parameter estimates  $\beta_{11}$ ,  $\beta_{10}$ ,  $\beta_{21}$ ,  $\beta_{20}$ ,  $\beta_{31}$ ,  $\beta_{30}$ ,  $\beta_{41}$ ,  $\beta_{40}$ ,  $\beta_{51}$ , and  $\beta_{50}$  from the main effect ANOVA model.

The estimate of the intercept is  $\mu$ , and the error term is  $\epsilon_{ijrkc}$

The predicted utility for the  $ijrkc$  combination is

$$Y_{ijrkc} = m + \beta_{1i} + \beta_{2j} + \beta_{3r} + \beta_{4k} + \beta_{5c}$$

The metric model is used in this research study.

$$Y_h = a + bU_h + \sum_{i=1, j=1}^{I, J} v_{jixij}$$

Where:

$Y_h$  = overall utility of the  $h^{\text{th}}$  profile ( $h = 1, H$ ),

$a$  = estimated parameter represents total intercept,

$b$  = estimated parameter represents the slope of profile  $h$ 's self-explicated utility

$U_h$  = utilities derived from self-explicated task:

$$U_h = a' + b' + \sum_{i=1, j=1}^{I, J} w_{juij}$$

Where:

$w_j$  = attribute  $j$ 's importance,  $u_{ij}$  represents level  $i$ 's desirability in attribute  $j$ ),

$v_{ij}$  = the estimated utility (dummy-coded variable) represents main effect associated with level  $i$  ( $i = 1, I$ ) of attribute  $j$  ( $j = 1, J$ ),

$x_{ij}$  = dummy variable represents the presence ( $x = 1$ ) or absence ( $x = 0$ ) of the attribute level in the defined stimulus profile.

By summing the utilities of the levels defined in each profile, the authors could compare the overall profile utilities and select the most preferred hotel profile among the nine profiles studied. Meanwhile, the authors measured the relative importance of all five attributes and identified the most important attributes in the study (Hu & Hiemstra, 1996).

### **Full profiles and orthogonal designs (array)**

Conjoint Analysis has become a popular method for identifying and understanding the combined effects of product. It can better predict the overall consumer

preference through aggregating the utility scores of all individual products or services attributes because it is related to more realistic judgment than other research methods (Levy, 1995). However, the realism of attribute level combinations may not be as important in practice (Moore & Holbrook, 1990). Thus, respondents do notice that some profiles are less realistic than others.

In Conjoint Analysis, respondents were asked to evaluate several hypothetical products or scenarios consisting of various combinations of product attributes and their levels in terms of preferences. However, the possible combination of all factor levels can become too large for respondents to rank or score. Thus, fractional factorial designs are used where a smaller fraction of all possible alternatives is utilized instead of the full profiles. The number of relevant combinations can be reduced significantly through the use of an orthogonal array experimental design (Green, 1974). Using orthogonal designs was predictive of market behavior (Levin, Louviere, Schepanski, & Norman, 1983). Based on the evaluations of the hypothetical products made by the participants, orthogonal arrays can be generated by Conjoint Analysis programs such as SAS, SPSS and MINITAB. For example, in the case of five attributes with three levels each, all possible profiles would be 243 ( $3 \times 3 \times 3 \times 3 \times 3$ ). SAS or SPSS can generate a parsimonious orthogonal array of 27 profiles that are a true representation of all 243 profiles. Such utilization of orthogonal arrays reduces the data collection burden on the respondents, yet maintains the research rigor to perform analysis as well as one would with a full profile research project.

Finally, Conjoint Analysis assists to determine the relative importance of the many attributes of a product to the consumers (Green & Wind, 1975). Green and

Srinivasan (1990) addressed the various uses and implications of Conjoint Analysis in marketing and demonstrated the symbiotic relationship between market segmentation and targeting.

### **Validation**

Many researchers have carried out cross-validation tests, internal validation and external validation, for several of the Conjoint models used previously (Garcia, Rummel, & Hauser, 2007). The internal validation assesses the validity of the model in predicting the dependent variable (profile evaluation score) within the system, and the external validation evaluates the validity of the model in predicting the dependent variable in the real world (Hu & Hiemstra, 1996).

### **Typical Conjoint Procedures**

Most Conjoint studies are conducted using the following steps:

- 1) Select relevant attributes.
- 2) Identify the relevant levels of each attribute.
- 3) Configure attribute-level combinations (profiles) by using orthogonal arrays.
- 4) Select data collection methods.

The larger the number of attributes and their levels, the larger the number of profiles a respondent may have to evaluate. In such situations, it is not uncommon to use orthogonal arrays to reduce the number of profiles evaluated by the respondents.

### **Levels and Profiles**

In this study, five attributes (i.e., convenience, quality, price, brand image, and relationship) were decided upon with three levels. Each attribute and level is described below (see Table 6).

Table 6. The Levels Assigned to Each of the Attributes

| <b>Attributes</b> | <b>Levels</b>  | <b>Explanation</b>   |
|-------------------|--|--|
| Convenience       | Above expected = 1<br>As expected=0<br>Below expected = -1 | Convenient to reach the hotel or the services (e.g., Accessibility, Ease of booking/reservation, Providing various service options, etc.)                                  |
| Quality           | Above expected = 1<br>As expected=0<br>Below expected = -1 | Perceived quality in terms of all services (e.g., Service quality, Amenities, Facilities, Cleaning, Room suppliers, etc.)  |
| Price             | Above expected = 1<br>As expected=0<br>Below expected = -1 | Described as acceptable or unacceptable price as expected (e.g., Room rate, Value for money, Additional charges for extra services, Discounts because of membership, etc.) |
| Brand Image       | Above expected = 1<br>As expected=0<br>Below expected = -1 | Overall image on the basis of brand property (e.g., Chain brand image, Property brand image, Uniqueness, Impressions gained from standards of service established, etc.)   |
| Relationship      | Above expected = 1<br>As expected=0<br>Below expected = -1 | Relationship between the hotel and customers (e.g., Loyalty program, Reward program, Affiliation, Hotel's community enrichment programs, Co-brandings, etc.)               |

Five attributes with three levels resulted in a total of 243 profiles (3<sup>5</sup>). These full profiles were too numerous for the respondents and are a hindrance to the collection of any useful data. With the orthogonal arrays, assuming that any interaction effect is negligible, only the main effect could be estimated. The five orthogonal arrays used in this study were formed with the aid of the Conjoint Designer (SAS 9.1). The SAS program generated an orthogonal array of 27 profiles. This study considered that even 27 profiles are too many for a respondent to answer. Thus, this study added a new attribute called “BLOCK” with three levels (i.e., Block 1) to our model. This way, when the model splits out the profiles, we can then separate out by the blocks and still have few profiles per respondent. Finally, the SAS program generated three sets consisting of nine profiles per respondent (see Table 7 - 9). The arrays used for Conjoint Analysis model per each set are indicated below:



Table 7. The Orthogonal Arrays used for Conjoint Analysis Model (1st set for 9 profiles)

|         | <b>Convenience</b> | <b>Quality</b> | <b>Price</b>   | <b>Brand Image</b> | <b>Relationship</b> |
|---------|--------------------|----------------|----------------|--------------------|---------------------|
| Hotel A | Below Expected     | Below Expected | Below Expected | Below Expected     | Below Expected      |
| Hotel B | Below Expected     | As Expected    | Above Expected | Below Expected     | Below Expected      |
| Hotel C | Below Expected     | Above Expected | As Expected    | Below Expected     | Below Expected      |
| Hotel D | As Expected        | Below Expected | Below Expected | Above Expected     | As Expected         |
| Hotel E | As Expected        | As Expected    | Above Expected | Above Expected     | As Expected         |
| Hotel F | As Expected        | Above Expected | As Expected    | Above Expected     | As Expected         |
| Hotel G | Above Expected     | Below Expected | Below Expected | As Expected        | Above Expected      |
| Hotel H | Above Expected     | As Expected    | Above Expected | As Expected        | Above Expected      |
| Hotel I | Above Expected     | Above Expected | As Expected    | As Expected        | Above Expected      |

Table 8. The Orthogonal Arrays used for Conjoint Analysis Model (2nd set for 9 profiles)

|         | <b>Convenience</b> | <b>Quality</b> | <b>Price</b>   | <b>Brand Image</b> | <b>Relationship</b> |
|---------|--------------------|----------------|----------------|--------------------|---------------------|
| Hotel A | Below Expected     | Below Expected | As Expected    | Above Expected     | Above Expected      |
| Hotel B | Below Expected     | As Expected    | Below Expected | Above Expected     | Above Expected      |
| Hotel C | Below Expected     | Above Expected | Above Expected | Above Expected     | Above Expected      |
| Hotel D | As Expected        | Below Expected | As Expected    | As Expected        | Below Expected      |
| Hotel E | As Expected        | As Expected    | Below Expected | As Expected        | Below Expected      |
| Hotel F | As Expected        | Above Expected | Above Expected | As Expected        | Below Expected      |
| Hotel G | Above Expected     | Below Expected | As Expected    | Below Expected     | As Expected         |
| Hotel H | Above Expected     | As Expected    | Below Expected | Below Expected     | As Expected         |
| Hotel I | Above Expected     | Above Expected | Above Expected | Below Expected     | As Expected         |

Table 9. The Orthogonal Arrays used for Conjoint Analysis Model (3rd set for 9 profiles)

|         | <b>Convenience</b> | <b>Quality</b>    | <b>Price</b>      | <b>Brand Image</b> | <b>Relationship</b> |
|---------|--------------------|-------------------|-------------------|--------------------|---------------------|
| Hotel A | Below<br>Expected  | Below<br>Expected | Above<br>Expected | As<br>Expected     | As<br>Expected      |
| Hotel B | Below<br>Expected  | As<br>Expected    | As<br>Expected    | As<br>Expected     | As<br>Expected      |
| Hotel C | Below<br>Expected  | Above<br>Expected | Below<br>Expected | As<br>Expected     | As<br>Expected      |
| Hotel D | As<br>Expected     | Below<br>Expected | Above<br>Expected | Below<br>Expected  | Above<br>Expected   |
| Hotel E | As<br>Expected     | As<br>Expected    | As<br>Expected    | Below<br>Expected  | Above<br>Expected   |
| Hotel F | As<br>Expected     | Above<br>Expected | Below<br>Expected | Below<br>Expected  | Above<br>Expected   |
| Hotel G | Above<br>Expected  | Below<br>Expected | Above<br>Expected | Above<br>Expected  | Below<br>Expected   |
| Hotel H | Above<br>Expected  | As<br>Expected    | As<br>Expected    | Above<br>Expected  | Below<br>Expected   |
| Hotel I | Above<br>Expected  | Above<br>Expected | Below<br>Expected | Above<br>Expected  | Below<br>Expected   |

The characteristics in terms of the five key attributes were described to respondents in each profile. These profiles have been used in previous Conjoint experiments (Haider & Ewing, 1991; Lindberg, Dellaert, & Rassing, 1999; Wei, Ruys, & Muller, 1999). All profiles were described in surveys (see Appendix A). An example of the profiles is shown below:

Second set of Hotel I (Profile 18)

- The hotel is closer than you thought it would be from the airport.
- The hotel's quality is above what you expected.
- You were asked to pay a lower price for the room than what you expected.
- The brand image of the hotel is below what you would expect to stay at normally.
- The hotel engages in customer relationship building efforts as you expected such as customer loyalty programs, reward programs, etc.

When the questionnaire was pilot-tested, minor adjustments were made to clarify the wording or semantics within the questionnaire.

### *Calculating CLV and CE*

As presented in the literature review, Gupta et al. (2006) generally defined CLV as “the present value of all future profits obtained from a customer over his or her life of relationship with a firm (p. 141).” Basically, this current study is based on the concept of CE presented by Rust et al.’s (2000) and Rust, Lemon, and Zeithaml’s (2004) studies. Rust, Lemon, and Zeithaml’s (2004) study used the brand-switching matrices as a CLV model. Rust, Lemon, and Zeithaml’s (2004) CLV model approach is that CLV is calculated by putting information about acquisition and retention of customers on competing brands in terms of brand switching. The brand switching matrix presented the probability an individual customer would switch from one brand to another. Thus, the lifetime value,  $CLV_{ij}$  of customer  $i$  to brand  $j$  is shown below.

$$CLV_{ij} = \sum_{t=0}^{T_{ij}} \frac{1}{(1 + d_j)^{t/f_t}} \times V_{ijt} \times \Pi_{ijt} \times B_{ijt},$$

Where,

$T_{ij}$  = number of purchases customer  $i$  makes during the specified time period,

$d_j$  = firm  $j$ ’s discount rate,

$f_t$  = average number of purchases customer  $i$  makes in a unit time (e.g., per year),

$V_{ijt}$  = customer  $i$ ’s expected purchase volume of brand  $j$  in purchase  $t$ ,

$\Pi_{ijt}$  = expected contribution margin per unit of brand  $j$  from customer  $i$  in purchase  $t$ ,

$B_{ijt}$  = probability that customer  $i$  buys brand  $j$  in purchase  $t$ .

However, the samplings of Rust, Lemon, and Zeithaml’s (2004) study were airlines, groceries, and facial tissues industries. In order to better understand the formula by applying the hotel industries, this study used the formula of CLV presented by Rust et al.’s (2000) study. The formula of CLV is shown below.

$$CLV_i = \sum_{t=0}^T \frac{1}{(1+d)^t} \times R_{it} \times S_{it} \times M_{it},$$

Where,

$CLV_i$  = the lifetime value of customer  $i$ ,

$t$  = time period,

$T$  = the length of the planning horizon,

$D$  = the discount factor,

$R_{it}$  = the revenue per period

$S_{it}$  = the expected share of customer  $i$ 's wallet for this brand in time  $t$  ( $B_{ijt}$  = probability that customer  $i$  buys brand  $j$  in purchase  $t$ ),

$M_{it}$  = contribution margin

On the basis of Rust, Lemon, and Zeithaml's (2004) study, to calculate  $CE_{ij}$ , of customer  $i$  to brand  $j$  is;

$$CE_j = mean_i(CLV_{ij}) \times POP,$$

Where;

$mean_i(CLV_{ij})$  = the average lifetime value for firm  $j$ 's customers  $i$  across the sample,

**POP\*** = the total number of customers in the market across all brands.

Depending on hotel type, population was applied differently on the basis of percentage of number of rooms. The population was shown below.

**POP\***

| Hotel type | Number of rooms <sup>b</sup> |
|------------|------------------------------|
| Budget     | 479,265                      |
| Mid-price  | 2,218,908                    |
| High-end   | 1,244,613                    |
| Luxury     | 533,405                      |
| Total      | 4,476,192                    |

Note:

<sup>a</sup>. Source: AHLA (2008). 2008 Lodging Industry Profile by Smith Travel Research (2008)

<sup>b</sup>. Total rooms  $\times$  average occupancy rate  $\times$  days = Room-nights/year

➔  $4,476,192 \times 63.1 \times 365 = 1,030,934,160$

### ***@Risk® simulation analysis***

To analyze the change in CE, spreadsheet modeling software was used. Spreadsheet modeling software has evolved to the point where it now provides generalists with the power to analyze their own decisions quickly and easily (Bodily, 1986). It can be used for decision tree analysis, expert systems, optimization, risk analysis simulation, statistical analysis and forecasting (Bodily, 1986).

One such simulation, Monte Carlo simulation is the methodology for studying a large number of probabilistic scenarios (@Risk® simulation, 2008; Bodily, 1986). Bodily (1986) suggested that Monte Carlo simulation can be carried out within the spreadsheet because it can be easy to set up the simulation. Monte Carlo simulation is a logical approach to extending a spreadsheet where uncertainty about more than one assumption variable is important (@Risk® simulation, 2008; Bodily, 1986). The Palisade Corporation developed an add-in package to M.S. Excel, called @Risk® simulation that uses Monte Carlo simulation (@Risk® simulation, 2008; Lieberman, Ramsay, & Balsly, 1989). Lieberman et al. (1989) suggested that @Risk® simulation is a powerful simulation tool that should be considered. Also, the technical appendix of @Risk® software products provides formula definition. The @Risk® function appendix also offers detained information on each type of probability distribution available in @Risk® simulation (Lieberman et al., 1989; @Risk® simulation, 2008).

For a spreadsheet simulation, there are usually four assumptions that need to be made (Bodily, 1986; Hertz, 1979). The four assumptions are as follows (Bodily, 1986, p. 44):

- 1) There should be a spreadsheet model that is developed in the usual way.

- 2) For each variable that is to be treated as uncertain, a probability distribution must be known or assumed.
- 3) From a random number generated by the computer, a random observation of each uncertain variable should be calculated, using the appropriate probability distribution for that variable. The entire spreadsheet is then solved to give one complete scenario, or trial of the simulation.
- 4) A number of trials are collected into a frequency distribution for some output variables of the spreadsheet. For example, the result of the simulation may be a chart showing the relative frequency (or alternatively, percentiles) of net present value (NPV) for a project. The project is evaluated according to the frequency distribution.”

@Risk® simulation analysis required input variables to forecast CLV in terms of life time of customers in number of years, called lifecycle in the current study. All respondents are categorized by the CE-based segmentation and type of hotel (i.e., budget, mid-price, high-end, and luxury).

In the customers’ survey, input variables are as follows:

- 1) Average room-nights stayed during typical last trip
- 2) Average room rate paid during typical last trip
- 3) Frequency of usage of typical hotel per year in terms of number of visits
- 4) Dollar amount spent on marketing expense per year by the typical hotel
- 5) Additional expenses incurred by the customer during typical last trip (e.g. food, gift shop, etc.)
- 6) Average life time of the customer in number of years

The above input variables were built into a spreadsheet model using the @Risk software and the distributions for the variables were obtained from the results of the survey conducted. The output variables measuring CE by segments were then evaluated for strategic analysis purposes.

### ***Measuring Marketing Effort Responsiveness***

Each scenario had several questions for the measurement of marketing effort responsiveness. Marketing effort responsiveness can be measured by asking customers' percentage of brand switching probability, the change in room-nights they desire to stay, and the change in room rate they are willing to pay about each profile of the nine hypothetical hotels. These three items were asked in terms of funding sources such as personal funds and business funds.

The marketing effort responsiveness for each hotel profile was measured by using those variables as the input variables for calculating CLV and CE. @Risk® simulation analysis was run to develop the probability distributions of the potential change in CLV and CE for each of the market segments based on separately applying each CE driver (i.e., convenience, quality, price, brand image, and relationship). Consequently, @Risk® simulation provided the ROI of marketing effort exerted by a hotel in terms of the change in CE. The results of @Risk® simulation were used to develop marketing strategies for each of the CE segments based on the resulting change in CE as a consequence of the simulated marketing effort. Finally, action plans were identified for each CE-based segment and hotel type by identifying the marketing tools most preferred by the groups.

### ***Multidimensional Scaling***

Multidimensional scaling (MDS) is popular in marketing research (Abdi, 2007; Kruskal & Wish, 1978; Mead, 1992). MDS discovered underlying dimensions on the basis of series of similarity of distance judgments by subjects or objects (Abdi, 2007; Borg & Groenen, 1997). That is, the purpose of MDS is to provide a visual representation of the pattern of proximities such as similarities or distances (Kruskal & Wish, 1978). The central MDS output is a type of *perceptual mapping*, the form of a set of scatterplots in which the axes are the primary dimensions and the points are the subjects of comparison (Borg & Groenen, 1997; Kruskal & Wish, 1978). MDS provided graphically how different objects of comparison do/do not cluster (Abdi, 2007; Borg & Groenen, 1997).

Also, MDS was designed for judgment data; however, it can be used to analyze any correlation matrix as a type of similarity measures (Borg & Groenen, 1997). It is common to use factor analysis to group variables, or cluster analysis when dimensions are objective and measurable (Garson, 2009). In general, it is also possible to use MDS with objective distance data and with quantitative variables (Garson, 2009). MDS does not require assumptions such as linearity, metricity, or multivariate normality (Abdi, 2007; Mead, 1992). For these reasons, factor analysis is suggested; however, MDS does not take account of control relationships as factor analysis does (Garson, 2009). Thus, the current study did not analyze factor analysis or cluster analysis about hotel information sources because hotel information sources are independent marketing tools. MDS was used to determine which of hotel information sources was seen as being similar by each of market segments and hotel type.



## **Summary**

In this chapter, the research procedure and overview of the methodological model were presented. The qualitative study (Phase I) and quantitative study (Phase II) were explained. Each phase described the methods, measurements of the variables, data collection, and data analysis procedures. In particular, a presentation of the equations used to measure Customer Equity was provided.

## CHAPTER IV

### FINDINGS

#### **Introduction**

This chapter presents the results of the quantitative study conducted in Phase II, which in turn are based on the results of the qualitative study conducted during Phase I of this study. The objective of Phase II was to examine Proposition 1, 2, and 3 of the research. The quantitative results of Phase II are shown in the following categories: Overall Descriptions of Survey, Quantitative Results, Descriptive Statistics, and Hypotheses Testing Results for Proposition 1, 2, and 3.

#### **Overall Descriptions of Survey**

A total of 195,119 surveys were distributed through an email invitation. However, only 90,764 were valid email addresses which resulted in a total response of 285 completed surveys. Because of the high probability of the surveys ending up in the junk folders and the filters placed by the respondents or their internet service providers, the final response rate was only about 0.314%. Although low, this response rate is consistent with web surveys that do not involve any incentives.

As described in the methodology, this study conducted three sets of surveys. Each survey had the same questions along with different sets of hypothetical hotel profiles involved in Conjoint Analysis study. By having three versions of the survey, the

researcher reduced the likelihood of respondent fatigue and also was able to have all 27 profiles evaluated. The descriptive statistics of all 27 hotel profiles from three surveys are presented in Appendix C. Of the total 285 surveys, 100 surveys (35.1%) were for the first version of survey, 98 (34.4%) were for the second version of survey, and 87 (30.5%) were for the third version of survey. The screening question was, “*Have you stayed at any type of commercial hotel/motel/lodging establishments at least once during the past 12 months?*” Of the 285 surveys returned, only 232 (81.4%) answered “*Yes*” to the screening question and were included in the final analysis. The rest of the 53 (18.6%) respondents who responded “*no*” to the screening question were not considered for further analysis.

## **Quantitative Results**

### **Reliability of Scales and Factor Analysis**

All measurement items were analyzed for reliability and validity purposes. The examination of the measurements for internal consistency of the scales showed that all factors were acceptable on the basis of the criteria from Nunnally’s (1988) study. The Cronbach’s coefficient alpha of all factors ranged from .597 to .913. The results of reliability and factor analyses are described in Table 10.

As a result of an exploratory factor analysis, the constructs of Customer Equity drivers (CE drivers) were showed as five factors; *factor 1*: “Brand Image” (Cronbach’s  $\alpha = .882$ ), *factor 2*: “Convenience” (Cronbach’s  $\alpha = .824$ ), *factor 3*: “Relationship” (Cronbach’s  $\alpha = .913$ ), *factor 4*: “Quality” (Cronbach’s  $\alpha = .831$ ), and *factor 5*: “Price” (Cronbach’s  $\alpha = .597$ ). These five CE drivers were obviously emphasized in the hotel

industry instead of three CE drivers (*Value, Brand Image, and Relationship* drivers) in the previous work of Rust et al. (2001; 2004).

Table 10. Final Measurement Items and Summary of Factor Loading and Internal Reliability

| Factor label and attributes                               | Mean <sup>a</sup> | SD   | Factor loadings | Eigen-value | Variance (%) | Reliability coefficient ( $\alpha$ ) |
|---|-------------------|------|-----------------|-------------|--------------|--------------------------------------|
| <b><i>Factor 1: Brand Image</i></b>                       |                   |      |                 | 9.313       | 24.271       | 0.882                                |
| Impression gained from room amenities                     | 5.27              | 1.44 | .954            |             |              |                                      |
| Impression gained from the reputation of the neighborhood | 5.15              | 1.51 | .944            |             |              |                                      |
| Impression gained from the Word-of-mouth                  | 5.38              | 1.54 | .927            |             |              |                                      |
| General brand image                                       | 4.41              | 1.80 | .924            |             |              |                                      |
| Impression gained from company Ads.                       | 4.13              | 1.74 | .921            |             |              |                                      |
| Impression gained from on-line reviews                    | 4.58              | 1.72 | .915            |             |              |                                      |
| Impression gained from the standards of service           | 4.45              | 1.79 | .913            |             |              |                                      |
| Uniqueness of hotel                                       | 3.74              | 1.87 | .905            |             |              |                                      |
| <b><i>Factor 2: Convenience</i></b>                       |                   |      |                 | 6.311       | 19.951       | 0.824                                |
| Providing various room types                              | 5.03              | 1.74 | .932            |             |              |                                      |
| Ability to provide various service options                | 4.41              | 1.78 | .913            |             |              |                                      |
| Ease of making reservations                               | 5.43              | 1.59 | .908            |             |              |                                      |
| Various methods of payments                               | 4.99              | 1.89 | .907            |             |              |                                      |
| Ease of ordering services                                 | 4.19              | 1.96 | .907            |             |              |                                      |
| Easy accessibility to amenities                           | 4.93              | 1.68 | .902            |             |              |                                      |
| Convenient location                                       | 5.67              | 1.46 | .877            |             |              |                                      |
| <b><i>Factor 3: Relationship</i></b>                      |                   |      |                 | 5.509       | 18.056       | 0.913                                |
| Hotels' involvement with community enrichment programs    | 3.66              | 1.96 | .940            |             |              |                                      |
| Hotel's involvement with resolving social issues          | 3.80              | 1.97 | .937            |             |              |                                      |
| Hotel's participation in referral group programs          | 3.72              | 1.82 | .921            |             |              |                                      |
| Provision of non-incentive loyalty                        | 3.48              | 1.89 | .919            |             |              |                                      |
| Hotel's programs for co-branding                          | 3.56              | 1.87 | .892            |             |              |                                      |
| Availability of loyalty programs                          | 4.46              | 1.87 | .885            |             |              |                                      |
| <b><i>Factor 4: Quality</i></b>                           |                   |      |                 | 3.605       | 17.188       | 0.831                                |
| Quality of service recovery                               | 5.89              | 1.33 | .926            |             |              |                                      |
| Quality of amenities                                      | 5.08              | 1.62 | .915            |             |              |                                      |
| Quality of service performance                            | 5.75              | 1.35 | .914            |             |              |                                      |
| Quality of facilities' upkeep                             | 6.37              | 1.04 | .895            |             |              |                                      |
| Quality of room supplies                                  | 5.20              | 1.67 | .894            |             |              |                                      |
| Quality of room service                                   | 4.51              | 2.08 | .857            |             |              |                                      |
| <b><i>Factor 5: Price</i></b>                             |                   |      |                 | 1.555       | 8.178        | 0.597                                |
| Discounts received owing to membership                    | 5.16              | 1.77 | .890            |             |              |                                      |
| Additional charges for extra services/facilities          | 5.28              | 1.57 | .889            |             |              |                                      |
| Perceived value for the price paid for the room           | 6.15              | 1.06 | .787            |             |              |                                      |
| <b>Total % of variance</b>                                |                   |      |                 |             | 87.645       |                                      |

Note:

<sup>a</sup>Mean values were computed on the basis of 7-point Likert-type scale 7 (*Extremely Important*) to 1 (*Not at all Important*).

<sup>b</sup>N = 175.

## **Cluster analysis**

Cluster analysis was employed to classify attributes of the CE drivers on the basis of a K-means clustering method. A non-hierarchical algorithm (Hair, Anderson, et al., 1998) was used to determine the best number of clusters based on the activity factors. The current study suggested that a five-cluster solution was most appropriate for organizing the data concerning the CE drivers. Weighed mean scores for importance of the five CE drivers were calculated by multiplying the raw mean scores and the weights for each CE driver. The standardized weighed mean scores assisted to define the labels of clusters as follows: “cluster 1: *Relationship-Seeking Customer Segment (RSCS)*,” “cluster 2: *Convenience-Seeking Customer Segment (CSCS)*,” “cluster 3: *Quality-Seeking Customer Segment (QSCS)*,” “cluster 4: *Brand Image-Seeking Customer Segment (BSCS)*,” and “cluster 5: *Price-Seeking Customer Segment (PSCS)*.” The appropriateness of each category was described in Table 11.

Table 11. Standardized Weighed Score for Importance of CE Drivers

| Cluster Number and Name  | Standardized Weighed Five-Key-CE Drivers      | Mean <sup>a</sup> | SD           |
|--|---|-------------------|--------------|
| Cluster 1<br><i>Relationship-Seeking Customer Segment (RSCS)</i> | Average weighted score of Convenience         | 0.038             | 0.646        |
|  | Average weighted score of Quality             | -0.340            | 0.344        |
|  | Average weighted score of Price               | -0.310            | 0.438        |
|  | Average weighted score of Brand Image         | 0.620             | 0.848        |
|  | <b>Average weighted score of Relationship</b> | <b>1.725</b>      | <b>0.923</b> |
| Cluster 2<br><i>Convenience-Seeking Customer Segment (CSCS)</i>  | <b>Average weighted score of Convenience</b>  | <b>1.688</b>      | <b>1.164</b> |
|  | Average weighted score of Quality             | -0.241            | 0.794        |
|  | Average weighted score of Price               | -0.374            | 0.639        |
|  | Average weighted score of Brand Image         | -0.485            | 0.378        |
|  | Average weighted score of Relationship        | -0.563            | 0.291        |
| Cluster 3<br><i>Quality-Seeking Customer Segment (QSCS)</i>      | Average weighted score of Convenience         | -0.517            | 0.629        |
|  | <b>Average weighted score of Quality</b>      | <b>1.319</b>      | <b>0.890</b> |
|  | Average weighted score of Price               | -0.351            | 0.898        |
|  | Average weighted score of Brand Image         | -0.492            | 0.480        |
|  | Average weighted score of Relationship        | -0.339            | 0.569        |
| Cluster 4<br><i>Brand Image-Seeking Customer Segment (BSCS)</i>  | Average weighted score of Convenience         | 0.010             | 0.804        |
|  | Average weighted score of Quality             | -0.080            | 0.730        |
|  | Average weighted score of Price               | -0.281            | 0.647        |
|  | <b>Average weighted score of Brand Image</b>  | <b>1.430</b>      | <b>0.868</b> |
|  | Average weighted score of Relationship        | -0.043            | 0.468        |
| Cluster 5<br><i>Price-Seeking Customer Segment (PSCS)</i>        | Average weighted score of Convenience         | -0.363            | 0.605        |
|  | Average weighted score of Quality             | -0.605            | 0.576        |
|  | <b>Average weighted score of Price</b>        | <b>0.795</b>      | <b>1.189</b> |
|  | Average weighted score of Brand Image         | -0.604            | 0.383        |
|  | Average weighted score of Relationship        | -0.462            | 0.447        |

Note:

<sup>a</sup>Weighed mean scores for importance of the five CE drivers were calculated by multiplying the raw mean scores and the weights for each CE driver. (The weights for each CE driver were evaluated by asking the degree of importance. The allocated points for all five CE drivers must total 100.)

<sup>b</sup>Raw mean values were evaluated on the basis of 7-point Likert-type scale 7 (*Extremely Important*) to 1 (*Not at all Important*).

<sup>c</sup>N=175.

*Cluster 1*: This cluster contained 32 respondents. This cluster was named “*Relationship-Seeking Customer Segment (RSCS)*” based on the standardized weighed mean score. This cluster appeared to have the highest standardized weighed mean score on “*Relationship*” ( $M = 1.725$ ) among the five key CE drivers.

*Cluster 2:* This cluster contained 22 respondents. This cluster was named “*Convenience-Seeking Customer Segment (CSCS)*” based on the standardized weighed mean score. This cluster appeared to have the highest standardized weighted mean score on “*Convenience*” ( $M = 1.688$ ).

*Cluster 3:* This cluster contained 39 respondents. This cluster was named “*Quality-Seeking Customer Segment (QSCS)*” based on the standardized weighed mean score. This cluster appeared to have the highest standardized weighted mean score on “*Quality*” ( $M = 1.319$ ).

*Cluster 4:* This cluster contained 31 respondents. This cluster was named “*Brand Image-Seeking Customer Segment (BSCS)*” based on the standardized weighed mean score. This cluster appeared to have the highest standardized weighted mean score on “*Brand Image*” ( $M = 1.430$ ).

*Cluster 5:* This cluster contained 51 respondents. This cluster was named “*Price-Seeking Customer Segment (PSCS)*” based on the standardized weighed mean score. This cluster appeared to have the highest standardized weighted mean score on “*Price*” ( $M = 0.795$ ).

Additionally, correlation analysis was conducted to enhance our understanding of the cluster structure. The result of the correlation analysis significantly supported the five-cluster solution ( $p < .001$ ).

Table 12. Correlation between Factor Scores and Standardized Weighted Importance Scores for CE Drivers

| Factors               | Cluster 1                                    | Cluster 2                                   | Cluster 3                               | Cluster 4                                   | Cluster 5                             |
|-----------------------|--|---|---|---|---------------------------------------|
|                       | Relationship-Seeking Customer Segment (RSCS) | Convenience-Seeking Customer Segment (CSCS) | Quality-Seeking Customer Segment (QSCS) | Brand Image-Seeking Customer Segment (BSCS) | Price-Seeking Customer Segment (PSCS) |
| Factor 1 Brand Image  | .205**                                       | .017  | -.032                                   | .980**                                      | -.192*                                |
| Factor 2 Convenience  | -.026  | .991**                                      | -.091                                   | .023  | -.222**                               |
| Factor 3 Relationship | .974**                                       | -.024                                       | -.067                                   | .176*                                       | -.128                                 |
| Factor 4 Quality      | -.062  | -.082                                       | .984**                                  | -.021                                       | -.256**                               |
| Factor 5 Price        | -.060  | -.099                                       | -.127                                   | -.081                                       | .909**                                |

Note:

\*  $p < .05$ , \*\*  $p < .001$ .

Tests were also conducted to determine if the clusters differed from each other significantly. ANOVA tests indicated that all five factors contributed to differentiating the five clusters ( $p < .001$ ). In addition, Multivariate of Analysis of Variance (MANOVA) test was conducted and also verified that all five factors contributed to differentiating the five clusters (Pillai Trace = 2.204,  $p < .001$ ; Wilks' Ramba = 0.035,  $p < .001$ ; Hotelling-Lawley Trace = 5.667,  $p < .001$ ; and Roy's Greatest Root = 2.676,  $p < .001$ ). Furthermore, a *post-hoc* analysis, using Tukey HSD' test, was employed to explore any significant differences between the clusters with respect to each of the CE factor scores. The results of the Tukey HSD's test indicated that there were statistically significant differences between clusters (see Table 13).

There were statistically significant differences among the clusters,  $F(4, 170) = 60.373$ ,  $p < .001$ , Cluster 1 ( $M = 0.297$ ,  $SD = 0.932$ ), Cluster 2 ( $M = -0.491$ ,  $SD = 0.403$ ), Cluster 3 ( $M = -0.474$ ,  $SD = 0.492$ ), Cluster 4 ( $M = 1.511$ ,  $SD = 0.893$ ), Cluster 5 ( $M = -0.531$ ,  $SD = 0.411$ ) within the "Brand Image" factor. As for the "Convenience" factor,



there were statistically significant differences,  $F(4, 170) = 32.276, p < .001$ , Cluster 1 ( $M = 0.033, SD = 0.681$ ), Cluster 2 ( $M = 1.653, SD = 1.136$ ), Cluster 3 ( $M = -0.450, SD = 0.603$ ), Cluster 4 ( $M = -0.030, SD = 0.869$ ), Cluster 5 ( $M = -0.371, SD = 0.646$ ). Also for the “*Relationship*” factor, there were statistically significant differences,  $F(4, 170) = 69.838, p < .001$ , Cluster 1 ( $M = 1.653, SD = 0.968$ ), Cluster 2 ( $M = -0.497, SD = 0.341$ ), Cluster 3 ( $M = -0.232, SD = 0.596$ ), Cluster 4 ( $M = -0.399, SD = 0.569$ ), Cluster 5 ( $M = -0.403, SD = 0.471$ ). As for the “*Quality*” factor, there were statistically significant differences,  $F(4, 170) = 38.733, p < .001$ , Cluster 1 ( $M = -0.255, SD = 0.442$ ), Cluster 2 ( $M = -0.191, SD = 0.828$ ), Cluster 3 ( $M = 1.225, SD = 0.909$ ), Cluster 4 ( $M = -0.076, SD = 0.830$ ), Cluster 5 ( $M = -0.648, SD = 0.609$ ). Finally, as for the “*Price*” factor, there were statistically significant differences,  $F(4, 170) = 4.066, p < .001$ , Cluster 1 ( $M = -0.128, SD = 0.608$ ), Cluster 2 ( $M = -0.239, SD = 0.772$ ), Cluster 3 ( $M = -0.293, SD = 0.886$ ), Cluster 4 ( $M = -0.058, SD = 0.724$ ), Cluster 5 ( $M = 0.442, SD = 1.336$ ).

Table 13. Results of Cluster Analysis for CE Drivers

| Name of Factor      | Cluster 1   | Cluster 2  | Cluster 3                                      | Cluster 4  | Cluster 5                                    | F-value  | Tukey HSD multiple range tests |           |           |           |           |           |           |           |           |           |
|---------------------|---|--|--|--|--|--|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                     |   |  |  |  |  |  | 1-2                            | 1-3       | 1-4       | 1-5       | 2-3       | 2-4       | 2-5       | 3-4       | 3-5       | 4-5       |
| Brand Image         | 0.297 <sup>a</sup><br>(5.47) <sup>b</sup>             | -0.491<br>(4.49)                                     | -0.474<br>(4.66)                               | 1.511<br>(5.18)                                    | -0.531<br>(3.84)                             | 60.373**   | **                             | **        | **        | **        | <i>ns</i> | **        | <i>ns</i> | **        | <i>ns</i> | **        |
| Convenience         | 0.033<br>(5.67)                                       | 1.653<br>(5.38)                                      | -0.450<br>(4.89)                               | -0.030<br>(5.30)                                   | -0.371<br>(4.15)                             | 32.276**   | **                             | <i>ns</i> | <i>ns</i> | <i>ns</i> | **        | **        | **        | <i>ns</i> | <i>ns</i> | <i>ns</i> |
| Relationship        | 1.653<br>(5.17)                                       | -0.497<br>(3.39)                                     | -0.232<br>(3.67)                               | -0.399<br>(4.31)                                   | -0.403<br>(2.84)                             | 69.838**   | **                             | **        | **        | **        | <i>ns</i> | <i>ns</i> | <i>ns</i> | <i>ns</i> | <i>ns</i> | <i>ns</i> |
| Quality             | -0.255<br>(6.13)                                      | -0.191<br>(5.57)                                     | 1.225<br>(5.51)                                | -0.076<br>(5.94)                                   | -0.648<br>(4.69)                             | 38.733**   | <i>ns</i>                      | **        | <i>ns</i> | <i>ns</i> | **        | <i>ns</i> | <i>ns</i> | **        | **        | <i>ns</i> |
| Price               | -0.128<br>(5.98)                                      | -0.239<br>(5.50)                                     | -0.293<br>(5.44)                               | -0.058<br>(5.69)                                   | 0.442<br>(5.23)                              | 4.066*   | <i>ns</i>                      | <i>ns</i> | <i>ns</i> | <i>ns</i> | <i>ns</i> | <i>ns</i> | *         | <i>ns</i> | *         | <i>ns</i> |
| <b>Cluster name</b> | <i>Relationship - Seeking Customer Segment (RSCS)</i> | <i>Convenience - Seeking Customer Segment (CSCS)</i> | <i>Quality-Seeking Customer Segment (QSCS)</i> | <i>Brand Image-Seeking Customer Segment (BSCS)</i> | <i>Price-Seeking Customer Segment (PSCS)</i> | Pillai Trace = 2.204 (p < .001);<br>Wilks' Ramba = 0.035 (p < .001);<br>Hotelling-Lawley Trace = 5.667 (p < .001); and<br>Roy's Greatest Root = 2.676 (p < .001) |                                |           |           |           |           |           |           |           |           |           |

Note:

<sup>a</sup>Weighed mean scores for importance of the five CE drivers were calculated by multiplying the raw mean scores and the weights scores for each CE driver. (The weights for each CE driver were evaluated by asking the degree of importance. The allocated points for all five CE drivers must total 100.)

<sup>b</sup>( ) indicates raw mean values which were evaluated on the basis of 7-point Likert-type scale 7 (*Extremely Important*) to 1 (*Not at all Important*).

\* p < .05, \*\* p < .001, *ns* indicates 'not significant.'

The following descriptive statistics below (see Table 14) were the mean of the non-weighted importance scores (i.e., raw data) for the CE drivers in terms of the five clusters. *Cluster 1: “Relationship-Seeking Customer Segment (RSCS)”* had mean scores as follows for the five CE drivers in the hotel industry: “Convenience factor” ( $M = 5.67$ ), “Quality factor” ( $M = 6.13$ ), “Price factor” ( $M = 5.98$ ), “Brand Image factor” ( $M = 5.47$ ), and “Relationship factor” ( $M = 5.17$ ).

*Cluster 2: “Convenience-Seeking Customer Segment (CSCS)”* had mean scores as follows for the five CE drivers in the hotel industry: “Convenience factor” ( $M = 5.38$ ), “Quality factor” ( $M = 5.57$ ), “Price factor” ( $M = 5.50$ ), “Brand Image factor” ( $M = 4.49$ ), and “Relationship factor” ( $M = 3.39$ ).

*Cluster 3: “Quality-Seeking Customer Segment (QSCS)”* had mean scores as follows for the five CE drivers in the hotel industry: “Convenience factor” ( $M = 4.89$ ), “Quality factor” ( $M = 5.51$ ), “Price factor” ( $M = 5.44$ ), “Brand Image factor” ( $M = 4.66$ ), and “Relationship factor” ( $M = 3.67$ ).

*Cluster 4: “Brand Image-Seeking Customer Segment (BSCS)”* had mean scores as follows for the five CE drivers in the hotel industry: “Convenience factor” ( $M = 5.30$ ), “Quality factor” ( $M = 5.94$ ), “Price factor” ( $M = 5.69$ ), “Brand Image factor” ( $M = 5.18$ ), and “Relationship factor” ( $M = 4.31$ ).

Finally, *cluster 5: “Price-Seeking Customer Segment (PSCS)”* had mean scores as follows for the five CE drivers in the hotel industry: “Convenience factor” ( $M = 4.15$ ), “Quality factor” ( $M = 4.69$ ), “Price factor” ( $M = 5.23$ ), “Brand Image factor” ( $M = 3.84$ ), and “Relationship factor” ( $M = 2.84$ ). According to non-weighted importance scores for each CE driver, Cluster 1, *Relationship-Seeking Customer Segment (RSCS)* evaluated the

highest mean scores for all five factors. All clusters except cluster 5 perceived “quality” as the most important factor. Cluster 5, *Price-Seeking Customer Segment* (PSCS), scored the highest mean score for “price factor.”

Table 14. Mean and SD of Scores Non-Weighted for Importance of CE Drivers by Clusters

|                             | Cluster 1<br>“Relationship”<br>(n = 32) |           | Cluster 2<br>“Convenience”<br>(n = 22) |           | Cluster 3<br>“Quality”<br>(n = 39) |                      | Cluster 4<br>“Brand<br>Image”<br>(n = 31) |                      | Cluster 5<br>“Price”<br>(n = 51) |                      |
|-----------------------------|---|-----------|--|-----------|------------------------------------|----------------------|---|----------------------|----------------------------------|----------------------|
|                             | <i>M<sup>a</sup></i>                    | <i>SD</i> | <i>M<sup>a</sup></i>                   | <i>SD</i> | <i>M<sup>a</sup></i>               | <i>M<sup>a</sup></i> | <i>SD</i>                                 | <i>M<sup>a</sup></i> | <i>SD</i>                        | <i>M<sup>a</sup></i> |
| <b>Convenience Factor</b>   | 5.67                                    | 1.44      | 5.38                                   | 1.39      | 4.89                               | 1.62                 | 5.30                                      | 1.67                 | 4.15                             | 1.78                 |
| Location                    | 6.09                                    | 1.20      | 6.59                                   | 0.67      | 5.23                               | 1.63                 | 5.45                                      | 1.57                 | 5.49                             | 1.47                 |
| Reservation                 | 6.22                                    | 0.94      | 5.73                                   | 1.45      | 5.26                               | 1.55                 | 5.77                                      | 1.52                 | 4.73                             | 1.76                 |
| Ordering Service            | 5.13                                    | 1.81      | 4.91                                   | 1.72      | 4.05                               | 1.92                 | 4.84                                      | 1.71                 | 3.02                             | 1.74                 |
| Room type                   | 5.78                                    | 1.43      | 5.45                                   | 1.01      | 5.21                               | 1.51                 | 5.42                                      | 1.65                 | 4.00                             | 1.96                 |
| Service option              | 5.16                                    | 1.65      | 4.45                                   | 1.71      | 4.64                               | 1.58                 | 4.97                                      | 1.64                 | 3.39                             | 1.72                 |
| Access amenity              | 5.41                                    | 1.56      | 5.50                                   | 1.57      | 4.92                               | 1.29                 | 5.45                                      | 1.39                 | 4.06                             | 1.90                 |
| Pay Method                  | 5.91                                    | 1.47      | 5.05                                   | 1.59      | 4.90                               | 1.83                 | 5.19                                      | 2.20                 | 4.33                             | 1.88                 |
| <b>Quality Factor</b>       | 6.13                                    | 1.02      | 5.57                                   | 1.28      | 5.51                               | 1.33                 | 5.94                                      | 1.39                 | 4.69                             | 1.68                 |
| Performance                 | 6.34                                    | 0.79      | 5.95                                   | 0.95      | 6.00                               | 1.10                 | 6.00                                      | 1.34                 | 4.96                             | 1.62                 |
| Quality of amenity          | 5.56                                    | 1.50      | 4.82                                   | 1.71      | 5.23                               | 1.40                 | 5.87                                      | 1.15                 | 4.29                             | 1.75                 |
| Quality of Room<br>Supplies | 6.13                                    | 0.94      | 5.59                                   | 1.33      | 4.79                               | 1.76                 | 5.71                                      | 1.60                 | 4.45                             | 1.76                 |
| Quality of Room<br>service  | 5.50                                    | 1.70      | 4.59                                   | 1.99      | 4.44                               | 2.11                 | 5.58                                      | 1.69                 | 3.25                             | 1.86                 |
| Quality of Facility         | 6.63                                    | 0.55      | 6.41                                   | 0.67      | 6.56                               | 0.79                 | 6.58                                      | 0.96                 | 5.92                             | 1.44                 |
| Quality of Recovery         | 6.59                                    | 0.61      | 6.05                                   | 1.00      | 6.05                               | 0.83                 | 5.90                                      | 1.60                 | 5.24                             | 1.62                 |
| <b>Price Factor</b>         | 5.98                                    | 1.16      | 5.50                                   | 1.34      | 5.44                               | 1.27                 | 5.69                                      | 1.44                 | 5.23                             | 1.74                 |
| Perceived value             | 6.38                                    | 0.66      | 6.23                                   | 0.87      | 6.08                               | 0.81                 | 6.26                                      | 1.15                 | 5.96                             | 1.39                 |
| Additional Charge           | 5.75                                    | 1.37      | 5.36                                   | 1.50      | 5.41                               | 1.21                 | 5.19                                      | 1.68                 | 4.90                             | 1.82                 |
| Discount                    | 5.81                                    | 1.45      | 4.91                                   | 1.66      | 4.82                               | 1.79                 | 5.61                                      | 1.48                 | 4.84                             | 2.01                 |
| <b>Brand Image Factor</b>   | 5.47                                    | 1.28      | 4.49                                   | 1.67      | 4.66                               | 1.67                 | 5.18                                      | 1.46                 | 3.84                             | 1.64                 |
| General Brand<br>Image      | 5.31                                    | 1.49      | 4.23                                   | 1.66      | 4.21                               | 1.84                 | 5.55                                      | 1.39                 | 3.37                             | 1.61                 |
| Uniqueness                  | 4.72                                    | 1.71      | 3.18                                   | 1.65      | 3.92                               | 2.17                 | 4.52                                      | 1.41                 | 2.75                             | 1.52                 |
| Image of online             | 5.31                                    | 1.18      | 4.45                                   | 1.95      | 4.41                               | 1.86                 | 4.94                                      | 1.65                 | 4.10                             | 1.71                 |
| Image of Reputation         | 5.97                                    | 0.90      | 4.95                                   | 1.76      | 5.13                               | 1.38                 | 5.65                                      | 1.33                 | 4.43                             | 1.58                 |
| Image of Room<br>amenity    | 5.97                                    | 0.97      | 5.09                                   | 1.57      | 5.41                               | 1.14                 | 5.71                                      | 1.30                 | 4.53                             | 1.62                 |
| Image of Standard           | 5.16                                    | 1.51      | 4.23                                   | 1.82      | 4.64                               | 1.74                 | 5.10                                      | 1.66                 | 3.55                             | 1.71                 |
| Image of Ads.               | 5.25                                    | 1.41      | 4.14                                   | 1.64      | 4.05                               | 1.85                 | 4.61                                      | 1.54                 | 3.20                             | 1.51                 |
| Image of WOM                | 6.09                                    | 1.06      | 5.68                                   | 1.29      | 5.49                               | 1.39                 | 5.32                                      | 1.42                 | 4.76                             | 1.84                 |
| <b>Relationship Factor</b>  | 5.17                                    | 1.54      | 3.39                                   | 1.76      | 3.67                               | 1.95                 | 4.31                                      | 1.73                 | 2.84                             | 1.59                 |
| Loyalty Program             | 5.91                                    | 1.20      | 4.18                                   | 1.50      | 4.03                               | 1.91                 | 5.13                                      | 1.54                 | 3.61                             | 1.88                 |
| Non-Incentive<br>Program    | 4.97                                    | 1.51      | 2.86                                   | 1.96      | 3.46                               | 1.97                 | 4.10                                      | 1.72                 | 2.45                             | 1.32                 |
| Social Issue                | 5.28                                    | 1.42      | 3.41                                   | 1.89      | 3.90                               | 2.09                 | 3.97                                      | 1.85                 | 2.86                             | 1.72                 |
| Referral group              | 4.97                                    | 1.62      | 3.23                                   | 1.82      | 3.74                               | 1.79                 | 4.29                                      | 1.70                 | 2.78                             | 1.46                 |
| Community<br>Environment    | 5.19                                    | 1.60      | 3.50                                   | 1.77      | 3.41                               | 2.06                 | 3.97                                      | 1.74                 | 2.78                             | 1.76                 |
| Co-branding                 | 4.69                                    | 1.91      | 3.18                                   | 1.59      | 3.49                               | 1.86                 | 4.42                                      | 1.82                 | 2.55                             | 1.38                 |

Note:

<sup>a</sup> Mean (*M*) values were computed on the basis of 7-point Likert-type scale 7 (*Extremely Important*) to 1 (*Not at all Important*).

## Descriptive Statistics

### Socio-Demographic Characteristics

Each cluster was cross-tabulated with the socio-demographic characteristics to develop a profile for each of the five clusters. There were no statistically significant differences among the five CE clusters except “room rate ( $p < .05$ ).” Table 15 summarizes the socio-demographic characteristics by clusters. The ages of the average respondent in each cluster ranged as follows: *cluster 1* (1%), *cluster 2* (0%), *cluster 3* (0%), *cluster 4* (0%), and *cluster 5* (0%) were between the ages of 21 to 24; *cluster 1* (4.1%), *cluster 2* (3.1%), *cluster 3* (5.2%), *cluster 4* (4.1%), and *cluster 5* (1%) were between the ages of 25-34; *cluster 1* (4.1%), *cluster 2* (1%), *cluster 3* (2.1%), *cluster 4* (2.1%), and *cluster 5* (6.2%) were between the ages of 35-44; *cluster 1* (7.2%), *cluster 2* (3.1%), *cluster 3* (4.1%), *cluster 4* (6.2%), and *cluster 5* (10.3%) were between the ages of 45-54; *cluster 1* (4.1%), *cluster 2* (3.1%), *cluster 3* (6.2%), *cluster 4* (5.2%), and *cluster 5* (11.3%) were between the ages of 55-64; and *cluster 1* (1%), *cluster 2* (1%), *cluster 3* (0%), *cluster 4* (1%), and *cluster 5* (2.1%) were 65 years of age or older.

Male respondents of all clusters except cluster 4 were higher proportioned than females. The gender was described as follows: males (13.4%) and females (8.2%) were in *cluster 1*; males (7.2%) and females (4.1%) were in *cluster 2*; males (9.3%) and females (8.2%) were in *cluster 3*; males (7.2%) and females (11.3%) were in *cluster 4*; and males (18.6%) and females (12.4%) were in *cluster 5*.

The major occupation of the respondents was as follows: were in *cluster 1* (13.4%), *cluster 2* (9.3%), *cluster 3* (9.3%), *cluster 4* (7.2%), and *cluster 5* (20.6%) were in “Manager/Professional.” The majorities of the income were between the income of

\$50,000-74,999 and \$75,000-99,999: *cluster 1* (7.2%), *cluster 2* (4.1%), and *cluster 5* (6.2%) were between the income of \$50,000-74,999. And, *cluster 3* (6.2%), *cluster 4* (6.2%), and *cluster 5* (6.2%) were between the income of \$75,000-99,999.

Caucasians (non-Hispanic) mainly participated in this survey as follows: *cluster 1* (11.3%), *cluster 2* (8.2%), *cluster 3* (14.4%), *cluster 4* (9.3%), and *cluster 5* (27.8%).

The majority of the respondents reported having a college degree and post-graduate degree: *cluster 1* (10.3% and 6.2%), *cluster 2* (6.2% and 5.2%), *cluster 3* (6.2% and 5.2%), *cluster 4* (5.2% and 7.2%), and *cluster 5* (7.2% and 18.6%), respectively.

Table 15. Socio-Demographic Characteristics

| <i>Demographic Characteristics</i> | <b>Cluster 1<br/>(n=32)</b>                         | <b>Cluster 2<br/>(n=22)</b>                        | <b>Cluster 3<br/>(n=39)</b>                    | <b>Cluster 4<br/>(n=31)</b>                        | <b>Cluster 5<br/>(n=51)</b>                  |
|------------------------------------|---|--|--|--|--|
|                                    | <i>Relationship-Seeking Customer Segment (RSCS)</i> | <i>Convenience-Seeking Customer Segment (CSCS)</i> | <i>Quality-Seeking Customer Segment (QSCS)</i> | <i>Brand Image-Seeking Customer Segment (BSCS)</i> | <i>Price-Seeking Customer Segment (PSCS)</i> |
| <i>Age (n = 97)</i>                |   |  |  |  |  |
| 21-24                              | 1 (1.0%)  | 0 (0%)   | 0 (0%)   | 0 (0%)   | 0 (0%)                                       |
| 25-34                              | 4 (4.1%)  | 3 (3.1%)   | 5 (5.2%)                                       | 4 (4.1%)   | 1 (1.0%)                                     |
| 35-44                              | 4 (4.1%)  | 1 (1.0%)   | 2 (2.1%)                                       | 2 (2.1%)   | 6 (6.2%)                                     |
| 45-54                              | 7 (7.2%)  | 3 (3.1%)   | 4 (4.1%)                                       | 6 (6.2%)   | 10 (10.3%)                                   |
| 55-64                              | 4 (4.1%)  | 3 (3.1%)   | 6 (6.2%)                                       | 5 (5.2%)   | 11 (11.3%)                                   |
| 65+                                | 1 (1.0%)  | 1 (1.0%)   | 0 (0%)   | 1 (1.0%)   | 2 (2.1%)                                     |
| <i>Gender (n = 97)</i>             |   |  |  |  |  |
| Male                               | 13 (13.4%)  | 7 (7.2%)   | 9 (9.3%)                                       | 7 (7.2%)   | 18 (18.6%)                                   |
| Female                             | 8 (8.2%)  | 4 (4.1%)   | 8 (8.2%)                                       | 11 (11.3%)   | 12 (12.4%)                                   |
| <i>Occupation (n = 97)</i>         |   |  |  |  |  |
| Manager/Professional               | 13 (13.4%)  | 9 (9.3%)   | 9 (9.3%)                                       | 7 (7.2%)   | 20 (20.6%)                                   |
| Clerical/Sales/Service             | 2 (2.1%)  | 1 (1.0%)   | 4 (4.1%)                                       | 4 (4.1%)   | 3 (3.1%)                                     |
| Not in workforce                   | 3 (3.1%)  | 0 (0%)   | 4 (4.1%)                                       | 4 (4.1%)   | 4 (4.1%)                                     |
| Others                             | 3 (3.1%)  | 1 (1.0%)   | 0 (0%)   | 3 (3.1%)   | 3 (3.1%)                                     |
| <i>Income (n = 97)</i>             |   |  |  |  |  |
| Less than \$30,000                 | 1 (1.0%)  | 1 (1.0%)   | 1 (1.0%)                                       | 4 (4.1%)   | 3 (3.1%)                                     |
| \$30,000-49,999                    | 1 (1.0%)  | 2 (2.1%)   | 3 (3.1%)                                       | 4 (4.1%)   | 3 (3.1%)                                     |
| \$50,000-74,999                    | 7 (7.2%)  | 4 (4.1%)   | 2 (2.1%)                                       | 2 (2.1%)   | 6 (6.2%)                                     |
| \$75,000-99,999                    | 6 (6.2%)  | 1 (1.0%)   | 6 (6.2%)                                       | 6 (6.2%)   | 6 (6.2%)                                     |
| \$100,000-149,999                  | 3 (3.1%)  | 3 (3.1%)   | 3 (3.1%)                                       | 0 (0%)   | 5 (5.2%)                                     |
| \$150,000-199,999                  | 1 (1.0%)  | 0 (0%)   | 1 (1.0%)                                       | 0 (0%)   | 5 (5.2%)                                     |
| More than \$200,000                | 2 (2.1%)  | 0 (0%)   | 1 (1.0%)                                       | 2 (2.1%)   | 2 (2.1%)                                     |
| <i>Ethnic Background (n = 97)</i>  |   |  |  |  |  |
| Caucasian (non-Hispanic)           | 11 (11.3%)  | 8 (8.2%)   | 14 (14.4%)                                     | 9 (9.3%)   | 27 (27.8%)                                   |
| African-American                   | 3 (3.1%)  | 0 (0%)   | 1 (1.0%)                                       | 2 (2.1%)   | 0 (0%)                                       |
| Hispanic                           | 2 (2.1%)  | 0 (0%)   | 1 (1.0%)                                       | 1 (1.0%)   | 1 (1.0%)                                     |
| Asian/Pacific Islander             | 3 (3.1%)  | 2 (2.1%)   | 0 (0%)   | 3 (3.1%)   | 1 (1.0%)                                     |
| Native American                    | 0 (0%)  | 1 (1.0%)   | 0 (0%)   | 1 (1.0%)   | 0 (0%)                                       |
| Others                             | 2 (2.1%)  | 0 (0%)   | 1 (1.0%)                                       | 2 (2.1%)   | 1 (1.0%)                                     |
| <i>Education Level (n = 97)</i>    |   |  |  |  |  |
| Some high school                   | 0 (0%)  | 0 (0%)   | 1 (1.0%)                                       | 0 (0%)   | 0 (0%)                                       |
| High school graduates              | 1 (1.0%)  | 0 (0%)   | 1 (1.0%)                                       | 1 (1.0%)   | 0 (0%)                                       |
| Some college/technical             | 4 (4.1%)  | 0 (0%)   | 4 (4.1%)                                       | 5 (5.2%)   | 5 (5.2%)                                     |
| College graduates                  | 6 (6.2%)  | 6 (6.2%)   | 6 (6.2%)                                       | 5 (5.2%)   | 7 (7.2%)                                     |
| Post-graduate degree               | 10 (10.3%)  | 5 (5.2%)   | 5 (5.2%)                                       | 7 (7.2%)   | 18 (18.6%)                                   |



## General Information about Hotel Stay for Customer Equity

This study sought the customers' typical hotel purchase behavior through the survey instrument. The information was required for calculating the customers' initial CE based on their reported hotel purchase behavior. Table 16 provides the summary of general information about hotel stay of the respondents. The most of respondents paid "personally" for the room: *cluster 1* (10.9%), *cluster 2* (10.3%), *cluster 3* (17.1%), *cluster 4* (10.9%), and *cluster 5* (22.9%). In the hotel category, four clusters were mainly in "Mid-price" and "High-end" as follows: *cluster 1* (9.7% and 5.1%), *cluster 2* (5.1% and 6.3%), *cluster 3* (12.0% and 6.9%), and *cluster 4* (6.9% and 6.9%), respectively while *cluster 5* was in "Budget (8.6%)" and "Mid-price (13.8%)." The majority of the purposes was "Pleasure/Leisure": 9.1% (*cluster 1*), 9.7% (*cluster 2*), 17.7% (*cluster 3*), 10.9% (*cluster 4*), and 18.3% (*cluster 5*), respectively. Most respondents stayed during "2 to 3 nights per visit": 9.7% (*cluster 1*), 8.0% (*cluster 2*), 10.9% (*cluster 3*), 9.1% (*cluster 4*), and 14.9% (*cluster 5*), respectively.

The most respondents of the room rate categories were as follows, "\$65 to 99.99" and "\$100 to 149.99" was as follows respectively: *cluster 1* (8.0% and 5.1%), *cluster 2* (4.6% and 6.3%), *cluster 3* (6.3% and 8.6%), and *cluster 4* (4.6% and 4.6%) while *cluster 5* was between the room rate of "\$45 to 64.99 (7.4%)" and "\$65 to 99.99 (12.1%)."

The range of the other expenses was mostly between the categories of "\$25 to \$49.99" in *cluster 1* (8.6%) and *cluster 2* (4.6%), between "\$50 to \$99.99" in *cluster 3* (8.0%) and *cluster 4* (5.7%), and less than \$25 in *cluster 5* (10.9%).

The majority of the "times stayed in this type of hotels during the past 12 months" was less than 5 times: *cluster 1* (8.6%), *cluster 2* (8.0%), *cluster 3* (10.3%), *cluster 4*

(9.1%), and *cluster 5* (18.8 %). Finally, the respondents had “6 years and higher” lifecycles mostly: 9.7% (*cluster 1*), 9.1% (*cluster 2*), 12.6% (*cluster 3*), 7.4% (*cluster 4*), and 18.3% (*cluster 5*).

Table 16. General Information about Hotel Stay

| Characteristics                    | Cluster 1<br>(n=32)                                 | Cluster 2<br>(n=22)                                | Cluster 3<br>(n=39)                            | Cluster 4<br>(n=31)                                | Cluster 5<br>(n=51)                          |
|------------------------------------|---|--|--|--|--|
|                                    | <i>Relationship-Seeking Customer Segment (RSCS)</i> | <i>Convenience-Seeking Customer Segment (CSCS)</i> | <i>Quality-Seeking Customer Segment (QSCS)</i> | <i>Brand Image-Seeking Customer Segment (BSCS)</i> | <i>Price-Seeking Customer Segment (PSCS)</i> |
| <b>Payment Type (n = 175)</b>      |   |  |  |  |  |
| Personally paid for it.            | 19 (10.9%)  | 17 (10.3%)   | 30 (17.1%)                                     | 19 (10.9%)   | 41 (22.9%)                                   |
| My company paid for it.            | 12 (6.9%)   | 4 (2.3%)   | 7 (4.0%)                                       | 10 (5.7%)  | 8 (4.6%)                                     |
| Others                             | 1 (0.6%)  | 1 (0.6%)   | 2 (1.1%)                                       | 2 (1.1%)   | 2 (1.1%)                                     |
| <b>Category (n = 175)</b>          |   |  |  |  |  |
| Budget/Economy                     | 5 (2.9%)  | 3 (1.7%)   | 4 (2.3%)                                       | 5 (2.9%)   | 15 (8.6%)                                    |
| Mid-price                          | 17 (9.7%)   | 8 (5.1%)   | 21 (12.0%)                                     | 12 (6.9%)  | 25 (13.8%)                                   |
| High-End                           | 9 (5.1%)  | 11 (6.3%)  | 12 (6.9%)                                      | 12 (6.9%)  | 11 (6.3%)                                    |
| Luxury                             | 1 (0.6%)  | 0 (0%)   | 2 (1.1%)                                       | 2 (1.1%)   | 0 (0%)                                       |
| <b>Purpose (n = 175)</b>           |   |  |  |  |  |
| Business                           | 12 (6.9%)   | 4 (2.3%)   | 4 (2.3%)                                       | 6 (3.4%)   | 13 (7.4%)                                    |
| Pleasure/Leisure                   | 16 (9.1%)   | 16 (9.7%)  | 31 (17.7%)                                     | 19 (10.9%)   | 33 (18.3%)                                   |
| Conference                         | 3 (1.7%)  | 1 (0.6%)   | 2 (1.1%)                                       | 3 (1.7%)   | 2 (1.1%)                                     |
| Others                             | 1 (0.6%)  | 1 (0.6%)   | 2 (1.1%)                                       | 3 (1.7%)   | 3 (1.7%)                                     |
| <b>Room-nights/Visit (n = 175)</b> |   |  |  |  |  |
| 1 night                            | 7 (4.0%)  | 3 (1.7%)   | 9 (5.1%)                                       | 7 (4.0%)   | 14 (8.0%)                                    |
| 2-3 nights                         | 17 (9.7%)   | 13 (8.0%)  | 19 (10.9%)                                     | 16 (9.1%)  | 27 (14.9%)                                   |
| 4-5 nights                         | 4 (2.3%)  | 6 (3.4%)   | 8 (4.6%)                                       | 6 (3.4%)   | 4 (2.3%)                                     |
| 6-7 nights                         | 2 (1.1%)  | 0 (0%)   | 2 (1.1%)                                       | 1 (0.6%)   | 5 (2.9%)                                     |
| More than 8 nights                 | 2 (1.1%)  | 0 (0%)   | 1 (0.6%)                                       | 1 (0.6%)   | 1 (0.6%)                                     |
| <b>Room rate/Visit (n = 175)</b>   |   |  |  |  |  |
| \$20-44.99                         | 1 (0.6%)  | 0 (0.6%)   | 1 (0.6%)                                       | 3 (1.7%)   | 3 (1.7%)                                     |
| \$45-64.99                         | 3 (1.7%)  | 1 (0.6%)   | 4 (2.3%)                                       | 3 (1.7%)   | 13 (7.4%)                                    |
| \$65-99.99                         | 14 (8.0%)   | 8 (4.6%)   | 11 (6.3%)                                      | 8 (4.6%)   | 22 (12.1%)                                   |
| \$100-149.99                       | 9 (5.1%)  | 11 (6.3%)  | 15 (8.6%)                                      | 8 (4.6%)   | 8 (4.6%)                                     |
| \$150-199.99                       | 1 (0.6%)  | 2 (1.1%)   | 4 (2.3%)                                       | 6 (3.4%)   | 4 (2.3%)                                     |
| \$200-249.99                       | 4 (2.3%)  | 0 (0%)   | 3 (1.7%)                                       | 1 (0.6%)   | 1 (0.6%)                                     |
| \$250+                             | 0 (0%)  | 0 (0%)   | 1 (0.6%)                                       | 2 (1.1%)   | 0 (0%)                                       |

Table 16. General Information about Hotel Stay (*continued*)

| Characteristics  | Cluster 1<br>(n=32)                                 | Cluster 2<br>(n=22)                                | Cluster 3<br>(n=39)                            | Cluster 4<br>(n=31)                                | Cluster 5<br>(n=51)                          |
|--|---|--|--|--|--|
|  | <i>Relationship-Seeking Customer Segment (RSCS)</i> | <i>Convenience-Seeking Customer Segment (CSCS)</i> | <i>Quality-Seeking Customer Segment (QSCS)</i> | <i>Brand Image-Seeking Customer Segment (BSCS)</i> | <i>Price-Seeking Customer Segment (PSCS)</i> |
| <b><i>Other Expenses (n = 175)</i></b>   |   |  |  |  |  |
| Less than \$25   | 3 (1.7%)  | 6 (3.4%)   | 7 (4.0%)                                       | 6 (3.4%)   | 19 (10.9%)                                   |
| \$25-49.99   | 15 (8.6%)   | 8 (4.6%)   | 9 (5.1%)                                       | 8 (4.6%)   | 18 (9.8%)                                    |
| \$50-99.99   | 9 (5.1%)  | 6 (4.0%)   | 14 (8.0%)                                      | 10 (5.7%)  | 9 (5.1%)                                     |
| \$100-149.99   | 3 (1.7%)  | 2 (1.1%)   | 8 (4.6%)                                       | 6 (3.4%)   | 4 (2.3%)                                     |
| \$150-199.99   | 0 (0%)  | 0 (0%)   | 0 (0%)   | 1 (0.6%)   | 1 (0.6%)                                     |
| \$200+   | 2 (1.1%)  | 0 (0%)   | 1 (0.6%)                                       | 0 (0%)   | 0 (0%)                                       |
| <b><i>Times stayed in this type of hotel during the past 12 months (n = 175)</i></b> |   |  |  |  |  |
| Less than 5 times  | 15 (8.6%)   | 13 (8.0%)  | 18 (10.3%)                                     | 16 (9.1%)  | 33 (18.8%)                                   |
| 5-9 times  | 10 (5.7%)   | 9 (5.1%)   | 14 (8.0%)                                      | 7 (4.0%)   | 9 (4.6%)                                     |
| 10-14 times  | 3 (1.7%)  | 0 (0%)   | 3 (1.7%)                                       | 1 (0.6%)   | 6 (3.4%)                                     |
| 15-19 times  | 2 (1.1%)  | 0 (0%)   | 2 (1.1%)                                       | 3 (1.7%)   | 0 (0%)                                       |
| 20-24 times  | 1 (0.6%)  | 0 (0%)   | 0 (0%)   | 2 (1.1%)   | 2 (1.1%)                                     |
| 25-29 times  | 0 (0%)  | 0 (0%)   | 0 (0%)   | 1 (0.6%)   | 0 (0%)                                       |
| 40 + times   | 1 (0.6%)  | 0 (0%)   | 2 (1.1%)                                       | 1 (0.6%)   | 1 (0.6%)                                     |
| <b><i>Lifecycle (n = 175)</i></b>  |   |  |  |  |  |
| Less than 6 months   | 1 (0.6%)  | 2 (1.1%)   | 1 (0.6%)                                       | 2 (1.1%)   | 5 (2.9%)                                     |
| 6 months to less than 1 year   | 4 (2.3%)  | 1 (0.6%)   | 0 (0%)   | 4 (2.3%)   | 4 (2.3%)                                     |
| 1 year to less than 2 year   | 3 (1.7%)  | 2 (1.1%)   | 2 (1.1%)                                       | 1 (0.6%)   | 1 (0.6%)                                     |
| 2 year to less than 3 year   | 1 (0.6%)  | 0 (0%)   | 6 (3.4%)                                       | 5 (2.9%)   | 2 (1.1%)                                     |
| 3 year to less than 4 year   | 1 (0.6%)  | 1 (0.6%)   | 5 (2.9%)                                       | 2 (1.1%)   | 3 (1.7%)                                     |
| 4 year to less than 5 year   | 5 (2.9%)  | 0 (0%)   | 3 (1.7%)                                       | 4 (2.3%)   | 4 (1.8%)                                     |
| 6 + year   | 17 (9.7%)   | 16 (9.1%)  | 22 (12.6%)                                     | 13 (7.4%)  | 32 (18.3%)                                   |

### Hypotheses Testing Results

Three global propositions were articulated in this study. Fundamentally, the first proposition derived five hypotheses and the second proposition also had five hypotheses. Based on findings of Proposition 1 and 2, the third proposition was (a) to determine the CE drivers that maximize the ROI of marketing effort of exerted by a hotel in terms of

the change in CE, and (b) to identify an effective marketing action plans for each of the CE-based segments and hotel type.

### **Proposition 1**

Proposition 1 derived five hypotheses as follows:

- H1.* Considering the Relationship-Seeking Customer Segment (RSCS) for any hotel type, the relationship driver will be significantly more important than the other remaining CE drivers.
- H2.* Considering the Convenience-Seeking Customer Segment (CSCS) for any hotel type, the convenience driver will be significantly more important than the other remaining CE drivers.
- H3.* Considering the Quality-Seeking Customer Segment (QSCS) for any hotel type, the quality driver will be significantly more important than the other remaining CE drivers.
- H4.* Considering the Brand Image-Seeking Customer Segment (BSCS) for any hotel type, the brand image driver will be significantly more important than the other remaining CE drivers.
- H5.* Considering the Price-Seeking Customer Segment (PSCS) for any hotel type, the price driver will be significantly more important than the other remaining CE drivers.

The results of the ANOVA test indicated that there were statistically significant differences ( $p < .05$  and  $p < .001$ ) between hotel type for the five key CE drivers (i.e., convenience, quality, price, brand image, and relationship) in terms of the five clusters (CE-based segments). Based on the findings of this study, there was support for the idea that there existed significant differences in the perceptions about the impact of the CE drivers on a hotel for each of the CE-based segments. In all five CE segments, for each of the five CE drivers where there was at least one statistically significant difference between the group means as described below.

#### ***Relationship-Seeking Customer Segment (RSCS) for H1***

The five sub-hypotheses for **H1** that were statistically supported were as follows:

- H1a.* Considering the Relationship-Seeking Customer Segment (RSCS) for the budget hotels, the price driver will be significantly more important than the brand image driver.

For customers in the RSCS, the price driver ( $M = 0.14$ ) is more important than the brand image driver ( $M = 0.06$ ) for the budget hotels,  $F(4, 220) = 4.498, p = 0.002$ .

**H1b.** Considering the Relationship-Seeking Customer Segment (RSCS) for the budget hotels, the price driver will be significantly more important than the relationship driver.

For customers in the RSCS, the price driver ( $M = 0.14$ ) is more important than the relationship driver ( $M = 0.09$ ) for the budget hotels,  $F(4, 220) = 4.498, p = 0.002$ .

**H1c.** Considering the Relationship-Seeking Customer Segment (RSCS) for the mid-price hotels, the quality driver will be significantly more important than the brand image driver.

For customers in the RSCS, the quality driver ( $M = 0.11$ ) is more important than the brand image driver ( $M = 0.06$ ) for the mid-price hotels,  $F(4, 760) = 8.609, p = 0.000$ .

**H1d.** Considering the Relationship-Seeking Customer Segment (RSCS) for the mid-price hotels, the price driver will be significantly more important than the brand image driver.

For customers in the RSCS, the price driver ( $M = 0.11$ ) is more important than the brand image driver ( $M = 0.06$ ) for the mid-price hotels,  $F(4, 760) = 8.609, p = 0.000$ .

**H1e.** Considering the Relationship-Seeking Customer Segment (RSCS) for the mid-price hotels, the relationship driver will be significantly more important than the brand image driver.

For customers in the RSCS, the relationship driver ( $M = 0.12$ ) is more important than the brand image driver ( $M = 0.06$ ) for the mid-price,  $F(4, 760) = 8.609, p = 0.000$ .

The summary of results for the RSCS was presented in Table 17.

Table 17. Cluster 1 (RSCS)\_Significance test for CE Drivers' Impacts by Hotel Type

| Hotel Type                   | Budget<br><i>n</i> =45 |                |         | Mid-price<br><i>n</i> =153 |                     |         | High-end<br><i>n</i> =81 |         |                | Luxury<br><i>n</i> =9 |         |                |
|------------------------------|------------------------|----------------|---------|----------------------------|---------------------|---------|--------------------------|---------|----------------|-----------------------|---------|----------------|
|                              | Mean <sup>a</sup>      | F-value        | P-value | Mean <sup>a</sup>          | F-value             | P-value | Mean <sup>a</sup>        | F-value | P-value        | Mean <sup>a</sup>     | F-value | P-value        |
|                              |                        | 4.498          | .002*   |                            | 8.609               | .000**  |                          | 2.069   | .084 <i>ns</i> |                       | 2.500   | .058 <i>ns</i> |
| CE Driver1 Convenience (C)   | 0.10                   |                |         | 0.10                       |                     |         | 0.09                     |         |                | 0.02                  |         |                |
| CE Driver 2 Quality (Q)      | 0.11                   |                |         | 0.11                       |                     |         | 0.11                     |         |                | 0.12                  |         |                |
| CE Driver 3 Price (P)        | 0.14                   |                |         | 0.11                       |                     |         | 0.09                     |         |                | 0.12                  |         |                |
| CE Driver 4 Brand Image (B)  | 0.06                   |                |         | 0.06                       |                     |         | 0.09                     |         |                | 0.07                  |         |                |
| CE Driver 5 Relationship (R) | 0.09                   |                |         | 0.12                       |                     |         | 0.12                     |         |                | 0.15                  |         |                |
| Tukey HSD's Test             |                        | (P) > (B), (R) |         |                            | (Q), (P), (R) > (B) |         |                          |         |                |                       |         |                |

Note:

<sup>a</sup>Mean values were Part Worth Scores on the basis of the weighted score and three levels.

<sup>b</sup>Relationship-Seeking Customer Segment (RSCS)

\*  $p < .05$ , \*\*  $p < .001$ , *ns* is not significant.

### ***Convenience-Seeking Customer Segment (CSCS) for H2***

The seven sub-hypotheses for **H2** that were statistically supported were as follows:

**H2a.** Considering the Convenience-Seeking Customer Segment (CSCS) for the budget hotels, the convenience driver will be significantly more important than the other remaining CE drivers (*Quality, Price, Brand Image, and Relationship* driver).

That is, for customers in the CSCS, the convenience driver ( $M = 0.26$ ) was the most influential driver for the budget hotels,  $F(4, 130) = 14.138, p = .000$ , quality ( $M = 0.08$ ), price ( $M = 0.08$ ), brand image ( $M = 0.04$ ), and relationship ( $M = 0.03$ ).

**H2b.** Considering the Convenience-Seeking Customer Segment (CSCS) for the mid price hotels, the convenience driver will be significantly more important than the other remaining CE drivers (*Quality, Price, Brand Image, and Relationship* driver).

That is, for customers in the CSCS, the convenience driver ( $M = 0.18$ ) was the most influential drivers for the mid-price hotels,  $F(4, 400) = 33.786, p = .000$ , quality ( $M = 0.13$ ), price ( $M = 0.13$ ), brand image ( $M = 0.03$ ), and relationship ( $M = 0.03$ ).

**H2c.** Considering the Convenience-Seeking Customer Segment (CSCS) for the mid price hotels, the quality driver will be significantly more important than the other drivers (*Brand image and Relationship* driver).

For customers in the CSCS, the quality driver ( $M = 0.13$ ) was more influential driver than the brand image ( $M = 0.03$ ) and the relationship driver ( $M = 0.03$ ) for the mid-price hotels,  $F(4, 400) = 33.786, p = .000$ .

**H2d.** Considering the Convenience-Seeking Customer Segment (CSCS) for the mid price hotels, the price driver will be significantly more important than the other drivers (*Brand image* and *Relationship* driver).

For customers in the CSCS, the price driver ( $M = 0.13$ ) was more influential driver than the brand image ( $M = 0.03$ ) and the relationship driver ( $M = 0.03$ ) for the mid-price hotels,  $F(4, 400) = 33.786, p = .000$ .

**H2e.** Considering the Convenience-Seeking Customer Segment (CSCS) for the high-end hotels, the convenience driver will be significantly more important than the other CE drivers (*Quality*, *Price*, *Brand Image*, and *Relationship* driver).

That is, for customers in the CSCS, the convenience driver ( $M = 0.21$ ) was the most influential driver for the high-end hotels,  $F(4, 490) = 46.043, p = 0.000$ , quality ( $M = 0.13$ ), price ( $M = 0.10$ ), brand image ( $M = 0.03$ ), and relationship ( $M = 0.02$ ).

**H2f.** Considering the Convenience-Seeking Customer Segment (CSCS) for the high-end hotels, the quality driver will be significantly more important than the other drivers (*Brand image* and *Relationship* driver).

For customers in the CSCS, the quality driver ( $M = 0.13$ ) was more influential driver than the brand image ( $M = 0.03$ ) and the relationship driver ( $M = 0.02$ ) for the high-end hotels,  $F(4, 490) = 46.043, p = 0.000$ .

**H2g.** Considering the Convenience-Seeking Customer Segment (CSCS) for the high-end hotels, the price driver will be significantly more important than the other drivers (*Brand image* and *Relationship* driver).

For customers in the CSCS, the price driver ( $M = 0.10$ ) was more influential driver than the brand image ( $M = 0.03$ ) and the relationship driver ( $M = 0.02$ ) for the



high-end hotels,  $F(4, 490) = 46.043, p = .000$ . The summary of results for the CSCS was presented in Table 18.

Table 18. Cluster 2 (CSCS)\_Significance test for CE Drivers' Impacts by Hotel Type

| Hotel Type                   | Budget<br>n=27           |         |         | Mid-price<br>n=81  |         |         | High-end<br>n=99   |         |         |
|------------------------------|--------------------------|---------|---------|--|---------|---------|--|---------|---------|
|                              | Mean <sup>a</sup>        | F-value | P-value | Mean <sup>a</sup>  | F-value | P-value | Mean <sup>a</sup>  | F-value | P-value |
|                              |                          | 14.138  | .000**  |  | 33.786  | .000**  |  | 46.043  | .000**  |
| CE Driver1 Convenience (C)   | 0.26                     |         |         | 0.18   |         |         | 0.21   |         |         |
| CE Driver 2 Quality (Q)      | 0.08                     |         |         | 0.13   |         |         | 0.13   |         |         |
| CE Driver 3 Price (P)        | 0.08                     |         |         | 0.13   |         |         | 0.10   |         |         |
| CE Driver 4 Brand Image (B)  | 0.04                     |         |         | 0.03   |         |         | 0.03   |         |         |
| CE Driver 5 Relationship (R) | 0.03                     |         |         | 0.03   |         |         | 0.02   |         |         |
| Tukey HSD's Test             | (C) > (Q), (P), (B), (R) |         |         | (C) > (Q), (P), (B), (R)<br>(Q) > (B), (R)<br>(P) > (B), (R) |         |         | (C) > (Q), (P), (B), (R)<br>(Q) > (B), (R)<br>(P) > (B), (R) |         |         |

Note:

<sup>a</sup>Mean values were Part Worth Scores on the basis of the weighted score and three levels.

<sup>b</sup>Convenience-Seeking Customer Segment (CSCS)

\*  $p < .05$ , \*\*  $p < .001$ , ns is not significant.

### *Quality-Seeking Customer Segment (QSCS) for H3*

The eight sub-hypotheses for **H3** that were statistically supported were as follows:

**H3a.** Considering the Quality-Seeking Customer Segment (QSCS) for the budget hotels, the quality driver will be significantly more important than the other remaining CE drivers (*Convenience, Price, Brand Image, and Relationship* driver).

That is, for customers in the QSCS, the quality driver ( $M = 0.23$ ) was the most influential driver for the budget hotels,  $F(4, 175) = 20.414, p = .000$ , convenience ( $M = 0.06$ ), price ( $M = 0.15$ ), brand image ( $M = 0.03$ ), and relationship ( $M = 0.03$ ).

**H3b.** Considering the Quality-Seeking Customer Segment (QSCS) for the budget hotels, the price driver will be significantly more important than the other CE drivers (*Convenience, Brand Image, and Relationship* driver).

For customers in the QSCS, the price driver ( $M = 0.15$ ) was more influential driver than convenience ( $M = 0.06$ ), brand image ( $M = 0.03$ ), and relationship driver ( $M = 0.03$ ) for the budget hotels,  $F(4, 175) = 20.414, p = .000$ .

**H3c.** Considering the Quality-Seeking Customer Segment (QSCS) for the mid-price hotels, the convenience driver will be significantly more important than the other CE drivers (*Brand Image*, and *Relationship* driver).

For customers in the QSCS, the convenience driver ( $M = 0.08$ ) was more influential driver than the brand image ( $M = 0.03$ ) and the relationship driver ( $M = 0.03$ ) for the mid-price hotels,  $F(4, 940) = 106.50, p = 0.000$ .

**H3d.** Considering the Quality-Seeking Customer Segment (QSCS) for the mid-price hotels, the quality driver will be significantly more important than the other remaining CE drivers (*Convenience*, *Price*, *Brand Image*, and *Relationship* driver).

That is, for customers in the QSCS, the quality driver ( $M = 0.24$ ) was the most influential driver for the mid-price hotels,  $F(4, 940) = 106.50, p = .000$ .

**H3e.** Considering the Quality-Seeking Customer Segment (QSCS) for the mid-price hotels, the price driver will be significantly more important than the other CE drivers (*Brand Image*, and *Relationship* driver).

For customers in the QSCS, the price driver ( $M = 0.12$ ) was more influential driver than the brand image ( $M = 0.03$ ) and the relationship driver ( $M = 0.03$ ) for the mid-price hotels,  $F(4, 940) = 106.50, p = .000$ .

**H3f.** Considering the Quality-Seeking Customer Segment (QSCS) for the high-end hotels, the quality driver will be significantly more important than the other remaining CE drivers (*Convenience*, *Price*, *Brand Image*, and *Relationship* driver).

That is, for customers in the QSCS, the quality driver ( $M = 0.25$ ) was the most influential drivers for the high-end hotels,  $F(4, 535) = 61.714$ ,  $p = .000$ , convenience ( $M = 0.07$ ), price ( $M = 0.10$ ), brand image ( $M = 0.03$ ), and relationship ( $M = 0.04$ ).

**H3g.** Considering the Quality-Seeking Customer Segment (QSCS) for the high-end hotels, the price driver will be significantly more important than the brand image driver.

For customers in the QSCS, the price driver ( $M = 0.10$ ) was more influential driver than the brand image ( $M = 0.03$ ) for the high-end hotels,  $F(4, 535) = 61.714$ ,  $p = .000$ .

**H3h.** Considering the Quality-Seeking Customer Segment (QSCS) for the luxury hotels, the quality driver will be significantly more important than the other remaining CE drivers (*Convenience, Price, Brand Image, and Relationship* driver).

That is, for customers in the QSCS, the quality driver ( $M = 0.30$ ) was the most influential driver for the luxury hotels,  $F(4, 85) = 14.685$ ,  $p = .000$ , convenience ( $M = 0.10$ ), price ( $M = 0.05$ ), brand image ( $M = 0.04$ ), and relationship ( $M = 0.01$ ). The summary of results for the QSCS was presented in Table 19.

Table 19. Cluster 3 (QSCS)\_Significance test for CE Drivers' Impacts by Hotel Type

| Hotel Type                   | Budget<br><i>n</i> =36                          |         |         | Mid-price<br><i>n</i> =189                                   |         |         | High-end<br><i>n</i> =108             |         |         | Luxury<br><i>n</i> =18   |         |         |
|------------------------------|---|---------|---------|--|---------|---------|---------------------------------------|---------|---------|--------------------------|---------|---------|
|                              | Mean <sup>a</sup>                               | F-value | P-value | Mean <sup>a</sup>  | F-value | P-value | Mean <sup>a</sup>                     | F-value | P-value | Mean <sup>a</sup>        | F-value | P-value |
|                              |   | 20.414  | .000**  |  | 106.50  | .000**  |                                       | 61.714  | .000**  |                          | 14.685  | .000**  |
| CE Driver1 Convenience (C)   | 0.06  |         |         | 0.08   |         |         | 0.07                                  |         |         | 0.10                     |         |         |
| CE Driver 2 Quality (Q)      | 0.23  |         |         | 0.24   |         |         | 0.25                                  |         |         | 0.30                     |         |         |
| CE Driver 3 Price (P)        | 0.15  |         |         | 0.12   |         |         | 0.10                                  |         |         | 0.05                     |         |         |
| CE Driver 4 Brand Image (B)  | 0.03  |         |         | 0.03   |         |         | 0.03                                  |         |         | 0.04                     |         |         |
| CE Driver 5 Relationship (R) | 0.03  |         |         | 0.03   |         |         | 0.04                                  |         |         | 0.01                     |         |         |
| Tukey HSD's Test             | (Q) > (C), (P), (B), (R)<br>(P) > (C), (B), (R) |         |         | (C) > (B), (R)<br>(Q) > (C), (P), (B), (R)<br>(P) > (B), (R) |         |         | (Q) > (C), (P), (B), (R)<br>(P) > (B) |         |         | (Q) > (C), (P), (B), (R) |         |         |

Note:

<sup>a</sup>Mean values were Part Worth Scores on the basis of the weighted score and three levels.

<sup>b</sup>Quality-Seeking Customer Segment (QSCS)

\*  $p < .05$ , \*\*  $p < .001$ .

***Brand Image-Seeking Customer Segment (BSCS) for H4***

The ten sub-hypotheses for **H4** that were statistically supported were as follows:

**H4a.** Considering the Brand Image-Seeking Customer Segment (BSCS) for the budget hotels, the convenience driver will be significantly more important than the relationship driver.

For customers in the BSCS, the convenience driver ( $M = 0.10$ ) was more influential driver than the relationship driver ( $M = 0.05$ ) for the budget hotels,  $F(4, 220) = 6.286, p = .000$ .

**H4b.** Considering the Brand Image-Seeking Customer Segment (BSCS) for the budget hotels, the quality driver will be significantly more important than the relationship driver.

For customers in the BSCS, the quality driver ( $M = 0.12$ ) was more influential driver than the relationship driver ( $M = 0.05$ ) for the budget hotels,  $F(4, 220) = 6.286, p = .000$ .

**H4c.** Considering the Brand Image-Seeking Customer Segment (BSCS) for the budget hotels, the price driver will be significantly more important than the relationship driver.

For customers in the BSCS, the price driver ( $M = 0.14$ ) was more influential driver than the relationship driver ( $M = 0.05$ ) for the budget hotels,  $F(4, 220) = 6.286, p = .000$ .

**H4d.** Considering the Brand Image-Seeking Customer Segment (BSCS) for the mid-price hotels, the quality driver will be significantly more important than the other drivers (*Convenience and Relationship* driver).

For customers in the BSCS, suggested the quality driver ( $M = 0.13$ ) was more influential driver than the convenience ( $M = 0.08$ ) and the relationship driver ( $M = 0.05$ ) for the mid-price hotels,  $F(4, 535) = 12.097, p = .000$ .

**H4e.** Considering the Brand Image-Seeking Customer Segment (BSCS) for the mid-price hotels, the price driver will be significantly more important than the relationship driver.

For customers in the BSCS, the price driver ( $M = 0.11$ ) was more influential driver than the relationship driver ( $M = 0.05$ ) for the mid-price hotels,  $F(4, 535) = 12.097, p = .000$ .

**H4f.** Considering the Brand Image-Seeking Customer Segment (BSCS) for the mid-price hotels, the brand image driver will be significantly more important than the other drivers (*Convenience* and *Relationship* driver).

For customers in the BSCS, the brand image driver ( $M = 0.13$ ) was more influential driver than the convenience ( $M = 0.08$ ) and the relationship driver ( $M = 0.05$ ) for the mid-price hotels,  $F(4, 535) = 12.097, p = .000$ .

**H4g.** Considering the Brand Image-Seeking Customer Segment (BSCS) for the high-end hotels, the relationship driver will be significantly less important than any other drivers (*Convenience*, *Quality*, *Price*, and *Brand Image* driver).

That is, for customers in the BSCS, the relationship driver ( $M = 0.04$ ) was the least influential driver for the high-end hotels,  $F(4, 535) = 15.637, p = 0.000$ , convenience ( $M = 0.10$ ), quality ( $M = 0.13$ ), price ( $M = 0.12$ ), and brand image ( $M = 0.11$ ).

**H4h.** Considering the Brand Image-Seeking Customer Segment (BSCS) for the luxury hotels, the convenience driver will be significantly more important than the other drivers (*Price* and *Relationship* driver).

For customers in the BSCS, the convenience driver ( $M = 0.15$ ) was more influential driver than the price driver ( $M = 0.02$ ) and the relationship driver ( $M = 0.04$ ) for the luxury hotels,  $F(4, 85) = 7.744$ ,  $p = .000$ .

**H4i.** Considering the Brand Image-Seeking Customer Segment (BSCS) for the luxury hotels, the quality driver will be significantly more important than the other drivers (*Price* and *Relationship* driver).

For customers in the BSCS, the quality driver ( $M = 0.16$ ) was more influential driver than the price driver ( $M = 0.02$ ) and the relationship driver ( $M = 0.04$ ) for the luxury hotels,  $F(4, 85) = 7.744$ ,  $p = .000$ .

**H4j.** Considering the Brand Image-Seeking Customer Segment (BSCS) for the luxury hotels, the brand image driver will be significantly more important than the price driver.

For customers in the BSCS, the brand image driver ( $M = 0.12$ ) was more influential driver than the price driver ( $M = 0.02$ ) for the luxury hotels,  $F(4, 85) = 7.744$ ,  $p = .000$ .

The summary of results for the BSCS was presented in Table 20.

Table 20. Cluster 4 (BSCS)\_Significance test for CE Drivers' Impacts by Hotel Type

| Hotel Type                   | Budget<br>n=45      |         |         | Mid-price<br>n=108                            |         |         | High-end<br>n=108        |         |         | Luxury<br>n=18                                |         |         |
|------------------------------|---------------------|---------|---------|---|---------|---------|--------------------------|---------|---------|---|---------|---------|
|                              | Mean <sup>a</sup>   | F-value | P-value | Mean <sup>a</sup>                             | F-value | P-value | Mean <sup>a</sup>        | F-value | P-value | Mean <sup>a</sup>                             | F-value | P-value |
|                              |                     | 6.286   | .000**  |   | 12.097  | .000**  |                          | 15.637  | .000**  |   | 7.744   | .000**  |
| CE Driver1 Convenience (C)   | 0.10                |         |         | 0.08  |         |         | 0.10                     |         |         | 0.15  |         |         |
| CE Driver 2 Quality (Q)      | 0.12                |         |         | 0.13  |         |         | 0.13                     |         |         | 0.16  |         |         |
| CE Driver 3 Price (P)        | 0.14                |         |         | 0.11  |         |         | 0.12                     |         |         | 0.02  |         |         |
| CE Driver 4 Brand Image (B)  | 0.10                |         |         | 0.13  |         |         | 0.11                     |         |         | 0.12  |         |         |
| CE Driver 5 Relationship (R) | 0.05                |         |         | 0.05  |         |         | 0.04                     |         |         | 0.04  |         |         |
| Tukey HSD's Test             | (C), (Q), (P) > (R) |         |         | (Q) > (C), (R)<br>(P) > (R)<br>(B) > (C), (R) |         |         | (C), (Q), (P), (B) > (R) |         |         | (C) > (P), (R)<br>(Q) > (P), (R)<br>(B) > (P) |         |         |

Note:

<sup>a</sup>Mean values were Part Worth Scores on the basis of the weighted score and three levels.

<sup>b</sup>Brand Image-Seeking Customer Segment (BSCS)

\*  $p < .05$ , \*\*  $p < .001$ .



### ***Price-Seeking Customer Segment (PSCS) for H5***

The nine sub-hypotheses for **H5** that were statistically supported were as follows:

**H5a.** Considering the Price-Seeking Customer Segment (PSCS) for the budget hotels, the convenience driver will be significantly more important than the other drivers (*Brand Image* and *Relationship* driver).

For customers in the PSCS, the convenience driver ( $M = 0.09$ ) was more influential driver than the brand image driver ( $M = 0.03$ ) and the relationship driver ( $M = 0.03$ ) for the budget hotels,  $F(4, 670) = 66.983, p = .000$ .

**H5b.** Considering the Price-Seeking Customer Segment (PSCS) for the budget hotels, the quality driver will be significantly more important than the other drivers (*Brand Image* and *Relationship* driver).

For customers in the PSCS, the quality driver ( $M = 0.10$ ) was more influential driver than the brand image driver ( $M = 0.03$ ) and the relationship driver ( $M = 0.03$ ) for the budget hotels,  $F(4, 670) = 66.983, p = .000$ .

**H5c.** Considering the Price-Seeking Customer Segment (PSCS) for the budget hotels, the price driver will be significantly more important than the other remaining CE drivers (*Convenience, Quality, Brand Image, and Relationship* driver).

That is, for customers in the PSCS, the price driver ( $M = 0.24$ ) was the most influential driver for the budget hotels,  $F(4, 670) = 66.983, p = .000$ , convenience ( $M = 0.09$ ), quality ( $M = 0.10$ ), brand image ( $M = 0.03$ ), and relationship ( $M = 0.03$ ).

**H5d.** Considering the Price-Seeking Customer Segment (PSCS) for the mid-price hotels, the convenience driver will be significantly more important than the other drivers (*Brand Image* and *Relationship* driver).

For customers in the PSCS, the convenience driver ( $M = 0.10$ ) was more influential driver than the brand image driver ( $M = 0.04$ ) and the relationship driver ( $M = 0.04$ ) for the mid-price hotels,  $F(4, 1080) = 90.665, p = .000$ .

**H5e.** Considering the Price-Seeking Customer Segment (PSCS) for the mid-price hotels, the quality driver will be significantly more important than the other drivers (*Brand Image* and *Relationship* driver).

For customers in the PSCS, the quality driver ( $M = 0.12$ ) was more influential driver than the brand image driver ( $M = 0.04$ ) and the relationship driver ( $M = 0.04$ ) for the mid-price hotels,  $F(4, 1080) = 90.665, p = .000$ .

**H5f.** Considering the Price-Seeking Customer Segment (PSCS) for the mid-price hotels, the price driver will be significantly more important than the other remaining CE drivers (*Convenience, Quality, Brand Image, and Relationship* driver).

That is, for customers in the PSCS, the price driver ( $M = 0.20$ ) was the most influential drivers for the mid-price hotels,  $F(4, 1080) = 90.665, p = .000$ , convenience ( $M = 0.10$ ), quality ( $M = 0.12$ ), brand image ( $M = 0.04$ ), and relationship ( $M = 0.04$ ).

**H5g.** Considering the Price-Seeking Customer Segment (PSCS) for the high-end hotels, the convenience driver will be significantly more important than the other drivers (*Brand Image* and *Relationship* driver).

For customers in the PSCS, the convenience driver ( $M = 0.11$ ) was more influential driver than the brand image driver ( $M = 0.03$ ) and the relationship driver ( $M = 0.04$ ) for the high-end hotels,  $F(4, 490) = 35.289, p = .000$ .

**H5h.** Considering the Price-Seeking Customer Segment (PSCS) for the high-end hotels, the quality driver will be significantly more important than the other drivers (*Brand Image* and *Relationship* driver).

For customers in the PSCS, the quality driver ( $M = 0.13$ ) was more influential driver than the brand image driver ( $M = 0.03$ ) and the relationship driver ( $M = 0.04$ ) for the high-end hotels,  $F(4, 490) = 35.289, p = .000$ .

**H5i.** Considering the Price-Seeking Customer Segment (PSCS) for the high-end hotels, the price driver will be significantly more important than the other remaining CE drivers (*Convenience*, *Quality*, *Brand Image*, and *Relationship* driver).

That is, for customers in the PSCS, the price driver ( $M = 0.19$ ) was the most influential drivers for the high-end hotels,  $F(4, 490) = 35.289, p = .000$ , convenience ( $M = 0.11$ ), quality ( $M = 0.13$ ), brand image ( $M = 0.03$ ), and relationship ( $M = 0.04$ ). The summary of results for the PSCS was presented in Table 21.

Table 21. Cluster 5 (PSCS)\_Significance test for CE Drivers' Impacts by Hotel Type

| Hotel Type                   | Budget<br><i>n=135</i> |  |         | Mid-price<br><i>n=217</i> |  |         | High-end<br><i>n=99</i> |  |         |
|------------------------------|------------------------|--|---------|---------------------------|--|---------|-------------------------|--|---------|
|                              | Mean <sup>a</sup>      | F-value  | P-value | Mean <sup>a</sup>         | F-value  | P-value | Mean <sup>a</sup>       | F-value  | P-value |
|                              |                        | 66.983   | .000**  |                           | 90.665   | .000**  |                         | 35.289   | .000**  |
| CE Driver1 Convenience (C)   | 0.09                   |  |         | 0.10                      |  |         | 0.11                    |  |         |
| CE Driver 2 Quality (Q)      | 0.10                   |  |         | 0.12                      |  |         | 0.13                    |  |         |
| CE Driver 3 Price (P)        | 0.24                   |  |         | 0.20                      |  |         | 0.19                    |  |         |
| CE Driver 4 Brand Image (B)  | 0.03                   |  |         | 0.04                      |  |         | 0.03                    |  |         |
| CE Driver 5 Relationship (R) | 0.03                   |  |         | 0.04                      |  |         | 0.04                    |  |         |
| Tukey HSD's Test             |                        | (C) > (B), (R)<br>(Q) > (B), (R)<br>(P) > (C), (Q), (B), (R) |         |                           | (C) > (B), (R)<br>(Q) > (B), (R)<br>(P) > (C), (Q), (B), (R) |         |                         | (C) > (B), (R)<br>(Q) > (B), (R)<br>(P) > (C), (Q), (B), (R) |         |

Note:

<sup>a</sup>Mean values were Part Worth Scores on the basis of the weighted score and three levels.

<sup>b</sup>Price-Seeking Customer Segment (PSCS)

\*  $p < .05$ , \*\*  $p < .001$ .

The all significant results of hypotheses for the first proposition are shown in

Table 22.

Table 22. Summary of Hypotheses for Proposition 1

| <b>Hypotheses for Proposition 1</b>  |                  |
|--|------------------|
| <b>H1.</b> Considering the Relationship-Seeking Customer Segment (RSCS) for any hotel type, the relationship driver is significantly more important than the other remaining CE drivers.   |                  |
| <b>H1a.</b> Considering the Relationship-Seeking Customer Segment (RSCS) for the budget hotels, the price driver is significantly more important than the brand image driver.  | <b>Supported</b> |
| <b>H1b.</b> Considering the Relationship-Seeking Customer Segment (RSCS) for the budget hotels, the price driver is significantly more important than the relationship driver.   | <b>Supported</b> |
| <b>H1c.</b> Considering the Relationship-Seeking Customer Segment (RSCS) for the mid-price hotels, the quality driver is significantly more important than the brand image driver.   | <b>Supported</b> |
| <b>H1d.</b> Considering the Relationship-Seeking Customer Segment (RSCS) for the mid-price hotels, the price driver is significantly more important than the brand image driver.   | <b>Supported</b> |
| <b>H1e.</b> Considering the Relationship-Seeking Customer Segment (RSCS) for the mid-price hotels, the relationship driver is significantly more important than the brand image driver.  | <b>Supported</b> |
| <b>H2.</b> Considering the Convenience-Seeking Customer Segment (CSCS) for any hotel type, the convenience driver is significantly more important than the other remaining CE drivers.   |                  |
| <b>H2a.</b> Considering the Convenience-Seeking Customer Segment (CSCS) for the budget hotels, the convenience driver is significantly more important than the other remaining CE drivers ( <i>Quality, Price, Brand Image, and Relationship</i> driver).    | <b>Supported</b> |
| <b>H2b.</b> Considering the Convenience-Seeking Customer Segment (CSCS) for the mid price hotels, the convenience driver is significantly more important than the other remaining CE drivers ( <i>Quality, Price, Brand Image, and Relationship</i> driver). | <b>Supported</b> |
| <b>H2c.</b> Considering the Convenience-Seeking Customer Segment (CSCS) for the mid price hotels, the quality driver is significantly more important than the other drivers ( <i>Brand image and Relationship</i> driver).                                   | <b>Supported</b> |
| <b>H2d.</b> Considering the Convenience-Seeking Customer Segment (CSCS) for the mid price hotels, the price driver is significantly more important than the other drivers ( <i>Brand image and Relationship</i> driver).                                     | <b>Supported</b> |
| <b>H2e.</b> Considering the Convenience-Seeking Customer Segment (CSCS) for the high-end hotels, the convenience driver is significantly more important than the other remaining CE drivers ( <i>Quality, Price, Brand Image, and Relationship</i> driver).  | <b>Supported</b> |
| <b>H2f.</b> Considering the Convenience-Seeking Customer Segment (CSCS) for the high-end hotels, the quality driver is significantly more important than the other drivers ( <i>Brand image and Relationship</i> driver).                                    | <b>Supported</b> |
| <b>H2g.</b> Considering the Convenience-Seeking Customer Segment (CSCS) for the high-end hotels, the price driver is significantly more important than the other drivers ( <i>Brand image and Relationship</i> driver).                                      | <b>Supported</b> |

Table 22. Summary of Hypotheses for Proposition 1 (*continued*)

| <b>Hypotheses for Proposition 1</b>  |                  |
|--|------------------|
| <p><b>H3.</b> Considering the Quality-Seeking Customer Segment (QSCS) for any hotel type, the quality driver is significantly more important than the other remaining CE drivers.</p>  |                  |
| <p><b>H3a.</b> Considering the Quality-Seeking Customer Segment (QSCS) for the budget hotels, the quality driver is significantly more important than the other remaining CE drivers (<i>Convenience, Price, Brand Image, and Relationship</i> driver).</p>    | <i>Supported</i> |
| <p><b>H3b.</b> Considering the Quality-Seeking Customer Segment (QSCS) for the budget hotels, the price driver is significantly more important than the other CE drivers (<i>Convenience, Brand Image, and Relationship</i> driver).</p>                       | <i>Supported</i> |
| <p><b>H3c.</b> Considering the Quality-Seeking Customer Segment (QSCS) for the mid-price hotels, the convenience driver is significantly more important than the other CE drivers (<i>Brand Image, and Relationship</i> driver).</p>                           | <i>Supported</i> |
| <p><b>H3d.</b> Considering the Quality-Seeking Customer Segment (QSCS) for the mid-price hotels, the quality driver is significantly more important than the other remaining CE drivers (<i>Convenience, Price, Brand Image, and Relationship</i> driver).</p> | <i>Supported</i> |
| <p><b>H3e.</b> Considering the Quality-Seeking Customer Segment (QSCS) for the mid-price hotels, the price driver is significantly more important than the other CE drivers (<i>Brand Image, and Relationship</i> driver).</p>                                 | <i>Supported</i> |
| <p><b>H3f.</b> Considering the Quality-Seeking Customer Segment (QSCS) for the high-end hotels, the quality driver is significantly more important than the other remaining CE drivers (<i>Convenience, Price, Brand Image, and Relationship</i> driver).</p>  | <i>Supported</i> |
| <p><b>H3g.</b> Considering the Quality-Seeking Customer Segment (QSCS) for the high-end hotels, the price driver will be significantly more important than brand image driver.</p>   | <i>Supported</i> |
| <p><b>H3h.</b> Considering the Quality-Seeking Customer Segment (QSCS) for the luxury hotels, the quality driver is significantly more important than the other remaining CE drivers (<i>Convenience, Price, Brand Image, and Relationship</i> driver).</p>    | <i>Supported</i> |
| <p><b>H4.</b> Considering the Brand Image-Seeking Customer Segment (BSCS) for any hotel type, brand image driver is significantly more important than the other remaining CE drivers.</p>  |                  |
| <p><b>H4a.</b> Considering the Brand Image-Seeking Customer Segment (BSCS) for the budget hotels, the convenience driver is significantly more important than the relationship driver.</p>   | <i>Supported</i> |
| <p><b>H4b.</b> Considering the Brand Image-Seeking Customer Segment (BSCS) for the budget hotels, the quality driver is significantly more important than the relationship driver.</p>   | <i>Supported</i> |
| <p><b>H4c.</b> Considering the Brand Image-Seeking Customer Segment (BSCS) for the budget hotels, the price driver is significantly more important than the relationship driver.</p>   | <i>Supported</i> |
| <p><b>H4d.</b> Considering the Brand Image-Seeking Customer Segment (BSCS) for the mid-price hotels, the quality driver is significantly more important than the other drivers (<i>Convenience and Relationship</i> driver).</p>                               | <i>Supported</i> |
| <p><b>H4e.</b> Considering the Brand Image-Seeking Customer Segment (BSCS) for the mid-price hotels, the price driver is significantly more important than the relationship driver.</p>  | <i>Supported</i> |
| <p><b>H4f.</b> Considering the Brand Image-Seeking Customer Segment (BSCS) for the mid-price hotels, the brand image driver is significantly more important than the other drivers (<i>Convenience and Relationship</i> driver).</p>                           | <i>Supported</i> |
| <p><b>H4g.</b> Considering the Brand Image-Seeking Customer Segment (BSCS) for the high-end hotels, the relationship driver is significantly less important than any other remaining drivers (<i>Convenience, Quality, Price, and Brand Image</i> driver).</p> | <i>Supported</i> |
| <p><b>H4h.</b> Considering the Brand Image-Seeking Customer Segment (BSCS) for the luxury hotels, the convenience driver is significantly more important than the other drivers (<i>Price and Relationship</i> driver).</p>                                    | <i>Supported</i> |
| <p><b>H4i.</b> Considering the Brand Image-Seeking Customer Segment (BSCS) for the luxury hotels, the quality driver is significantly more important than the other drivers (<i>Price and Relationship</i> driver).</p>  | <i>Supported</i> |
| <p><b>H4j.</b> Considering the Brand Image-Seeking Customer Segment (BSCS) for the luxury hotels, the brand image driver is significantly more important than the price driver.</p>  | <i>Supported</i> |

Table 22. Summary of Hypotheses for Proposition 1 (*continued*)

| <b>Hypotheses for Proposition 1</b>  |                  |
|--|------------------|
| <b>H5.</b> Considering the Price-Seeking Customer Segment (PSCS) for any hotel type, the price driver is significantly more important than the other remaining CE drivers.   |                  |
| <b>H5a.</b> Considering the Price-Seeking Customer Segment (PSCS) for the budget hotels, the convenience driver is significantly more important than the other drivers ( <i>Brand Image</i> and <i>Relationship</i> driver).   | <b>Supported</b> |
| <b>H5b.</b> Considering the Price-Seeking Customer Segment (PSCS) for the budget hotels, the quality driver is significantly more important than the other drivers ( <i>Brand Image</i> and <i>Relationship</i> driver).   | <b>Supported</b> |
| <b>H5c.</b> Considering the Price-Seeking Customer Segment (PSCS) for the budget hotels, the price driver is significantly more important than the other remaining CE drivers ( <i>Convenience</i> , <i>Quality</i> , <i>Brand Image</i> , and <i>Relationship</i> driver).    | <b>Supported</b> |
| <b>H5d.</b> Considering the Price-Seeking Customer Segment (PSCS) for the mid-price hotels, the convenience driver is significantly more important than the other drivers ( <i>Brand Image</i> and <i>Relationship</i> driver).  | <b>Supported</b> |
| <b>H5e.</b> Considering the Price-Seeking Customer Segment (PSCS) for the mid-price hotels, the quality driver is significantly more important than the other drivers ( <i>Brand Image</i> and <i>Relationship</i> driver).  | <b>Supported</b> |
| <b>H5f.</b> Considering the Price-Seeking Customer Segment (PSCS) for the mid-price hotels, the price driver is significantly more important than the other remaining CE drivers ( <i>Convenience</i> , <i>Quality</i> , <i>Brand Image</i> , and <i>Relationship</i> driver). | <b>Supported</b> |
| <b>H5g.</b> Considering the Price-Seeking Customer Segment (PSCS) for the high-end hotels, the convenience driver is significantly more important than the other drivers ( <i>Brand Image</i> and <i>Relationship</i> driver).   | <b>Supported</b> |
| <b>H5h.</b> Considering the Price-Seeking Customer Segment (PSCS) for the high-end hotels, the quality driver is significantly more important than the other drivers ( <i>Brand Image</i> and <i>Relationship</i> driver).   | <b>Supported</b> |
| <b>H5i.</b> Considering the Price-Seeking Customer Segment (PSCS) for the high-end hotels, the price driver is significantly more important than the other remaining CE drivers ( <i>Convenience</i> , <i>Quality</i> , <i>Brand Image</i> , and <i>Relationship</i> driver).  | <b>Supported</b> |

## Proposition 2

The second proposition derived basically five hypotheses by controlling for funding sources in the following hypotheses:

- H6.** Controlling for funding sources and hotel type, customers in the Relationship-Seeking Customer Segment (RSCS), will be significantly more responsive to the relationship driver in terms of their probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to pay.
- H7.** Controlling for funding sources and hotel type, customers in the Convenience-Seeking Customer Segment (CSCS), will be significantly more responsive to the convenience driver in terms of their probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to pay.

- H8.** Controlling for funding sources and hotel type, customers in the Quality-Seeking Customer Segment (QSCS), will be significantly more responsive to the quality driver in terms of their probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to pay.
- H9.** Controlling for funding sources and hotel type, customers in the Brand Image-Seeking Customer Segment (BSCS), will be significantly more responsive to the brand image driver in terms of their probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to pay.
- H10.** Controlling for funding sources and hotel type, customers in the Price-Seeking Customer Segment (PSCS), will be significantly more responsive to the price driver in terms of their probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to pay.

The results of the regression model in Conjoint Analysis indicated that there were statistically significant relationships ( $p < .05$  and  $p < .001$ ) between each CE driver and the market responsiveness in terms of three variables (i.e., brand switching, room-night, and room rate) considering the CE segments and hotel type. These dependent variables were key components to affect a hotel's CE. The values for the effectiveness of each CE driver were derived from the regression standardized coefficients of the dummy variables used to describe the hypothetical profiles used in Conjoint Analysis. In the regression model, the independent variables were the dummy variables such as convenience driver (above expected), convenience driver (as expected), quality driver (above expected), quality driver (as expected), and so forth. Each CE driver was used to describe the respective hotel profiles and their respective part-worth utilities. The dependent variables were the market responsiveness in terms of the probability of brand switching, the room-nights they desire to stay, and the room rate they willing to stay. Each respondent evaluated nine hypothetical hotel profiles and answered three dependent variables by controlling funding sources and hotel type. Thus, the regression models were examined by funding sources (i.e., personal funds, and business funds) and hotel type. The results

of hypotheses 6, 7, 8, 9, and 10 were described in terms of the five CE-based segments in the following sections.

### ***Relationship-Seeking Customer Segment (RSCS)***

The six sub-hypotheses for **H6** in terms of the funding sources (i.e., personal and business funds) were significantly supported as discussed. A summary of regression coefficients for the RSCS was presented in Table 23.

#### **Personal funding source**

**H6a** (*personal*). Considering the Relationship-Seeking Customer Segment (RSCS) and the mid-price hotels, “***convenience driver (above expected)***” will be significantly more responsive to the ***probability of brand switching***.

In terms of personal funds, considering the RSCS and the mid-price hotels, the overall model of the ten IVs significantly predicted the probability of brand switching,  $R^2 = .048$ ,  $R^2_{adj} = .040$ ,  $F(1, 124) = 6.205$ ,  $p < .05$ . A summary of regression coefficients indicated that the only one variable, *convenience driver (above expected)* ( $\beta = -.218$ ,  $t = -2.491$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

**H6b** (*personal*). Considering the Relationship-Seeking Customer Segment (RSCS) and the high-end hotels, “***brand image driver (above expected)***” will be significantly more responsive to the ***probability of brand switching***.

In terms of personal funds, considering the RSCS and the high-end hotels, the overall model of the ten IVs significantly predicted the probability of brand switching,  $R^2 = .152$ ,  $R^2_{adj} = .134$ ,  $F(1, 48) = 8.595$ ,  $p < .05$ . A summary of regression coefficients indicated that the only one variable, *brand image driver (above expected)* ( $\beta = .390$ ,  $t = 2.932$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.



**H6c** (*personal*). Considering the Relationship-Seeking Customer Segment (RSCS) and the budget hotels, “**brand image driver (above expected)**” will be significantly more responsive to the change in **room rate**.

In terms of personal funds, considering the RSCS and the budget hotels, the overall model of the ten IVs significantly predicted the change in room rate,  $R^2 = .13$ ,  $R^2_{adj} = .104$ ,  $F(1, 34) = 5.062$ ,  $p < .05$ . A summary of regression coefficients indicated that the only one variable, *brand image driver (above expected)* ( $\beta = .36$ ,  $t = 2.25$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

**H6d** (*personal*). Considering the Relationship-Seeking Customer Segment (RSCS) and the high-end hotels, “**price driver (above expected)**” will be significantly more responsive to the change in **room rate**.

In terms of personal funds, considering the RSCS and the high-end hotels, the overall model of the ten IVs significantly predicted the change in the room rate,  $R^2 = .194$ ,  $R^2_{adj} = .178$ ,  $F(1, 48) = 11.59$ ,  $p < .05$ . A summary of regression coefficients indicated that only one variable, *price driver (above expected)* ( $\beta = .441$ ,  $t = 3.404$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

### **Business funding source**

**H6e** (*business*). Considering the Relationship-Seeking Customer Segment (RSCS) and the budget hotels, “**brand image driver (above expected)**” will be significantly more responsive to the **probability of brand switching**.

In terms of business funds, considering the RSCS and the budget hotels, the overall model of the ten IVs significantly predicted the probability of brand switching,  $R^2 = .112$ ,  $R^2_{adj} = .086$ ,  $F(1, 34) = 4.291$ ,  $p < .05$ . A summary of regression coefficients

indicated that only one variable, *brand image driver (above expected)* ( $\beta = .335, t = 2.071, p < .05$ ) of ten variables, significantly contributed to the model.

**H6f** (*business*). Considering the Relationship-Seeking Customer Segment (RSCS) and the high-end hotels, “*convenience driver (above expected)*” and “*convenience driver (as expected)*” will be significantly more responsive to the *probability of brand switching*.

In terms of business funds, considering the RSCS and the high-end hotels, the overall model of the ten IVs significantly predicted the probability of brand switching,  $R^2 = .238, R^2_{adj} = .205, F(1, 47) = 7.322, p < .05$ . A summary of regression coefficients indicated that two variables, *convenience driver (above expected)* ( $\beta = .515, t = 3.665, p < .05$ ); and *convenience driver (as expected)* ( $\beta = .357, t = 2.543, p < .05$ ) of ten variables, significantly contributed to the model.

Table 23. RSCS\_Linear Regression Results (Coefficients for Model Variables)

| Funding source | Dependent Variable          | Hotel Type | Independent Variable <sup>a</sup> | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig.  |
|----------------|-----------------------------|------------|-----------------------------------|-----------------------------|------------|---------------------------|--------|-------|
|                |                             |            |                                   | B                           | Std. Error | Beta                      |        |       |
| Personal funds | Brand Switching Probability | Mid-price  | Convenience2                      | -.459                       | .184       | -.218                     | -2.491 | .014* |
|                |                             | High-end   | Brand Image2                      | .833                        | .284       | .390                      | 2.932  | .005* |
|                | Room rate                   | Budget     | Brand Image2                      | 0.759                       | 0.338      | 0.36                      | 2.25   | .031* |
|                |                             | High-end   | Price2                            | 0.926                       | 0.272      | 0.441                     | 3.404  | .001* |
| Business funds | Brand Switching Probability | Budget     | Brand Image2                      | 0.706                       | 0.341      | 0.335                     | 2.071  | .046* |
|                |                             | High-end   | Convenience2                      | 1.051                       | 0.287      | 0.515                     | 3.665  | .001* |
|                |                             | High-end   | Convenience1                      | 0.819                       | 0.322      | 0.357                     | 2.543  | .014* |

Note:

<sup>a</sup>. Independent variables were represented in the following categories: C1 (Convenience: As expected), C2 (Convenience: Above expected), Q1 (Quality: As expected), Q2 (Quality: Above expected), P1 (Price: As expected), P2 (Price: Above expected), B1 (Brand Image: As expected), B2 (Brand Image: Above expected), R1 (Relationship: As expected), and R2 (Relationship: Above expected).

\*  $p < .05$ .

### ***Convenience-Seeking Customer Segment (CSCS)***

The six sub-hypotheses for **H7** in terms of personal and business funds were significantly supported as discussed below. A summary of regression coefficients for the CSCS was presented in Table 24.

#### **Personal funding source**

**H7a** (*personal*). Considering the Convenience-Seeking Customer Segment (CSCS) and the budget hotels, “***quality driver (as expected)***” will be significantly more responsive to the change in the number of ***room-nights***.

In terms of personal funds, considering the CSCS and the budget hotels, the overall model of the ten IVs significantly predicted the change in the number of room-nights,  $R^2 = .603$ ,  $R^2_{adj} = .553$ ,  $F(1, 8) = 12.142$ ,  $p < .05$ . A summary of regression coefficients indicated that the only one variable, *quality driver (as expected)* ( $\beta = -.776$ ,  $t = -3.485$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

**H7b** (*personal*). Considering the Convenience-Seeking Customer Segment (CSCS) and the high-end hotels, “***price driver (as expected)***” related marketing effort will be significantly more responsive to the change in the number of ***room-nights***.

In terms of personal funds, considering the CSCS and the high-end hotels, the overall model of the ten IVs significantly predicted the change in the number of room-nights,  $R^2 = .098$ ,  $R^2_{adj} = .081$ ,  $F(1, 55) = 5.942$ ,  $p < .05$ . A summary of regression coefficients indicated that only one variable, *price driver (as expected)* ( $\beta = -.312$ ,  $t = -2.438$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

**H7c** (*personal*). Considering the Convenience-Seeking Customer Segment (CSCS) and the budget hotels, “*relationship driver (above expected)*” will be significantly more responsive to the change in *room rate*.

In terms of personal funds, considering the CSCS and the budget hotels, the overall model of the ten IVs significantly predicted the change in *room rate*,  $R^2 = .477$ ,  $R^2_{\text{adj}} = .141$ ,  $F(1, 8) = 7.282$ ,  $p < .05$ . A summary of regression coefficients indicated that the only one variable, *relationship driver (above expected)* ( $\beta = -.69$ ,  $t = -2.699$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

**H7d** (*personal*). Considering the Convenience-Seeking Customer Segment (CSCS) and the high-end hotels, “*convenience driver (above expected)*” and “*price driver (as expected)*” will be significantly more responsive to the change in *room rate*.

In terms of personal funds, considering the CSCS and the high-end hotels, the overall model of the ten IVs significantly predicted the change in room rate,  $R^2 = .141$ ,  $R^2_{\text{adj}} = .109$ ,  $F(1, 54) = 4.434$ ,  $p < .05$ . A summary of regression coefficients indicated that two variables, *convenience driver (above expected)* ( $\beta = .267$ ,  $t = 2.116$ ,  $p < .05$ ); and *price driver (as expected)* ( $\beta = -.264$ ,  $t = -2.095$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

### **Business funding source**

**H7e** (*business*). Considering the Convenience-Seeking Customer Segment (CSCS) and the high-end hotels, “*price driver (as expected)*” will be significantly more responsive to the change in the number of *room-nights*.

In terms of business funds, considering the CSCS and the high-end hotels, the overall model of the ten IVs significantly predicted the change in the number of room-nights,  $R^2 = .102$ ,  $R^2_{adj} = .086$ ,  $F(1, 55) = 6.272$ ,  $p < .05$ . A summary of regression coefficients indicated that the only one variable, *price driver (as expected)* ( $\beta = -.32$ ,  $t = -2.504$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

**H7f** (*business*). Considering the Convenience-Seeking Customer Segment (CSCS) and the high-end hotels, “*price driver (as expected)*” will be significantly more responsive to the change in *room rate*.

In terms of business funds, considering the CSCS and the high-end hotels, the overall model of the ten IVs significantly predicted the change in room rate,  $R^2 = .088$ ,  $R^2_{adj} = .071$ ,  $F(1, 55) = 5.297$ ,  $p < .05$ . A summary of regression coefficients indicated that the only one variable, *price driver (as expected)* ( $\beta = -.296$ ,  $t = -2.302$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

Table 24. CSCS\_Linear Regression Results (Coefficients for Model Variables)

| Funding source | Dependent Variable | Hotel Type | Independent Variable <sup>a</sup> | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig.  |
|----------------|--------------------|------------|-----------------------------------|-----------------------------|------------|---------------------------|--------|-------|
|                |                    |            |                                   | B                           | Std. Error | Beta                      |        |       |
| Personal funds | Room-night         | Budget     | Quality1                          | -1.515                      | 0.435      | -0.776                    | -3.485 | .008* |
|                |                    | High-end   | Price1                            | -0.651                      | 0.267      | -0.312                    | -2.438 | .018* |
|                | Room rate          | Budget     | Relationship2                     | -1.347                      | 0.499      | -0.69                     | -2.699 | .027* |
|                |                    | High-end   | Convenience2                      | 0.564                       | 0.267      | 0.267                     | 2.116  | .039* |
|                |                    | High-end   | Price1                            | -0.551                      | 0.263      | -0.264                    | -2.095 | .041* |
| Business funds | Room-night         | High-end   | Price1                            | -0.667                      | 0.266      | -0.32                     | -2.504 | .015* |
|                | Room rate          | High-end   | Price1                            | -0.618                      | 0.268      | -0.296                    | -2.302 | .025* |

Note:

<sup>a</sup>. Independent variables were represented in the following categories: C1 (Convenience: As expected), C2 (Convenience: Above expected), Q1 (Quality: As expected), Q2 (Quality: Above expected), P1 (Price: As expected), P2 (Price: Above expected), B1 (Brand Image: As expected), B2 (Brand Image: Above expected), R1 (Relationship: As expected), and R2 (Relationship: Above expected).

\*  $p < .05$ .

### ***Quality-Seeking Customer Segment (QSCS)***

The four sub-hypotheses for **H8** in terms of personal and business funds were significantly supported as follows. A summary of regression coefficients for the QSCS was presented in Table 25.

#### **Personal funding source**

**H8a** (*personal*). Considering the Quality-Seeking Customer Segment (QSCS) and the high-end hotels, “***price driver (above expected)***” will be significantly more responsive to the change in the number of ***room-nights***.

In terms of personal funds, considering the QSCS and the high-end hotels, the overall model of the ten IVs significantly predicted the change in room-nights,  $R^2 = .062$ ,  $R^2_{adj} = .047$ ,  $F(1, 62) = 4.081$ ,  $p < .05$ . A summary of regression coefficients indicated that the only one variable, ***price driver (above expected)*** ( $\beta = .249$ ,  $t = 2.02$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

#### **Business funding source**

**H8b** (*business*). Considering the Quality-Seeking Customer Segment (QSCS) and the budget hotels, “***price driver (above expected)***” will be significantly more responsive to the ***probability of brand switching***.

In terms of business funds, considering the QSCS and the budget hotels, the overall model of the ten IVs significantly predicted the probability of brand switching,  $R^2 = .488$ ,  $R^2_{adj} = .424$ ,  $F(1, 8) = 7.613$ ,  $p < .05$ . A summary of regression coefficients

indicated that the only one variable, *price driver (above expected)* ( $\beta = -.698, t = -2.759, p < .05$ ) of ten variables, significantly contributed to the model.

**H8c** (*business*). Considering the Quality-Seeking Customer Segment (QSCS) and the high-end hotels, “***brand image driver (above expected)***” will be significantly more responsive to the change in the number of ***room-nights***.

In terms of business funds, considering the QSCS and the high-end hotels, the overall model of the ten IVs significantly predicted the change in the number of room-nights,  $R^2 = .074, R^2_{adj} = .059, F(1, 62) = 4.944, p < .05$ . A summary of regression coefficients indicated that the only one variable, *brand image driver (above expected)* ( $\beta = .272, t = 2.223, p < .05$ ) of ten variables, significantly contributed to the model.

**H8d** (*business*). Considering the Quality-Seeking Customer Segment (QSCS) and the high-end hotels, “***relationship driver (above expected)***” will be significantly more responsive to the change in ***room rate***.

In terms of business funds, considering the QSCS and the high-end hotels, the overall model of the ten IVs significantly predicted the change in room rate,  $R^2 = .073, R^2_{adj} = .059, F(1, 62) = 4.917, p < .05$ . A summary of regression coefficients indicated that the only one variable, *relationship driver (above expected)* ( $\beta = .271, t = 2.217, p < .05$ ) of ten variables, significantly contributed to the model.

Table 25. QSCS\_Linear Regression Results (Coefficients for Model Variables)

| Funding source | Dependent Variable          | Hotel Type | Independent Variable <sup>a</sup> | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig.  |
|----------------|-----------------------------|------------|-----------------------------------|-----------------------------|------------|---------------------------|--------|-------|
|                |                             |            |                                   | B                           | Std. Error | Beta                      |        |       |
| Personal funds | Room-night                  | High-end   | Price2                            | 0.521                       | 0.258      | 0.249                     | 2.02   | .048* |
| Business funds | Brand Switching Probability | Budget     | Price2                            | -1.363                      | 0.494      | -0.698                    | -2.759 | .025* |
|                | Room-night                  | High-end   | Brand Image2                      | 0.57                        | 0.256      | 0.272                     | 2.223  | .03*  |
|                | Room rate                   | High-end   | Relationship2                     | 0.604                       | 0.272      | 0.271                     | 2.217  | .03*  |

Note:

<sup>a</sup>. Independent variables were represented in the following categories: C1 (Convenience: As expected), C2 (Convenience: Above expected), Q1 (Quality: As expected), Q2 (Quality: Above expected), P1 (Price: As expected), P2 (Price: Above expected), B1 (Brand Image: As expected), B2 (Brand Image: Above expected), R1 (Relationship: As expected), and R2 (Relationship: Above expected).

\*  $p < .05$ .

### ***Brand Image-Seeking Customer Segment (BSCS)***

The thirteen sub-hypotheses for **H9** in terms of personal and business funds were significantly supported as discussed below. A summary of regression coefficients for the BSCS was presented in Table 26.

#### **Personal funding source**

**H9a** (*personal*). Considering the Brand Image-Seeking Customer Segment (BSCS) and the budget hotels, “*convenience driver (above expected)*” will be significantly more responsive to the *probability of brand switching*.

In terms of personal funds, considering the BSCS and the budget hotels, the overall model of the ten IVs significantly predicted the probability of brand switching,  $R^2 = .152$ ,  $R^2_{adj} = .122$ ,  $F(1, 28) = 5.038$ ,  $p < .05$ . A summary of regression coefficients



indicated that the only one variable, *convenience driver (above expected)* ( $\beta = .39, t = 2.245, p < .05$ ) of ten variables, significantly contributed to the model.

**H9b** (*personal*). Considering the Brand Image-Seeking Customer Segment (BSCS) and the high-end hotels, “*quality driver (above expected)*” and “*price driver (above expected)*” will be significantly more responsive to the *probability of brand switching*.

In terms of personal funds, considering the BSCS and the high-end hotels, the overall model of the ten IVs significantly predicted the probability of brand switching,  $R^2 = .173, R^2_{adj} = .149, F(1, 70) = 7.317, p < .05$ . A summary of regression coefficients indicated that only two variables, *quality driver (above expected)* ( $\beta = -.351, t = -3.154, p < .05$ ); and *price driver (above expected)* ( $\beta = -.311, t = -2.797, p < .05$ ) of ten variables, significantly contributed to the model.

**H9c** (*personal*). Considering the Brand Image-Seeking Customer Segment (BSCS) and the budget hotels, “*convenience driver (as expected)*” will be significantly more responsive to the change in the number of *room-nights*.

In terms of personal funds, considering the BSCS and the budget hotels, the overall model of the ten IVs significantly predicted the change in the number of room-nights,  $R^2 = .225, R^2_{adj} = .197, F(1, 28) = 8.119, p < .05$ . A summary of regression coefficients indicated that the only one variable, *convenience driver (as expected)* ( $\beta = -.474, t = -2.849, p < .05$ ) of ten variables, significantly contributed to the model.

**H9d** (*personal*). Considering the Brand Image-Seeking Customer Segment (BSCS) and the mid-price hotels, “*brand image driver (above expected)*” will be significantly more responsive to the change in the number of *room-nights*.

In terms of personal funds, considering the BSCS and the mid-price hotels, the overall model of the ten IVs significantly predicted the change in the number of room-nights,  $R^2 = .068$ ,  $R^2_{adj} = .057$ ,  $F(1, 79) = 5.796$ ,  $p < .05$ . A summary of regression coefficients indicated that the only one variable, *brand image driver (above expected)* ( $\beta = .261$ ,  $t = 2.407$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

**H9e** (*personal*). Considering the Brand Image-Seeking Customer Segment (BSCS) and the mid-price hotels, “*price driver (as expected)*” will be significantly more responsive to the change in *room rate*.

In terms of personal funds, considering the BSCS and the mid-price hotels, the overall model of the ten IVs significantly predicted the change of the number of room rate,  $R^2 = .074$ ,  $R^2_{adj} = .063$ ,  $F(1, 79) = 6.354$ ,  $p < .05$ . A summary of regression coefficients indicated that the only one variable, *price driver (as expected)* ( $\beta = -.273$ ,  $t = -2.521$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

**H9f** (*personal*). Considering the Brand Image-Seeking Customer Segment (BSCS) and the high-end hotels, “*brand image driver (above expected)*” will be significantly more responsive to the change in *room rate*.

In terms of personal funds, considering the BSCS and the high-end hotels, the overall model of the ten IVs significantly predicted the change in room rate,  $R^2 = .077$ ,  $R^2_{adj} = .064$ ,  $F(1, 71) = 5.894$ ,  $p < .05$ . A summary of regression coefficients indicated that the only one variable, *brand image driver (above expected)* ( $\beta = .277$ ,  $t = 2.428$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

### **Business funding source**

**H9g** (*business*). Considering the Brand Image-Seeking Customer Segment (BSCS) and the budget hotels, “*convenience driver (above expected)*”, “*relationship driver (as expected)*”, and “*brand image driver (as expected)*” will be significantly more responsive to the *probability of brand switching*.

In terms of business funds, considering the BSCS and the budget hotels, the overall model of the ten IVs significantly predicted the probability of brand switching.  $R^2 = .42$ ,  $R^2_{adj} = .353$ ,  $F(1, 26) = 6.265$ ,  $p < .05$ . A summary of regression coefficients indicated that three variables, *convenience driver (above expected)* ( $\beta = .388$ ,  $t = 2.579$ ,  $p < .05$ ); *relationship driver (as expected)* ( $\beta = .42$ ,  $t = 2.763$ ,  $p < .05$ ); and *brand image driver (as expected)* ( $\beta = -.386$ ,  $t = -2.541$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

**H9h** (*business*). Considering the Brand Image-Seeking Customer Segment (BSCS) and the high-end hotels, “*price driver (above expected)*” and “*quality driver (above expected)*” will be significantly more responsive to the *probability of brand switching*.

In terms of business funds, considering the BSCS and the high-end hotels, the overall model of the ten IVs significantly predicted the probability of brand switching.  $R^2 = .128$ ,  $R^2_{adj} = .103$ ,  $F(1, 70) = 5.148$ ,  $p < .05$ . A summary of regression coefficients indicated that two variables, *price driver (above expected)* ( $\beta = -.312$ ,  $t = -2.725$ ,  $p < .05$ ); and *quality image driver (above expected)* ( $\beta = -.257$ ,  $t = -2.244$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

**H9i** (*business*). Considering the Brand Image-Seeking Customer Segment (BSCS) and the luxury hotels, “*convenience driver (above expected)*” will be significantly more responsive to the *probability of brand switching*.

In terms of business funds, considering the BSCS and the luxury hotels, the overall model of the ten IVs significantly predicted the probability of brand switching,  $R^2 = .368$ ,  $R^2_{adj} = .328$ ,  $F(1, 16) = 9.297$ ,  $p < .05$ . A summary of regression coefficients indicated that the only one variable, *convenience driver (above expected)* ( $\beta = -.606$ ,  $t = -3.049$ ,  $p < 0.05$ ) of ten variables, significantly contributed to the model.

**H9j** (*business*). Considering the Brand Image-Seeking Customer Segment (BSCS) and the budget hotels, “*convenience driver (as expected)*,” “*relationship driver (as expected)*,” and “*relationship driver (above expected)*” will be significantly more responsive to the change in the number of *room-nights*.

In terms of business funds, considering the BSCS and the budget hotels, the overall model of the ten IVs significantly predicted the change in the number of room-nights,  $R^2 = .444$ ,  $R^2_{adj} = .38$ ,  $F(1, 26) = 6.918$ ,  $p < .05$ . A summary of regression coefficients indicated that three variables, *convenience driver (as expected)* ( $\beta = -.413$ ,  $t = -2.816$ ,  $p < .05$ ); *relationship driver (as expected)* ( $\beta = .579$ ,  $t = 3.335$ ,  $p < .05$ ); and *relationship driver (above expected)* ( $\beta = .389$ ,  $t = 2.251$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

**H9k** (*business*). Considering the Brand Image-Seeking Customer Segment (BSCS) and the mid-price hotels, “*brand image driver (as expected)*” will be significantly more responsive to the change in the number of *room-nights*.

In terms of business funds, considering the BSCS and the mid-price hotels, the overall model of the ten IVs significantly predicted the change in the number of room-nights,  $R^2 = .104$ ,  $R^2_{\text{adj}} = .092$ ,  $F(1, 79) = 9.134$ ,  $p < .05$ . A summary of regression coefficients indicated that the only one variable, *brand image driver (as expected)* ( $\beta = -.322$ ,  $t = -3.022$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

**H9l** (*business*). Considering the Brand Image-Seeking Customer Segment (BSCS) and the mid-price hotels, “*price driver (as expected)*” and “*relationship driver (above expected)*” will be significantly more responsive to the change in *room rate*.

In terms of business funds, considering the BSCS and the mid-price hotels, the overall model of the ten IVs significantly predicted the change in room rate.  $R^2 = .133$ ,  $R^2_{\text{adj}} = .111$ ,  $F(1, 78) = 5.992$ ,  $p < .05$ . A summary of regression coefficients indicated that two variables, *price driver (as expected)* ( $\beta = -.292$ ,  $t = -2.767$ ,  $p < .05$ ); and *relationship driver (above expected)* ( $\beta = .219$ ,  $t = 2.08$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

**H9m** (*business*). Considering the Brand Image-Seeking Customer Segment (BSCS) and the high-end hotels, “*convenience driver (as expected)*” and “*brand image driver (above expected)*” will be significantly more responsive to the change in *room rate*.

In terms of business funds, considering the BSCS and the high-end hotels, the overall model of the ten IVs significantly predicted the change in room rate.  $R^2 = .159$ ,  $R^2_{\text{adj}} = .135$ ,  $F(1, 70) = 6.6$ ,  $p < .05$ . A summary of regression coefficients indicated that only two variables, *convenience driver (as expected)* ( $\beta = .347$ ,  $t = 3.05$ ,  $p < .05$ ); and *brand image driver (above expected)* ( $\beta = .308$ ,  $t = 2.17$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

Table 26. BSCS\_Linear Regression Results (Coefficients for Model Variables)

| Funding source | Dependent Variable          | Hotel Type   | Independent Variable <sup>a</sup> | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig.  |
|----------------|-----------------------------|--------------|-----------------------------------|-----------------------------|------------|---------------------------|--------|-------|
|                |                             |              |                                   | B                           | Std. Error | Beta                      |        |       |
| Personal funds | Brand Switching Probability | Budget       | Convenience2                      | 0.823                       | 0.367      | 0.39                      | 2.245  | .033* |
|                |                             | High-end     | Quality2                          | -0.73                       | 0.231      | -0.351                    | -3.154 | .002* |
|                |                             | High-end     | Price2                            | -0.647                      | 0.231      | -0.311                    | -2.797 | .007* |
|                | Room-night                  | Budget       | Convenience1                      | -1.00                       | 0.351      | -0.474                    | -2.849 | .008* |
|                |                             | Mid-price    | Brand Image2                      | 0.543                       | 0.226      | 0.261                     | 2.407  | .018* |
|                | Room rate                   | Mid-price    | Price1                            | -0.572                      | 0.227      | -0.273                    | -2.521 | .014* |
| High-end       |                             | Brand Image2 | 0.57                              | 0.235                       | 0.277      | 2.428                     | .018*  |       |
| Business funds | Brand Switching Probability | Budget       | Convenience2                      | 0.818                       | 0.317      | 0.388                     | 2.579  | .016* |
|                |                             | Budget       | Relationship1                     | 0.828                       | 0.3        | 0.42                      | 2.763  | .01*  |
|                |                             | Budget       | Brand Image1                      | -0.762                      | 0.3        | -0.386                    | -2.541 | .017* |
|                |                             | High-end     | Price2                            | -0.647                      | 0.238      | -0.312                    | -2.725 | .008* |
|                |                             | High-end     | Quality2                          | -0.533                      | 0.238      | -0.257                    | -2.244 | .028* |
|                |                             | Luxury       | Convenience2                      | -1.212                      | 0.398      | -0.606                    | -3.049 | .008* |
|                | Room-night                  | Budget       | Convenience1                      | -0.872                      | 0.31       | -0.413                    | -2.816 | .009* |
|                |                             | Budget       | Relationship1                     | 1.141                       | 0.342      | 0.579                     | 3.335  | .003* |
|                |                             | Budget       | Relationship2                     | 0.821                       | 0.365      | 0.389                     | 2.251  | .033* |
|                |                             | Mid-price    | Brand Image1                      | -0.688                      | 0.228      | -0.322                    | -3.022 | .003* |
|                | Room rate                   | Mid-price    | Price1                            | -0.611                      | 0.221      | -0.292                    | -2.767 | .007* |
|                |                             | Mid-price    | Relationship2                     | 0.459                       | 0.221      | 0.219                     | 2.08   | .041* |
| High-end       |                             | Convenience1 | 0.767                             | 0.251                       | 0.347      | 3.05                      | .003*  |       |
| High-end       |                             | Brand Image2 | 0.634                             | 0.234                       | 0.308      | 2.71                      | .008*  |       |

Note:

<sup>a</sup>. Independent variables were represented in the following categories: C1 (Convenience: As expected), C2 (Convenience: Above expected), Q1 (Quality: As expected), Q2 (Quality: Above expected), P1 (Price: As expected), P2 (Price: Above expected), B1 (Brand Image: As expected), B2 (Brand Image: Above expected), R1 (Relationship: As expected), and R2 (Relationship: Above expected).

\*  $p < .05$ .

### ***Price-Seeking Customer Segment (PSCS)***

The four sub-hypotheses for **H10** in terms of personal and business funds were significantly supported as follows. A summary of regression coefficients for the PSCS was presented in Table 27.

#### **Personal funding source**

**H10a** (*personal*). Considering the Price-Seeking Customer Segment (PSCS) and the high-end hotels, “*quality driver (above expected)*” and “*convenience driver (as expected)*” will be significantly more responsive to the ***probability of brand switching***.

In terms of personal funds, considering the PSCS and the high-end hotels, the overall model of the ten IVs significantly predicted the probability of brand switching,  $R^2 = .169$ ,  $R^2_{adj} = .143$ ,  $F(1, 62) = 6.32$ ,  $p < .05$ . A summary of regression coefficients indicated that two variables, *quality driver (above expected)* ( $\beta = .309$ ,  $t = 2.669$ ,  $p < .05$ ); and *convenience driver (as expected)* ( $\beta = -.277$ ,  $t = -2.389$ ,  $p < .05$ ) of ten variables, significantly contributed to the model.

**H10b** (*personal*). Considering the Price-Seeking Customer Segment (PSCS) and the budget hotels, “*quality driver (as expected)*” will be significantly more responsive to the change in the number of ***room-nights***.

In terms of personal funds, considering the PSCS and the budget hotels, the overall model of the ten IVs significantly predicted the change in the number of room-nights,  $R^2 = .065$ ,  $R^2_{adj} = .054$ ,  $F(1, 88) = 6.112$ ,  $p < .05$ . A summary of regression

coefficients indicated that only one variable, *quality driver (as expected)* ( $\beta = .255, t = 2.472, p < .05$ ) of ten variables, significantly contributed to the model.

**H10c** (*personal*). Considering the Price-Seeking Customer Segment (PSCS) and the mid-price hotels, “*price driver (above expected)*” will be significantly responsive to the change in the number of *room-nights*.

In terms of personal funds, considering the PSCS and the mid-price hotels, the overall model of the ten IVs significantly predicted the change in the number of room-nights,  $R^2 = .04, R^2_{adj} = .034, F(1, 148) = 6.189, p < .05$ . A summary of regression coefficients indicated that the only one variable, *price driver (above expected)* ( $\beta = .200, t = 2.488, p < .05$ ) of ten variables, significantly contributed to the model.

### **Business funding source**

**H10d** (*business*). Considering the Price-Seeking Customer Segment (PSCS) and the budget hotels, “*quality driver (as expected)*” will be significantly responsive to the change in the number of *room-nights*.

In terms of business funds, considering the PSCS and the budget hotels, the overall model of the ten IVs significantly predicted the change in the number of room-nights,  $R^2 = .062, R^2_{adj} = .051, F(1, 88) = 5.78, p < .05$ . A summary of regression coefficients indicated that only one variable, *quality driver (as expected)* ( $\beta = .248, t = 2.404, p < .05$ ) of ten variables, significantly contributed to the model.



Table 27. PSCS\_Linear Regression Results (Coefficients for Model Variables)

| Funding source | Dependent Variable          | Hotel Type | Independent Variable <sup>a</sup> | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig.              |
|----------------|-----------------------------|------------|-----------------------------------|-----------------------------|------------|---------------------------|--------|-------------------|
|                |                             |            |                                   | B                           | Std. Error | Beta                      |        |                   |
| Personal funds | Brand Switching Probability | High-end   | Quality2                          | 0.65                        | 0.244      | 0.309                     | 2.669  | .01 <sup>*</sup>  |
|                |                             | High-end   | Convenience1                      | -0.582                      | 0.244      | -0.277                    | -2.389 | .02 <sup>*</sup>  |
|                | Room-night                  | Budget     | Quality1                          | 0.539                       | 0.218      | 0.255                     | 2.472  | .015 <sup>*</sup> |
|                |                             | Mid-price  | Price2                            | 0.422                       | 0.17       | 0.2                       | 2.488  | .014 <sup>*</sup> |
| Business funds | Room-night                  | Budget     | uality1                           | 0.525                       | 0.218      | 0.248                     | 2.404  | .018 <sup>*</sup> |

Note:

<sup>a</sup>. Independent variables were represented in the following categories: C1 (Convenience: As expected), C2 (Convenience: Above expected), Q1 (Quality: As expected), Q2 (Quality: Above expected), P1 (Price: As expected), P2 (Price: Above expected), B1 (Brand Image: As expected), B2 (Brand Image: Above expected), R1 (Relationship: As expected), and R2 (Relationship: Above expected).

<sup>\*</sup>  $p < .05$ .

The all significant results of hypotheses for the second proposition are shown in Table 28.

Table 28. Summary of Hypotheses for Proposition 2

| <b>Hypotheses for Proposition 2</b>  |                  |
|--|------------------|
| <b>H6.</b> Controlling for funding sources and hotel type, customers in the Relationship-Seeking Customer Segment (RSCS), will be significantly more responsive to the relationship driver in terms of the probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they willing to pay. |                  |
| <b>Personal funds</b>  |                  |
| <b>H6a</b> <i>(personal)</i> . Considering the Relationship-Seeking Customer Segment (RSCS) and the mid-price hotels, “ <b>convenience driver (above expected)</b> ” is significantly more responsive to the <b>probability of brand switching</b> .   | <b>Supported</b> |
| <b>H6b</b> <i>(personal)</i> . Considering the Relationship-Seeking Customer Segment (RSCS) and the high-end hotels, “ <b>brand image driver (above expected)</b> ” is significantly more responsive to the <b>probability of brand switching</b> .  | <b>Supported</b> |
| <b>H6c</b> <i>(personal)</i> . Considering the Relationship-Seeking Customer Segment (RSCS) and the budget hotels, “ <b>brand image driver (above expected)</b> ” is significantly more responsive to the change in <b>room rate</b> .   | <b>Supported</b> |
| <b>H6d</b> <i>(personal)</i> . Considering the Relationship-Seeking Customer Segment (RSCS) and the high-end hotels, “ <b>price driver (above expected)</b> ” is significantly more responsive to the change in <b>room rate</b> .   | <b>Supported</b> |
| <b>Business funds</b>  |                  |
| <b>H6e</b> <i>(business)</i> . Considering the Relationship-Seeking Customer Segment (RSCS) and the budget hotels, “ <b>brand image driver (above expected)</b> ” is significantly more responsive to the <b>probability of brand switching</b> .  | <b>Supported</b> |
| <b>H6f</b> <i>(business)</i> . Considering the Relationship-Seeking Customer Segment (RSCS) and the high-end hotels, “ <b>convenience driver (above expected)</b> ” and “ <b>convenience driver (as expected)</b> ” is significantly more responsive to the <b>probability of brand switching</b> .  | <b>Supported</b> |

Table 28. Summary of Hypotheses for Proposition 2 (*continued*)

| <b>Hypotheses for Proposition 2</b>  |                  |
|--|------------------|
| <b>H7.</b> Controlling for funding sources and hotel type, customers in the Convenience-Seeking Customer Segment (CSCS), will be significantly more responsive to the convenience driver in terms of the probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they willing to pay. |                  |
| <b>Personal funds</b>  |                  |
| <b>H7a</b> ( <i>personal</i> ). Considering the Convenience-Seeking Customer Segment (CSCS) and the budget hotels, “ <b>quality driver (as expected)</b> ” is significantly more responsive to the change of the number of <b>room-nights</b> .  | <b>Supported</b> |
| <b>H7b</b> ( <i>personal</i> ). Considering the Convenience-Seeking Customer Segment (CSCS) and the high-end hotels, “ <b>price driver (as expected)</b> ” is significantly more responsive to the change of the number of <b>room-nights</b> .  | <b>Supported</b> |
| <b>H7c</b> ( <i>personal</i> ). Considering the Convenience-Seeking Customer Segment (CSCS) and the budget hotels, “ <b>relationship driver (above expected)</b> ” is significantly more responsive to the change in <b>room rate</b> .  | <b>Supported</b> |
| <b>H7d</b> ( <i>personal</i> ). Considering the Convenience-Seeking Customer Segment (CSCS) and the high-end hotels, “ <b>convenience driver (above expected)</b> ” and “ <b>price driver (as expected)</b> ” is significantly more responsive to the change in <b>room rate</b> .   | <b>Supported</b> |
| <b>Business funds</b>  |                  |
| <b>H7e</b> ( <i>business</i> ). Considering the Convenience-Seeking Customer Segment (CSCS) and for the high-end hotels, “ <b>price driver (as expected)</b> ” is significantly more responsive to the change of the number of <b>room-nights</b> .  | <b>Supported</b> |
| <b>H7f</b> ( <i>business</i> ). Considering the Convenience-Seeking Customer Segment (CSCS) and the high-end hotels, “ <b>price driver (as expected)</b> ” is significantly more responsive to the change in <b>room rate</b> .  | <b>Supported</b> |
| <b>H8.</b> Controlling for funding sources and hotel type, customers in the Quality-Seeking Customer Segment (QSCS), will be significantly more responsive to the quality driver in terms of the probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they willing to pay.         |                  |
| <b>Personal funds</b>  |                  |
| <b>H8a</b> ( <i>personal</i> ). Considering the Quality-Seeking Customer Segment (QSCS) and the high-end hotels, “ <b>price driver (above expected)</b> ” is significantly more responsive to the change of the number of <b>room-nights</b> .   | <b>Supported</b> |
| <b>Business funds</b>  |                  |
| <b>H8b</b> ( <i>business</i> ). Considering the Quality-Seeking Customer Segment (QSCS) and the budget hotels, “ <b>price driver (above expected)</b> ” is significantly more responsive to the <b>probability of brand switching</b> .  | <b>Supported</b> |
| <b>H8c</b> ( <i>business</i> ). Considering the Quality-Seeking Customer Segment (QSCS) and the high-end hotels, “ <b>brand image driver (above expected)</b> ” will be more significantly responsive to the change of the number of <b>room-nights</b> .  | <b>Supported</b> |
| <b>H8d</b> ( <i>business</i> ). Considering the Quality-Seeking Customer Segment (QSCS) and the high-end hotels, “ <b>relationship driver (above expected)</b> ” is significantly more responsive to the change in <b>room rate</b> .  | <b>Supported</b> |

Table 28. Summary of Hypotheses for Proposition 2 (*continued*)

| <b>Hypotheses for Proposition 2</b>  |                  |
|--|------------------|
| <p><b>H9.</b> Controlling for funding sources and hotel type, customer in the Brand Image-Seeking Customer Segment (BSCS), will be significantly more responsive to the brand image driver in terms of the probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they willing to pay.</p> |                  |
| <b>Personal funds</b>  |                  |
| <p><b>H9a</b> (<i>personal</i>). Considering the Brand Image-Seeking Customer Segment (BSCS) and the budget hotels, “<i>convenience driver (above expected)</i>” is significantly more responsive to the <i>probability of brand switching</i>.</p>  | <b>Supported</b> |
| <p><b>H9b</b> (<i>personal</i>). Considering the Brand Image-Seeking Customer Segment (BSCS) and the high-end hotels, “<i>quality driver (above expected)</i>” and “<i>price driver (above expected)</i>” is significantly more responsive to the <i>probability of brand switching</i>.</p>   | <b>Supported</b> |
| <p><b>H9c</b> (<i>personal</i>). Considering the Brand Image-Seeking Customer Segment (BSCS) and the budget hotels, “<i>convenience driver (as expected)</i>” is significantly more responsive to the change of the number of <i>room-nights</i>.</p>  | <b>Supported</b> |
| <p><b>H9d</b> (<i>personal</i>). Considering the Brand Image-Seeking Customer Segment (BSCS) and the mid-price hotels, “<i>brand image driver (above expected)</i>” is significantly more responsive to the change of the number of <i>room-nights</i>.</p>  | <b>Supported</b> |
| <p><b>H9e</b> (<i>personal</i>). Considering the Brand Image-Seeking Customer Segment (BSCS) and the mid-price hotels, “<i>price driver (as expected)</i>” is significantly more responsive to the change in <i>room rate</i>.</p>   | <b>Supported</b> |
| <p><b>H9f</b> (<i>personal</i>). Considering the Brand Image-Seeking Customer Segment (BSCS) and the high-end hotels, “<i>brand image driver (above expected)</i>” is significantly more responsive to the change in <i>room rate</i>.</p>   | <b>Supported</b> |
| <b>Business funds</b>  |                  |
| <p><b>H9g</b> (<i>business</i>). Considering the Brand Image-Seeking Customer Segment (BSCS) and the budget hotels, “<i>convenience driver (above expected)</i>,” “<i>relationship driver (as expected)</i>,” and “<i>brand image driver (as expected)</i>” is significantly more responsive to the <i>probability of brand switching</i>.</p>               | <b>Supported</b> |
| <p><b>H9h</b> (<i>business</i>). Considering the Brand Image-Seeking Customer Segment (BSCS) and the high-end hotels, “<i>price driver (above expected)</i>” and “<i>quality driver (above expected)</i>” is significantly more responsive to the <i>probability of brand switching</i>.</p>   | <b>Supported</b> |
| <p><b>H9i</b> (<i>business</i>). Considering the Brand Image-Seeking Customer Segment (BSCS) and the luxury hotels, “<i>convenience driver (above expected)</i>” is significantly more responsive to the <i>probability of brand switching</i>.</p>  | <b>Supported</b> |
| <p><b>H9j</b> (<i>business</i>). Considering the Brand Image-Seeking Customer Segment (BSCS) and the budget hotels, “<i>convenience driver (as expected)</i>,” “<i>relationship driver (as expected)</i>,” and “<i>relationship driver (above expected)</i>” is significantly more responsive to the change of the number of <i>room-nights</i>.</p>         | <b>Supported</b> |
| <p><b>H9k</b> (<i>business</i>). Considering the Brand Image-Seeking Customer Segment (BSCS) and the mid-price hotels, “<i>brand image driver (as expected)</i>” is significantly more responsive to the change of the number of <i>room-nights</i>.</p>   | <b>Supported</b> |
| <p><b>H9l</b> (<i>business</i>). Considering the Brand Image-Seeking Customer Segment (BSCS) and the mid-price hotels, “<i>price driver (as expected)</i>” and “<i>relationship driver (above expected)</i>” is significantly more responsive to the change in <i>room rate</i>.</p>   | <b>Supported</b> |
| <p><b>H9m</b> (<i>business</i>). Considering the Brand Image-Seeking Customer Segment (BSCS) and the high-end hotels, “<i>convenience driver (as expected)</i>” and “<i>brand image driver (above expected)</i>” is significantly more responsive the change in <i>room rate</i>.</p>  | <b>Supported</b> |

Table 28. Summary of Hypotheses for Proposition 2 (*continued*)

| <b>Hypotheses for Proposition 2</b>  |                  |
|--|------------------|
| <b>H10.</b> Controlling for funding sources and hotel type, customers in the Price-Seeking Customer Segment (PSCS), will be significantly more responsive to the relationship driver in terms of the probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they willing to pay. |                  |
| <b>Personal funds</b>  |                  |
| <b>H10a</b> ( <i>personal</i> ). Considering the Price-Seeking Customer Segment (PSCS) and the high-end hotels, “ <b>quality driver (above expected)</b> ” and “ <b>convenience driver (as expected)</b> ” is significantly more responsive to the <b>probability of brand switching</b> .   | <b>Supported</b> |
| <b>H10b</b> ( <i>personal</i> ). Considering the Price-Seeking Customer Segment (PSCS) and the budget hotels, “ <b>quality driver (as expected)</b> ” is significantly more responsive to the change of the number of <b>room-nights</b> .   | <b>Supported</b> |
| <b>H10c</b> ( <i>personal</i> ). Considering the Price-Seeking Customer Segment (PSCS) and the mid-price hotels, “ <b>price driver (above expected)</b> ” is significantly more responsive to the change of the number of <b>room-nights</b> .   | <b>Supported</b> |
| <b>Business funds</b>  |                  |
| <b>H10d</b> ( <i>business</i> ). Considering the Price-Seeking Customer Segment (PSCS) and the budget hotels, “ <b>quality driver (as expected)</b> ” is significantly more responsive to the change of the number of <b>room-nights</b> .   | <b>Supported</b> |

### Proposition 3

Proposition 3 consisted of three steps to answer *Research Question 3*. The first step was to calculate CLV as the key component for calculating Customer Equity (CE). Based on step 1, step 2 was to determine which drivers maximize the ROI on marketing effort exerted by a hotel in terms of the change in CE. Finally, step 3 was to identify the marketing tools (action plans) that would be most effective for each of the CE-based segment and hotel type.

### Research Question 3

“Which of the drivers maximize the Return-On-Investment (ROI) of marketing effort exerted by a hotel?”

#### Step 1

The survey was designed to obtain the necessary information to calculate CLV for each of respondent. As mentioned in the methodology, this study was based on the formula of CLV presented by Rust et al.’s (2000) and Rust, Lemon, and Zeithaml’s (2004) studies. This study modified the formula for the hotel industry shown below.

$$CLV_{ij} = \sum_{t=0}^{T_{ij}} \frac{1}{(1+d)^t} \times R_{ijt} \times M_{ijt} \times Y_{ijt} \times B_{ijt},$$

Where,

$CLV_i$  = the lifetime value for hotel  $j$ ’s customer  $i$ ,

$t$  = time period,

$T_{ij}$  = the length of the time horizon that customer  $i$  stays at the hotel  $j$  (e.g., a typical time horizon ranges from one to five years),

$d$  = the discount rate,

$R_{ijt}$  = the revenue per period (e.g., per year) for hotel  $j$ ’s customer  $i$ ,

$M_{ijt}$  = contribution margin for hotel  $j$ ’s customer  $i$ ,

$Y_{ijt}$  = the number of times per period (e.g., per year) that customer  $i$  stays the hotel  $j$ ,

$B_{ijt}$  = probability that customer  $i$  buys hotel  $j$  in purchase  $t$ ,

A time horizon ranged from one to five years. It can be called “lifecycle” in this study. A discounted rate of 10 % was used and a contribution margin of 75% for room rate and 31% for other expenses was used on the basis of “2008 Lodging Industry Profile” by Smith Travel Research (2008). The revenue per year ( $R_{ijt}$ ) was calculated by adding the revenue of room rate (the average room rate per night  $\times$  the average number of room-nights per visit) and the revenue of other expenses (the average other expenses per night  $\times$  the average number of room-nights per visit). For this study, CLV of each single

respondent in the sample was calculated separately, before the average CLVs were taken. The maximum of life cycle was five-year. The average life cycle of each single respondent by the CE-based segments and hotel type was taken to calculate CLV. The luxury hotels were deleted because of low respondents. The average of CLVs by the CE-based segments and hotel type were shown in Table 29.

Table 29. Customer Lifetime Value by the CE-based Segments and Hotel type

| CE-based Segments   | Hotel Type |      | CLV_1<br>Year (\$) | CLV_2<br>Year (\$) | CLV_3<br>Year (\$) | CLV_4<br>Year (\$) | CLV_5<br>Year (\$) | Initial<br>CLVs (\$) |
|---------------------|------------|------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------------|
| Cluster 1<br>(RSCS) | Budget     | Mean | 2,262.64           | 21.74              | -                  | -                  | -                  | 2,284.37             |
|                     |            | SD   | 4,152.92           | 43.96              | -                  | -                  | -                  | 4,141.67             |
|                     | Mid-price  | Mean | 2,015.01           | 253.40             | 207.79             | 188.90             | 133.24             | 2,798.36             |
|                     |            | SD   | 2,412.94           | 407.84             | 372.43             | 338.57             | 284.96             | 2,479.37             |
|                     | High-end   | Mean | 2,551.81           | 336.04             | 270.85             | 246.23             | 223.84             | 3,628.77             |
|                     |            | SD   | 1,238.58           | 841.29             | 770.85             | 700.77             | 637.07             | 3,297.91             |
| Cluster 2<br>(CSCS) | Budget     | Mean | 709.09             | -                  | -                  | -                  | -                  | 709.09               |
|                     |            | SD   | 519.87             | -                  | -                  | -                  | -                  | 519.87               |
|                     | Mid-price  | Mean | 858.09             | -                  | -                  | -                  | -                  | 858.09               |
|                     |            | SD   | 786.04             | -                  | -                  | -                  | -                  | 786.04               |
|                     | High-end   | Mean | 1,416.08           | 331.65             | 167.82             | 152.56             | -                  | 2,068.11             |
|                     |            | SD   | 1,039.26           | 634.63             | 533.38             | 484.89             | -                  | 2,080.92             |
| Cluster 3<br>(QSCS) | Budget     | Mean | 227.30             | 56.87              | 51.70              | 28.94              | -                  | 364.81               |
|                     |            | SD   | 185.29             | 60.69              | 55.17              | 50.84              | -                  | 184.71               |
|                     | Mid-price  | Mean | 3,049.59           | 919.87             | 314.53             | 200.95             | 78.24              | 4,563.18             |
|                     |            | SD   | 6,492.01           | 1,891.85           | 554.73             | 478.59             | 350.81             | 7,120.94             |
|                     | High-end   | Mean | 3,991.79           | 685.23             | 622.94             | 347.74             | 316.13             | 5,963.82             |
|                     |            | SD   | 5,556.54           | 1,287.57           | 1,170.52           | 1,022.09           | 929.17             | 6,946.51             |
| Cluster 4<br>(BSCS) | Budget     | Mean | 1,205.00           | 1,064.38           | 951.73             | 865.21             | 786.55             | 4,872.87             |
|                     |            | SD   | 1,929.76           | 1,772.97           | 1,621.04           | 1,473.68           | 1,339.71           | 8,136.68             |
|                     | Mid-price  | Mean | 3,204.16           | 128.51             | 116.83             | 47.04              | 22.35              | 3,518.89             |
|                     |            | SD   | 4,972.67           | 184.50             | 167.73             | 105.81             | 74.48              | 4,813.38             |
|                     | High-end   | Mean | 2,385.00           | 1,051.39           | 955.81             | 141.70             | 92.50              | 4,626.41             |
|                     |            | SD   | 2,857.21           | 2,755.38           | 2,504.89           | 352.79             | 308.21             | 7,935.48             |
| Cluster 5<br>(PSCS) | Budget     | Mean | 364.37             | 12.22              | 11.11              | 5.99               | 5.44               | 399.13               |
|                     |            | SD   | 357.00             | 31.88              | 28.98              | 22.49              | 20.44              | 345.51               |
|                     | Mid-price  | Mean | 2,842.04           | 887.11             | 799.90             | 688.07             | 4.42               | 5,221.53             |
|                     |            | SD   | 6,734.46           | 3,752.53           | 3,412.79           | 3,105.53           | 65.06              | 15,053.18            |
|                     | High-end   | Mean | 2,886.93           | 332.46             | 302.23             | 274.76             | 249.78             | 4,046.16             |
|                     |            | SD   | 4,263.55           | 747.22             | 679.30             | 617.54             | 561.40             | 4,831.60             |

## ***Step 2***

Based on the results of significant “CE drivers” related to marketing efforts found in Proposition 2 and the average of CLVs in Step 1, @Risk® simulation by the CE-based segments was run and the results were presented in Table 30. As a result of @Risk® simulation, this study found how much the ROIs were achieved by significant CE drivers. Additionally, the graphs of @Risk® simulation results were presented in Appendix F. The results were described by the five CE-based segments as follows.

### ***Relationship-Seeking Customer Segment (RSCS)***

In terms of personal funds, considering the RSCS and for the budget hotels, *brand image driver (above expected)* (*New CLV = \$5,698.17, Delta CLV = \$3,413.8, and ROI = 149.44%*) maximized the ROI on marketing effort responsiveness. Considering the RSCS and the mid-price hotels, *convenience driver (above expected)* (*New CLV = \$9,789.5, Delta CLV = \$6,991.14, and ROI = 249.83%*) maximized the ROI on marketing effort responsiveness. Considering the RSCS and the high-end hotels, three drivers, *price driver (above expected)* (*New CLV = \$3,957.82, Delta CLV = \$329.05, and ROI = 9.07%*); *brand image driver (above expected)* (*New CLV = \$6,340.21, Delta CLV = \$2,711.44, and ROI = 74.72%*); and *relationship driver (above expected)* (*New CLV = \$4,327.88, Delta CLV = \$699.11, and ROI = 19.27%*), maximized the ROI on marketing effort responsiveness.

On the other hand, in terms of business funds, considering the RSCS and the budget hotels, *brand image driver (above expected)* (*New CLV = \$-10,392.59, Delta CLV = \$-12,676.96, and ROI = -554.94%*) influenced negatively the ROI on marketing



effort responsiveness. In terms of business funds, considering the RSCS and the high-end hotels, two drivers, *convenience driver (above expected)* ( $New\ CLV = \$-6,933.53$ ,  $Delta\ CLV = \$-10,562.3$ , and  $ROI = -291.07\%$ ); and *convenience driver (above expected)* ( $New\ CLV = \$-6,904.76$ ,  $Delta\ CLV = \$-10,533.53$ , and  $ROI = -290.29\%$ ), influenced negatively the ROI on marketing effort responsiveness.

### **Convenience-Seeking Customer Segment (CSCS)**

In terms of personal funds, considering the CSCS and the budget hotels, two drivers, *quality driver (as expected)* ( $New\ CLV = \$765.63$ ,  $Delta\ CLV = \$56.54$ , and  $ROI = 7.97\%$ ); and *relationship driver (above expected)* ( $New\ CLV = \$793.7$ ,  $Delta\ CLV = \$84.61$ , and  $ROI = 11.93\%$ ), maximized the ROI on marketing effort responsiveness. In terms of personal funds, considering the CSCS and the high-end hotels, two drivers, *convenience driver (above expected)* ( $New\ CLV = \$3,141.67$ ,  $Delta\ CLV = \$1,073.56$ , and  $ROI = 51.91\%$ ); and *price driver (as expected)* ( $New\ CLV = \$2,705.85$ ,  $Delta\ CLV = \$637.74$ , and  $ROI = 30.84\%$ ), maximized the ROI on marketing effort responsiveness.

In terms of business funds, considering the CSCS and the high-end hotels, *price driver (as expected)* ( $New\ CLV = \$2,742.54$ ,  $Delta\ CLV = \$674.43$ , and  $ROI = 32.61\%$ ) maximized the ROI on marketing effort responsiveness.

### **Quality-Seeking Customer Segment (QSCS)**

In terms of personal funds, considering the QSCS and the high-end hotels, *price driver (above expected)* ( $New\ CLV = \$15,940.57$ ,  $Delta\ CLV = \$9,976.75$ , and  $ROI = 167.29\%$ ) maximized the ROI on marketing effort responsiveness.

In terms of business funds, considering the QSCS and the budget hotels, *price driver (above expected)* (*New CLV = \$1,833.42, Delta CLV = \$1,468.61, and ROI = 402.57%*) maximized the ROI on marketing effort responsiveness. In terms of business funds, considering the QSCS and the high-end hotels, two drivers, *brand image driver (above expected)* (*New CLV = \$15,811.74, Delta CLV = \$9,847.92, and ROI = 165.13%*); and *relationship driver (above expected)* (*New CLV = \$18,099.51, Delta CLV = \$12,135.69, and ROI = 203.49%*), maximized the ROI on marketing effort responsiveness.

### **Brand Image-Seeking Customer Segment (BSCS)**

#### *Personal funds:*

In terms of personal funds, considering the BSCS and the budget hotels, two drivers, *convenience driver (as expected)* (*New CLV = \$1,796.66, Delta CLV = \$-3,076.21, and ROI = -63.13%*); and *convenience driver (above expected)* (*New CLV = \$3,900.83, Delta CLV = \$-972.04, and ROI = -19.95%*), influenced negatively the ROI on marketing effort responsiveness.

On the other hand, in terms of personal funds, considering the BSCS and the mid-price hotels, two drivers, *price driver (as expected)* (*New CLV = \$7,139.65, Delta CLV = \$3,620.76, and ROI = 102.89%*); and *brand image driver (above expected)* (*New CLV = \$5,945.29, Delta CLV = \$2,426.4, and ROI = 68.95%*), maximized the ROI on marketing effort responsiveness.

In terms of personal funds, considering the BSCS and the high-end hotels, three drivers, *quality driver (above expected)* (*New CLV = \$9,383.54, Delta CLV = \$4,757.13,*

and  $ROI = 102.83\%$ ); *price driver (above expected)* ( $New\ CLV = \$9,377.9$ ,  $\Delta CLV = \$4,751.49$ , and  $ROI = 102.7\%$ ); and *brand image driver (above expected)* ( $New\ CLV = \$5,514.66$ ,  $\Delta CLV = \$888.25$ , and  $ROI = 19.2\%$ ), maximized the ROI on marketing effort responsiveness.

*Business funds:*

In terms of business funds, considering the BSCS and the budget hotels, five drivers, *convenience driver (as expected)* ( $New\ CLV = \$1,152.5$ ,  $\Delta CLV = \$-3,720.37$ , and  $ROI = -76.35\%$ ); *convenience driver (above expected)* ( $New\ CLV = \$3,715.34$ ,  $\Delta CLV = \$-1,157.53$ , and  $ROI = -23.75\%$ ); *brand image driver (as expected)* ( $New\ CLV = \$3,674.84$ ,  $\Delta CLV = \$-1,198.03$ , and  $ROI = -24.59\%$ ); *relationship driver (as expected)* ( $New\ CLV = \$2,632.34$ ,  $\Delta CLV = \$-2,240.53$ , and  $ROI = -45.98\%$ ); and *relationship driver (above expected)* ( $New\ CLV = \$2,135.92$ ,  $\Delta CLV = \$-2,736.95$ , and  $ROI = -56.17\%$ ); influenced negatively the ROI on marketing effort responsiveness.

On the other hand, in terms of business funds, considering the BSCS and the mid-price hotels, three drivers, *price driver (as expected)* ( $New\ CLV = \$7,705.61$ ,  $\Delta CLV = \$4,186.72$ , and  $ROI = 118.98\%$ ); *brand image driver (as expected)* ( $New\ CLV = \$4,756.3$ ,  $\Delta CLV = \$1,237.41$ , and  $ROI = 35.16\%$ ); and *relationship driver (above expected)* ( $New\ CLV = \$7,732.2$ ,  $\Delta CLV = \$4,213.31$ , and  $ROI = 119.73\%$ ); maximized the ROI on marketing effort responsiveness.

In terms of business funds, considering the BSCS and the high-end hotels, four drivers, *convenience driver (as expected)* ( $New\ CLV = \$5,445.1$ ,  $\Delta CLV = \$818.69$ , and  $ROI = 17.7\%$ ); *quality driver (above expected)* ( $New\ CLV = \$10,828.88$ ,  $\Delta CLV$

= \$6,202.47, and  $ROI=134.07\%$ ); *price driver (above expected)* (New CLV = \$10,827.75, Delta CLV = \$6,201.34, and  $ROI = 134.04\%$ ); and *brand image driver (above expected)* (New CLV = \$5,437.76, Delta CLV = \$818.35, and  $ROI = 17.54$ ), maximized the ROI on marketing effort responsiveness.

### **Price-Seeking Customer Segment (PSCS)**

#### *Personal funds:*

In terms of personal funds, considering the PSCS and the budget hotels, *quality driver (as expected)* (New CLV = \$565.23, Delta CLV = \$166.1, and  $ROI = 41.62\%$ ) maximized the ROI on marketing effort responsiveness. On the other hand, in terms of personal funds, considering the PSCS and for the mid-price hotels, *price driver (above expected)* (New CLV = \$2,347.38, Delta CLV = \$-2,874.15, and  $ROI = -55.04\%$ ) influenced negatively the ROI on marketing effort responsiveness. Also, in terms of personal funds, considering the PSCS and for the high-end hotels, two drivers, *convenience driver (as expected)* (New CLV = \$-13,271.15, Delta CLV = \$17,317.32, and  $ROI = -427.99\%$ ); and *quality driver (above expected)* (New CLV = \$-13,199.8, Delta CLV = \$17,245.96, and  $ROI = -426.23\%$ ), influenced negatively the ROI on marketing effort responsiveness.

#### *Business funds:*

In terms of business funds, considering the PSCS and the budget hotels, *quality driver (as expected)* (New CLV = \$596.21, Delta CLV = \$197.08, and  $ROI = 49.38\%$ ) also maximized the ROI on marketing effort responsiveness.

Table 30. @Risk® simulation Results by CE-based Segments

| CE-based Segments | Funding Source | Hotel Type | Drivers <sup>a</sup> | Mean /SD | Initial CLVs (\$) | New CLV (\$) | Delta CLV (\$) | POP <sup>b</sup> | ROI (%) |
|-------------------|----------------|------------|----------------------|----------|-------------------|--------------|----------------|------------------|---------|
| Cluster1 (RSCS)   | Personal funds | Budget     | B2                   | Mean     | 2,284.37          | 5,698.17     | 3,413.8        | 962,705          | 149.44  |
|                   |                |            |                      | SD       | 4,141.67          | 4,113.96     | 4,113.96       |                  | 180.09  |
|                   |                | Mid-price  | C2                   | Mean     | 2,798.36          | 9,789.5      | 6,991.14       | 1,059,947        | 249.83  |
|                   |                |            |                      | SD       | 2,479.37          | 3,929.42     | 3,929.42       |                  | 140.42  |
|                   |                | High-end   | P2                   | Mean     | 3,628.77          | 3,957.82     | 329.05         | 1,784,722        | 9.07    |
|                   |                |            |                      | SD       | 3,297.91          | 2,169.66     | 2,169.66       |                  | 59.79   |
|                   |                |            | B2                   | Mean     | 3,628.77          | 6,340.21     | 2,711.44       | 1,899,765        | 74.72   |
|                   |                |            |                      | SD       | 3,297.91          | 2,748.89     | 2,748.89       |                  | 75.75   |
|                   |                |            | R2                   | Mean     | 3,628.77          | 4,327.88     | 699.11         | 2,417,978        | 19.27   |
|                   |                |            |                      | SD       | 3,297.91          | 2,256.3      | 2256.3         |                  | 62.18   |
|                   | Business funds | Budget     | B2                   | Mean     | 2,284.37          | -10,392.59   | -12,676.96     | 962,705          | -554.94 |
|                   |                |            |                      | SD       | 4,141.67          | 6,124.12     | 6,124.12       |                  | 268.09  |
|                   |                | High-end   | C1                   | Mean     | 3,628.77          | -6,933.53    | -1,0562.3      | 1,899,765        | -291.07 |
|                   |                |            |                      | SD       | 3,297.91          | 3,023.46     | 3,023.46       |                  | 83.32   |
| C2                |                |            | Mean                 | 3,628.77 | -6,904.76         | -10,533.53   | 1,899,765      | -290.29          |         |
|                   |                |            | SD                   | 3,297.91 | 2,976.38          | 2,976.38     |                | 82.02            |         |

Table 30. @Risk® simulation Results by CE-based Segments (continued)

| CE-based Segments | Funding Source | Hotel Type | Drivers <sup>a</sup> | Mean /SD | Initial CLVs (\$) | New CLV (\$) | Delta CLV (\$) | POP <sup>b</sup> | ROI (%) |
|-------------------|----------------|------------|----------------------|----------|-------------------|--------------|----------------|------------------|---------|
| Cluster 2 (CSCS)  | Personal funds | Budget     | Q1                   | Mean     | 709.09            | 765.63       | 56.54          | 3,672,661        | 7.97    |
|                   |                |            |                      | SD       | 519.87            | 325.13       | 325.13         |                  | 45.85   |
|                   |                |            | R2                   | Mean     | 709.09            | 793.7        | 84.61          | 1,469,505        | 11.93   |
|                   |                |            |                      | SD       | 519.87            | 383.02       | 383.02         |                  | 54.01   |
|                   |                | High-end   | C2                   | Mean     | 2,068.11          | 3,141.67     | 1,073.56       | 7,228,469        | 51.91   |
|                   |                |            |                      | SD       | 2,080.92          | 1,348.54     | 1,348.54       |                  | 65.21   |
|                   |                |            | P1                   | Mean     | 2,068.11          | 2,705.85     | 637.74         | 3,654,432        | 30.84   |
|                   |                |            |                      | SD       | 2,080.92          | 1,120.48     | 1,120.48       |                  | 54.18   |
|                   | Business funds | High-end   | P1                   | Mean     | 2,068.11          | 2,742.54     | 674.43         | 3,654,432        | 32.61   |
|                   |                |            |                      | SD       | 2,080.92          | 1,120.24     | 1,120.24       |                  | 54.17   |
| Cluster 3 (QSCS)  | Personal funds | High-end   | P2                   | Mean     | 5,963.82          | 15,940.57    | 9,976.75       | 1,487,032        | 167.29  |
|                   |                |            |                      | SD       | 6,946.51          | 7,408.16     | 7,408.16       |                  | 124.22  |
|                   | Business funds | Budget     | P2                   | Mean     | 364.81            | 1,833.42     | 1,468.61       | 11,593,481       | 402.57  |
|                   |                |            |                      | SD       | 184.71            | 530.18       | 530.18         |                  | 145.33  |
|                   |                | High-end   | B2                   | Mean     | 5,963.82          | 15,811.74    | 9,847.92       | 506,563          | 165.13  |
|                   |                |            |                      | SD       | 6,946.51          | 7,356.51     | 7,356.51       |                  | 123.35  |
|                   |                |            | R2                   | Mean     | 5,963.82          | 18,099.51    | 12,135.69      | 664,532          | 203.49  |
|                   |                |            |                      | SD       | 6,946.51          | 8,665.5      | 8665.5         |                  | 145.3   |

Table 30. @Risk® simulation Results by CE-based Segments (continued)

| CE-based Segments | Funding Source | Hotel Type | Drivers <sup>a</sup> | Mean /SD | Initial CLVs (\$) | New CLV (\$) | Delta CLV (\$) | POP <sup>b</sup> | ROI (%) |
|-------------------|----------------|------------|----------------------|----------|-------------------|--------------|----------------|------------------|---------|
| Cluster 4 (BSCS)  | Personal funds | Budget     | C1                   | Mean     | 4,872.87          | 1,796.66     | -3,076.21      | 2,900,558        | -63.13  |
|                   |                |            |                      | SD       | 8,136.68          | 856.71       | 856.71         |                  | 17.58   |
|                   |                |            | C2                   | Mean     | 4,872.87          | 3,900.83     | -972.04        | 2,900,558        | -19.95  |
|                   |                |            |                      | SD       | 8,136.68          | 1,566.33     | 1,566.33       |                  | 32.14   |
|                   |                | Mid-price  | P1                   | Mean     | 3,518.89          | 7,139.65     | 3,620.76       | 921,771          | 102.89  |
|                   |                |            |                      | SD       | 4,813.38          | 3,979.41     | 3,979.41       |                  | 113.09  |
|                   |                |            | B2                   | Mean     | 3,518.89          | 5,945.29     | 2,426.4        | 1,058,194        | 68.95   |
|                   |                |            |                      | SD       | 4,813.38          | 3,148.28     | 3,148.28       |                  | 89.47   |
|                   |                | High-end   | Q2                   | Mean     | 4,626.41          | 9,383.54     | 4,757.13       | 3,544,075        | 102.83  |
|                   |                |            |                      | SD       | 7,935.48          | 3,651.92     | 3,651.92       |                  | 78.94   |
|                   |                |            | P2                   | Mean     | 4,626.41          | 9,377.9      | 4,751.49       | 3,397,312        | 102.7   |
|                   |                |            |                      | SD       | 7,935.48          | 3,655.68     | 3,655.68       |                  | 79.02   |
|                   |                |            | B2                   | Mean     | 4,626.41          | 5,514.66     | 888.25         | 2,944,790        | 19.2    |
|                   |                |            |                      | SD       | 7,935.48          | 2,626.6      | 2,626.6        |                  | 56.77   |

Table 30. @Risk® simulation Results by CE-based Segments (continued)

| CE-based Segments | Funding Source | Hotel Type | Drivers <sup>a</sup> | Mean /SD | Initial CLVs (\$) | New CLV (\$) | Delta CLV (\$) | POP <sup>b</sup> | ROI (%) |        |
|-------------------|----------------|------------|----------------------|----------|-------------------|--------------|----------------|------------------|---------|--------|
| Cluster 4 (BSCS)  | Business funds | Budget     | C1                   | Mean     | 4,872.87          | 1,152.5      | -3,720.37      | 2,900,558        | -76.35  |        |
|                   |                |            |                      | SD       | 8,136.68          | 490.08       | 490.08         |                  | 10.06   |        |
|                   |                |            | C2                   | Mean     | 4,872.87          | 3,715.34     | -1,157.53      | 2,900,558        | -23.75  |        |
|                   |                |            |                      | SD       | 8,136.68          | 1,476.76     | 1,476.76       |                  | 30.31   |        |
|                   |                |            | B1                   | Mean     | 4,872.87          | 3,674.84     | -1,198.03      | 2,729,937        | -24.59  |        |
|                   |                |            |                      | SD       | 8,136.68          | 1,469.32     | 1,469.32       |                  | 30.15   |        |
|                   |                |            | R1                   | Mean     | 4,872.87          | 2,632.34     | -2,240.53      | 1,364,968        | -45.98  |        |
|                   |                |            |                      | SD       | 8,136.68          | 1,003.82     | 1,003.82       |                  | 20.6    |        |
|                   |                |            | R2                   | Mean     | 4,872.87          | 2,135.92     | -2,736.95      | 1,364,968        | -56.17  |        |
|                   |                |            |                      | SD       | 8,136.68          | 1,033.59     | 1,033.59       |                  | 21.21   |        |
|                   |                |            | Mid-price            | P1       | Mean              | 3,518.89     | 7,705.61       | 4,186.72         | 921,771 | 118.98 |
|                   |                |            |                      |          | SD                | 4,813.38     | 4,305.33       | 4,305.33         |         | 122.35 |
|                   |                | B1         |                      | Mean     | 3,518.89          | 4,756.3      | 1,237.41       | 1,058,194        | 35.16   |        |
|                   |                |            |                      | SD       | 4,813.38          | 2,468.55     | 2,468.55       |                  | 70.15   |        |
|                   |                | R2         |                      | Mean     | 3,518.89          | 7,732.2      | 4,213.31       | 392,470          | 119.73  |        |
|                   |                |            |                      | SD       | 4,813.38          | 4,339.18     | 4,339.18       |                  | 123.31  |        |
|                   |                | High-end   | C1                   | Mean     | 4,626.41          | 5,445.1      | 818.69         | 2,717,849        | 17.7    |        |
|                   |                |            |                      | SD       | 7,935.48          | 2,606.9      | 2,606.9        |                  | 56.35   |        |
|                   |                |            | Q2                   | Mean     | 4,626.41          | 10,828.88    | 6,202.47       | 3,544,075        | 134.07  |        |
|                   |                |            |                      | SD       | 7,935.48          | 4,243.85     | 4,243.85       |                  | 91.73   |        |
|                   |                |            | P2                   | Mean     | 4,626.41          | 10,827.75    | 6,201.34       | 3,397,312        | 134.04  |        |
|                   |                |            |                      | SD       | 7,935.48          | 4,250.08     | 4,250.08       |                  | 91.87   |        |
|                   |                |            | B2                   | Mean     | 4,626.41          | 5,437.76     | 811.35         | 2,944,790        | 17.54   |        |
|                   |                |            |                      | SD       | 7,935.48          | 2,589.87     | 2,589.87       |                  | 55.98   |        |



Table 30. @Risk® simulation Results by CE-based Segments (continued)

| CE-based Segments | Funding Source | Hotel Type | Drivers <sup>a</sup> | Mean /SD | Initial CLVs (\$) | New CLV (\$) | Delta CLV (\$) | POP <sup>b</sup> | ROI (%) |
|-------------------|----------------|------------|----------------------|----------|-------------------|--------------|----------------|------------------|---------|
| Cluster 5 (PSCS)  | Personal funds | Budget     | Q1                   | Mean     | 399.13            | 565.23       | 166.1          | 4,823,019        | 41.62   |
|                   |                |            |                      | SD       | 345.51            | 279.29       | 279.29         |                  | 69.97   |
|                   |                | Mid-price  | P2                   | Mean     | 5,221.53          | 2,347.38     | -2,874.15      | 2,401,926        | -55.04  |
|                   |                |            |                      | SD       | 15,053.18         | 1,438.27     | 1,438.27       |                  | 27.54   |
|                   |                | High-end   | C1                   | Mean     | 4,046.16          | -13,271.15   | -17,317.32     | 2,344,666        | -427.99 |
|                   |                |            |                      | SD       | 4,831.6           | 5,290.07     | 5,290.07       |                  | 130.74  |
|                   | Q2             |            | Mean                 | 4,046.16 | -13,199.8         | -17,245.96   | 2,905,754      | -426.23          |         |
|                   |                |            | SD                   | 4,831.6  | 5,212.58          | 5,212.58     |                | 128.83           |         |
|                   | Business funds | Budget     | Q1                   | Mean     | 399.13            | 596.21       | 197.08         | 4,823,019        | 49.38   |
|                   |                |            |                      | SD       | 345.51            | 292.79       | 292.79         |                  | 73.36   |

Note:

<sup>a</sup>In terms of the marketing effort responsiveness, drivers were represented in the following categories: C1 (Convenience: As expected), C2 (Convenience: Above expected), Q1 (Quality: As expected), Q2 (Quality: Above expected), P1 (Price: As expected), P2 (Price: Above expected), B1 (Brand Image: As expected), B2 (Brand Image: Above expected), R1 (Relationship: As expected), and R2 (Relationship: Above expected).

<sup>b</sup>POP was derived from the total population of the hotel industry by hotel type as well as five CE drivers. Please refer Appendix D.

<sup>c</sup>The value of actual CE was computed by multiplying initial CLVs and population (POP). Please refer the Appendix E.

### *Step 3*

Hotel information sources for selecting a hotel were the key measure for developing specific and practical strategies for attracting hotel customers. Hotel information sources which customers used for selecting the hotels consisted of 24 sources as follows: Phone Call, Fax, Direct mail, Newsletter, E-mail, Hotel Website, Chain Website, Travel Website (e.g., Hotels.com), Meta Search (e.g., Kayak), Web Search (e.g., Google), Central Reservation System (CRS), Corporate Travel Manager, Independent Travel Agents, Newspaper Advertisements, Magazine Advertisements, Radio Advertisements, TV Advertisements, Web Advertisements (e.g., Banner, Youtube videos, etc.), Coupon Booklets (Entertainment), Travel Clubs/Web blogs, Hotel Marketing Literature (e.g., Hotel & lodging magazine), Travel Listserves (e.g., Travel database), and Recommendation from friends or others (i.e., Word-of-Mouth [WOM]).

Through mean and standard deviation scores, this study identified what kinds of hotel information source were most effective for each of the CE segments. In terms of the CE-based segments, Step 3 described the importance of hotel information sources overall and then analyzed it by hotel type in the following sections. Additionally, MDS was conducted to suggest an effective action plan group which was viewed similarly for each segment and hotel type. Thus, this step suggested the most effective marketing action plan for the CE-based segments and hotel type.

### **Overall Importance of Hotel Information Sources for Action Plans**

In terms of the CE-based segments, the customers' importance of hotel information sources was presented in Table 31. The results of the importance were described by top 5 ranks. Relationship-Seeking Customer Segment (RSCS) considered "Hotel Website" ( $M = 5.97, SD = 1.47$ ) the most important sources. "Word-of-Mouth" ( $M = 5.87, SD = 1.15$ ) was perceived as the second most important source, followed by "Phone Call" ( $M = 5.84, SD = 1.55$ ), "Chain Website" ( $M = 5.58, SD = 1.54$ ), and "Web Search" ( $M = 5.55, SD = 1.52$ ).

As for Convenience-Seeking Customer Segment (CSCS), "Hotel Website" ( $M = 6.05, SD = 0.97$ ) was also perceived as the most important source. "Phone Call" ( $M = 5.67, SD = 1.56$ ) was perceived as the second important source, followed by "Travel Website" ( $M = 5.33, SD = 1.43$ ). "Chain Website" ( $M = 5.19, SD = 1.40$ ) and "Web Search" ( $M = 5.19, SD = 1.60$ ) were ranked by the fourth at the same time.

Quality-Seeking Customer Segment (QSCS) also considered "Hotel Website" ( $M = 5.61, SD = 1.63$ ) the most important source. "Word-of-Mouth" ( $M = 5.47, SD = 1.46$ ) was perceived as the second important source, followed by "Phone Call" ( $M = 5.33, SD = 1.80$ ), "E-mail" ( $M = 5.03, SD = 1.96$ ), and "Chain Website" ( $M = 4.69, SD = 1.70$ ).

Brand Image-Seeking Customer Segment (BSCS) also considered "Hotel Website" ( $M = 5.50, SD = 1.20$ ) the most important source. "Phone Call" ( $M = 5.47, SD = 1.72$ ) was perceived as the second important source, followed by "Chain Website" ( $M = 5.00, SD = 1.80$ ), "CRS" ( $M = 4.73, SD = 1.76$ ), and "WOM" ( $M = 4.70, SD = 1.74$ ).

On the other hand, Price-Seeking Customer Segment (PSCS) considered "WOM" ( $M = 5.35, SD = 1.62$ ) the most important source. "Phone Call" ( $M = 5.27, SD = 1.83$ )

was perceived as the second important source, followed by “Hotel Website” ( $M = 5.25$ ,  $SD = 1.55$ ), “E-mail” ( $M = 4.73$ ,  $SD = 2.01$ ), and “Web Search” ( $M = 4.69$ ,  $SD = 1.79$ ).

All segments except the PSCS considered “Hotel Website” the most important information source. “Phone Call,” “Hotel Website,” “Chain Website,” and “WOM” were outstandingly perceived as the most important hotel information source in all segments. “E-mail” was also one of the most significant sources in the QSCS and the PSCS. “Web Search” was highly considered in the RSCS and the PSCS. The CSCS considered “Travel Website” one of the influential sources and the BSCS perceived “CRS” as one of the influential sources.

Table 31. Importance of Hotel Information Source by CE-based Segments (N=175)

|                        | Cluster 1<br>RSCS<br>(n=32) |      |      | Cluster 2<br>CSCS<br>(n=22) |      |      | Cluster 3<br>QSCS<br>(n=39) |      |      | Cluster 4<br>BSCS<br>(n=31) |      |      | Cluster 5<br>PSCS<br>(n=51) |      |      |
|------------------------|-----------------------------|------|------|-----------------------------|------|------|-----------------------------|------|------|-----------------------------|------|------|-----------------------------|------|------|
|                        | Mean <sup>a</sup>           | SD   | Rank | Mean <sup>a</sup>           | SD   | Rank | Mean <sup>a</sup>           | SD   | Rank | Mean <sup>a</sup>           | SD   | Rank | Mean <sup>a</sup>           | SD   | Rank |
| Phone Call             | 5.84                        | 1.55 | 3    | 5.67                        | 1.56 | 2    | 5.33                        | 1.80 | 3    | 5.47                        | 1.72 | 2    | 5.27                        | 1.83 | 2    |
| Fax                    | 4.23                        | 1.98 | 14   | 2.52                        | 1.47 | 23   | 3.50                        | 1.87 | 11   | 3.27                        | 1.74 | 18   | 3.08                        | 1.88 | 13   |
| Direct Mail            | 4.48                        | 1.88 | 9    | 2.71                        | 1.62 | 19   | 3.17                        | 1.86 | 15   | 3.33                        | 1.90 | 17   | 3.06                        | 1.74 | 14   |
| Newsletter             | 4.29                        | 1.94 | 13   | 2.33                        | 1.28 | 24   | 2.81                        | 1.65 | 18   | 3.10                        | 1.67 | 22   | 2.69                        | 1.50 | 20   |
| E-mail                 | 5.39                        | 1.91 | 7    | 4.29                        | 1.98 | 8    | 5.03                        | 1.96 | 4    | 4.10                        | 1.97 | 8    | 4.73                        | 2.01 | 4    |
| Hotel Website          | 5.97                        | 1.47 | 1    | 6.05                        | 0.97 | 1    | 5.61                        | 1.63 | 1    | 5.50                        | 1.20 | 1    | 5.25                        | 1.55 | 3    |
| Chain Website          | 5.58                        | 1.54 | 4    | 5.19                        | 1.40 | 4    | 4.69                        | 1.70 | 5    | 5.00                        | 1.80 | 3    | 4.19                        | 1.77 | 8    |
| Travel Website         | 5.42                        | 1.36 | 6    | 5.33                        | 1.43 | 3    | 4.61                        | 1.92 | 6    | 4.57                        | 1.61 | 7    | 4.60                        | 1.72 | 6    |
| Meta Search            | 4.45                        | 1.82 | 11   | 4.05                        | 1.83 | 9    | 3.39                        | 2.07 | 14   | 3.40                        | 1.81 | 16   | 3.50                        | 1.94 | 9    |
| Web Search             | 5.55                        | 1.52 | 5    | 4.90                        | 1.45 | 6    | 4.44                        | 1.99 | 7    | 4.67                        | 1.60 | 6    | 4.69                        | 1.79 | 5    |
| CRS                    | 5.06                        | 1.84 | 8    | 4.76                        | 1.48 | 7    | 4.11                        | 1.70 | 8    | 4.73                        | 1.76 | 4    | 4.27                        | 1.90 | 7    |
| Cor. Travel Manager    | 4.10                        | 2.04 | 18   | 2.86                        | 1.68 | 17   | 2.75                        | 1.79 | 20   | 3.67                        | 2.04 | 11   | 2.54                        | 1.56 | 24   |
| Ind. Travel Agent      | 3.97                        | 2.23 | 21   | 3.00                        | 1.90 | 14   | 2.69                        | 1.70 | 23   | 3.93                        | 2.16 | 9    | 2.75                        | 1.67 | 18   |
| Newspaper Ads.         | 3.87                        | 1.88 | 22   | 3.14                        | 1.80 | 12   | 2.81                        | 1.75 | 19   | 3.23                        | 1.77 | 20   | 2.77                        | 1.45 | 17   |
| Magazine Ads.          | 4.06                        | 1.86 | 19   | 3.10                        | 1.79 | 13   | 2.75                        | 1.73 | 21   | 3.50                        | 1.94 | 15   | 2.73                        | 1.50 | 19   |
| Radio Ads.             | 3.87                        | 1.80 | 23   | 2.62                        | 1.53 | 22   | 2.44                        | 1.61 | 24   | 2.87                        | 1.63 | 24   | 2.56                        | 1.44 | 22   |
| TV Ads.                | 4.19                        | 1.68 | 16   | 3.00                        | 1.58 | 15   | 2.75                        | 1.59 | 22   | 3.27                        | 1.86 | 19   | 2.56                        | 1.43 | 23   |
| Web Ads.               | 3.81                        | 1.78 | 24   | 2.71                        | 1.65 | 20   | 3.17                        | 1.80 | 16   | 3.10                        | 1.79 | 23   | 2.58                        | 1.62 | 21   |
| Coupon booklets        | 4.23                        | 2.01 | 15   | 3.00                        | 1.87 | 16   | 3.72                        | 1.98 | 9    | 3.53                        | 1.98 | 14   | 3.21                        | 1.64 | 11   |
| Travel Clubs/Web blogs | 4.00                        | 2.11 | 20   | 2.71                        | 1.62 | 21   | 3.14                        | 1.82 | 17   | 3.23                        | 1.76 | 21   | 3.02                        | 1.58 | 15   |
| MKTG Literature        | 4.42                        | 1.86 | 12   | 3.19                        | 1.60 | 11   | 3.47                        | 2.01 | 12   | 3.67                        | 1.79 | 12   | 2.92                        | 1.57 | 16   |
| Travel Brochure        | 4.48                        | 1.86 | 10   | 3.43                        | 1.66 | 10   | 3.53                        | 1.96 | 10   | 3.87                        | 1.76 | 10   | 3.33                        | 1.65 | 10   |
| Travel Listserves      | 4.16                        | 1.92 | 17   | 2.86                        | 1.39 | 18   | 3.44                        | 1.95 | 13   | 3.57                        | 1.77 | 13   | 3.17                        | 1.74 | 12   |
| WOM                    | 5.87                        | 1.15 | 2    | 5.19                        | 1.60 | 5    | 5.47                        | 1.46 | 2    | 4.70                        | 1.74 | 5    | 5.35                        | 1.62 | 1    |

Note:

<sup>a</sup> Mean values were computed on the basis of 7-point Likert-type scale 7 (*Extremely Important*) to 1 (*Not at all Important*).

On the basis of importance index scores (see Table 32), the RSCS evaluated all hotel information sources prominently highly except “Hotel Website” compared to other segments. Only “Hotel Website” was evaluated as the highest important index in the CSCS. “Phone Call” was importantly assessed higher than standard index (100) in the RSCS (Index = 105.87) and the PSCS (Index = 102.75). “Fax” was also significantly assessed higher than standard index in the RSCS (Index = 127.29) and the QSCS (Index = 105.42). In the only one segment, RSCS (Index = 133.76), “Direct Mail” was significantly assessed higher than standard index. “Newsletter” was importantly evaluated higher than standard index in the RSCS (Index = 140.97) and the BSCS (Index = 101.86). In three segments, RSCS (Index = 114.47), QSCS (Index = 106.84), and PSCS (Index = 100.49), “E-mail” was significantly assessed higher than standard index respectively. “Hotel Website” was importantly evaluated higher than standard index in the RSCS (Index = 105.15) and the CSCS (Index = 106.56). “Chain Website” also was importantly evaluated higher than standard index in three segments, RSCS (Index = 113.18), CSCS (Index = 105.27), and BSCS (Index = 101.41). “Travel Website,” “Meta Search,” and “Web Search” were assessed more important in the RSCS (Indexes = 110.44, 118.47, and 114.39) and the CSCS (Indexes = 108.69, 107.72, and 101.12) than standard index, respectively. “CRS” was significantly assessed higher than standard index in three segments, RSCS (Index = 110.38), QSCS (Index = 103.78), and BSCS (Index = 103.16). Also, “Corporate Travel Manager,” “Independent Travel Agent,” “News Ads.,” and “Magazine Ads.” were assessed higher than the standard index in two segments, RSCS (Indexes = 128.73, 121.37, 122.32, and 125.92); and BSCS (Indexes = 115.22, 120.32, 102.17, and 108.43), respectively. “Radio Ads” was evaluated as the

highest important index only in the RSCS (Index = 134.75). “TV Ads.” was important assessed higher than standard index in the RSCS (Index = 132.94) and the BSCS (Index = 103.55). “Web Ads.” was significantly evaluated higher than standard index in three segments, RSCS (Index = 123.82); QSCS (Index = 103.01); and BSCS (Index = 100.84). In two segments, RSCS (Index = 119.44) and QSCS (Index = 105.21), “Coupon Booklet” was important evaluated higher than standard index. “Travel Clubs/Web blogs,” “Travel Literature,” and “Travel Brochure” were assessed higher than the standard index in two segments, RSCS (Indexes = 124.17, 125.09, and 120.27); and BSCS (Indexes = 100.37, 103.78, and 103.72), respectively. “Travel Listserves” was significantly evaluated higher than standard index in three segments, RSCS (Index = 120.99); QSCS (Index = 100.15); and BSCS (Index = 103.71). Finally, “Coupon Booklet” was importantly assessed higher than standard index in three segments, RSCS (Index = 110.41), QSCS (Index = 102.91), and PSCS (Index = 100.69).

Table 32. Importance Index Scores Compared to CE-based Segments

|                        | Cluster 1<br>RSCS<br>(n=32) | Cluster 2<br>CSCS<br>(n=22) | Cluster 3<br>QSCS<br>(n=39) | Cluster 4<br>BSCS<br>(n=31) | Cluster 5<br>PSCS<br>(n=51) | Standard<br>Index |
|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------|
| Phone Call             | <b>105.87</b>               | <b>102.75</b>               | 96.70                       | 99.12                       | 95.57                       | 100               |
| Fax                    | <b>127.29</b>               | 76.02                       | <b>105.42</b>               | 98.40                       | 92.87                       | 100               |
| Direct Mail            | <b>133.76</b>               | 80.97                       | 94.47                       | 99.44                       | 91.36                       | 100               |
| Newsletter             | <b>140.97</b>               | 76.67                       | 92.19                       | <b>101.86</b>               | 88.31                       | 100               |
| E-mail                 | <b>114.47</b>               | 91.07                       | <b>106.84</b>               | 87.12                       | <b>100.49</b>               | 100               |
| Hotel Website          | <b>105.15</b>               | <b>106.56</b>               | 98.87                       | 96.91                       | 92.51                       | 100               |
| Chain Website          | <b>113.18</b>               | <b>105.27</b>               | 95.21                       | <b>101.41</b>               | 84.93                       | 100               |
| Travel Website         | <b>110.44</b>               | <b>108.69</b>               | 93.97                       | 93.07                       | 93.83                       | 100               |
| Meta Search            | <b>118.47</b>               | <b>107.72</b>               | 90.19                       | 90.48                       | 93.14                       | 100               |
| Web Search             | <b>114.39</b>               | <b>101.12</b>               | 91.63                       | 96.21                       | 96.64                       | 100               |
| CRS                    | <b>110.38</b>               | <b>103.78</b>               | 89.60                       | <b>103.16</b>               | 93.08                       | 100               |
| Cor. Travel Manager    | <b>128.73</b>               | 89.78                       | 86.41                       | <b>115.22</b>               | 79.87                       | 100               |
| Ind. Travel Agent      | <b>121.37</b>               | 91.77                       | 82.42                       | <b>120.32</b>               | 84.12                       | 100               |
| Newspaper Ads.         | <b>122.32</b>               | 99.31                       | 88.65                       | <b>102.17</b>               | 87.55                       | 100               |
| Magazine Ads.          | <b>125.92</b>               | 95.89                       | 85.20                       | <b>108.43</b>               | 84.55                       | 100               |
| Radio Ads.             | <b>134.75</b>               | 91.17                       | 85.09                       | 99.79                       | 89.20                       | 100               |
| TV Ads.                | <b>132.94</b>               | 95.10                       | 87.18                       | <b>103.55</b>               | 81.23                       | 100               |
| Web Ads.               | <b>123.82</b>               | 88.29                       | <b>103.01</b>               | <b>100.84</b>               | 84.03                       | 100               |
| Coupon booklets        | <b>119.44</b>               | 84.80                       | <b>105.21</b>               | 99.87                       | 90.68                       | 100               |
| Travel Clubs/Web blogs | <b>124.17</b>               | 84.26                       | 97.44                       | <b>100.37</b>               | 93.77                       | 100               |
| MKTG Literature        | <b>125.09</b>               | 90.30                       | 98.28                       | <b>103.78</b>               | 82.55                       | 100               |
| Travel Brochure        | <b>120.27</b>               | 91.97                       | 94.63                       | <b>103.72</b>               | 89.41                       | 100               |
| Travel Listserves      | <b>120.99</b>               | 83.07                       | <b>100.15</b>               | <b>103.71</b>               | 92.07                       | 100               |
| WOM                    | <b>110.41</b>               | 97.61                       | 102.91                      | 88.39                       | 100.69                      | 100               |

Compared to other hotel information sources (see Table 33), “Hotel Website” was ranked as a prominent information source in all segments except the PSCS. Only the PSCS evaluated “WOM” importantly higher than any other information sources. Eight sources, “Phone Call,” “E-mail,” “Hotel Website,” “Chain Website,” “Travel Website,” “Web Search,” “CRS,” and “WOM” among all hotel information sources were perceived more important than standard index in all segments. Additionally, “Meta Search” was evaluated more important than standard index in the CSCS. “Coupon Booklet” was added more important than standard index in the QSCS. Finally, “Independent Travel Agent” also was assessed more important than standard index as an important tool in the BSCS.



Table 33. Importance Index Scores Compared to Hotel Information Sources

|                        | <b>Cluster 1<br/>RSCS<br/>(n=32)</b> | <b>Cluster 2<br/>CSCS<br/>(n=22)</b> | <b>Cluster 3<br/>QSCS<br/>(n=39)</b> | <b>Cluster 4<br/>BSCS<br/>(n=31)</b> | <b>Cluster 5<br/>PSCS<br/>(n=51)</b> |
|------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Phone Call             | <b>125.91</b>                        | <b>153.47</b>                        | <b>144.09</b>                        | <b>140.67</b>                        | <b>149.12</b>                        |
| Fax                    | 91.13                                | 68.35                                | 94.56                                | 84.06                                | 87.23                                |
| Direct Mail            | 96.70                                | 73.51                                | 85.55                                | 85.78                                | 86.64                                |
| Newsletter             | 92.52                                | 63.19                                | 75.80                                | 79.77                                | 76.03                                |
| E-mail                 | <b>116.17</b>                        | <b>116.07</b>                        | <b>135.83</b>                        | <b>105.50</b>                        | <b>133.79</b>                        |
| Hotel Website          | <b>128.70</b>                        | <b>163.78</b>                        | <b>151.59</b>                        | <b>141.53</b>                        | <b>148.53</b>                        |
| Chain Website          | <b>120.35</b>                        | <b>140.57</b>                        | <b>126.83</b>                        | <b>128.66</b>                        | <b>118.47</b>                        |
| Travel Website         | <b>116.87</b>                        | <b>144.44</b>                        | <b>124.58</b>                        | <b>117.51</b>                        | <b>130.26</b>                        |
| Meta Search            | 96.00                                | <b>109.62</b>                        | 91.56                                | 87.49                                | 99.02                                |
| Web Search             | <b>119.65</b>                        | <b>132.83</b>                        | <b>120.08</b>                        | <b>120.09</b>                        | <b>132.61</b>                        |
| CRS                    | <b>109.22</b>                        | <b>128.96</b>                        | <b>111.07</b>                        | <b>121.80</b>                        | <b>120.83</b>                        |
| Cor. Travel Manager    | 88.35                                | 77.38                                | 74.30                                | 94.35                                | 71.91                                |
| Ind. Travel Agent      | 85.57                                | 81.25                                | 72.80                                | <b>101.22</b>                        | 77.80                                |
| Newspaper Ads.         | 83.48                                | 85.12                                | 75.80                                | 83.20                                | 78.39                                |
| Magazine Ads.          | 87.65                                | 83.83                                | 74.30                                | 90.06                                | 77.21                                |
| Radio Ads.             | 83.48                                | 70.93                                | 66.04                                | 73.77                                | 72.50                                |
| TV Ads.                | 90.43                                | 81.25                                | 74.30                                | 84.06                                | 72.50                                |
| Web Ads.               | 82.09                                | 73.51                                | 85.55                                | 79.77                                | 73.08                                |
| Coupon booklets        | 91.13                                | 81.25                                | <b>100.56</b>                        | 90.92                                | 90.77                                |
| Travel Clubs/Web blogs | 86.26                                | 73.51                                | 84.80                                | 83.20                                | 85.46                                |
| MKTG Literature        | 95.30                                | 86.41                                | 93.81                                | 94.35                                | 82.51                                |
| Travel Brochure        | 96.70                                | 92.85                                | 95.31                                | 99.50                                | 94.30                                |
| Travel Listserves      | 89.74                                | 77.38                                | 93.06                                | 91.78                                | 89.59                                |
| WOM                    | <b>126.61</b>                        | <b>140.57</b>                        | <b>147.84</b>                        | <b>120.94</b>                        | <b>151.47</b>                        |
| <i>Standard Index</i>  | 100                                  | 100                                  | 100                                  | 100                                  | 100                                  |

**Importance of Hotel Information Sources by Hotel Type for Action Plans**

The customers evaluated differently the importance of hotel information sources by hotel type (i.e., budget, mid-price, high-end, and luxury hotel). The results of the importance were also reported in rank order in terms of the CE-based segments. The importance of hotel information sources by the luxury hotel was deleted because of low respondents.

*Budget Hotel Type:*

Relationship-Seeking Customer Segment (RSCS) considered “Phone Call” ( $M = 6.80, SD = 0.41$ ) the most important source in the budget hotels. “E-mail” ( $M = 6.60, SD = 0.50$ ), “Web Search” ( $M = 6.60, SD = 0.50$ ), and “WOM” ( $M = 6.60, SD = 0.81$ ) were perceived as the second important source, followed by “Hotel Website” ( $M = 6.40, SD = 0.50$ ) in the budget hotels.

As for convenience-Seeking Customer Segment (CSCS), “Hotel Website” ( $M = 5.67, SD = 0.96$ ) was perceived as the most important source in the budget hotel. Next, “Phone Call” ( $M = 5.33, SD = 1.27$ ) and “Web Search” ( $M = 5.33, SD = 1.27$ ) were perceived at the same rank, followed by “Chain Website” ( $M = 5.00, SD = 1.66$ ) in the budget hotels. In the following, “Travel Website” ( $M = 4.67, SD = 1.73$ ) and “Meta Search” ( $M = 4.67, SD = 1.73$ ) also were ranked by the fifth in the budget hotels.

Quality-Seeking Customer Segment (QSCS) considered “E-mail” ( $M = 6.00, SD = 0.83$ ) and “WOM” ( $M = 6.00, SD = 1.44$ ) the most important source in the budget hotels. “Hotel Website” ( $M = 5.00, SD = 2.20$ ) was perceived as the third important source, followed by “Chain Website” ( $M = 4.67, SD = 1.73$ ), and “CRS” ( $M = 4.67, SD = 1.73$ ) at the same rank in the budget hotels.

Brand Image-Seeking Customer Segment (BSCS) evaluated “Chain Website” ( $M = 5.00, SD = 1.43$ ) as the most important source in the budget hotels. “Hotel Website” ( $M = 4.80, SD = 1.18$ ), “Travel Web” ( $M = 4.80, SD = 1.49$ ), “Web Search” ( $M = 4.80, SD = 1.34$ ), and “Phone Call” ( $M = 4.80, SD = 2.16$ ) were perceived as the second important sources in the budget hotels.

Price-Seeking Customer Segment (PSCS) assessed “Phone Call” ( $M = 5.36$ ,  $SD = 1.72$ ) as the most important source in the budget hotels. “Hotel Website” ( $M = 4.93$ ,  $SD = 1.80$ ) was perceived as the second important source, followed by “WOM” ( $M = 4.71$ ,  $SD = 1.63$ ), “Web Search” ( $M = 4.64$ ,  $SD = 1.80$ ), and “CRS” ( $M = 4.21$ ,  $SD = 1.75$ ) in the budget hotels. Customers in the budget hotels considered “Hotel Website” one of the significant marketing tools in all segments (see Table 34).

Table 34. Importance of Hotel Information Source by Budget Hotel

| Hotel Type   | Hotel Information Source | Cluster 1 RSCS (n=32) |      |      | Cluster 2 CSCS (n=22) |      |      | Cluster 3 QSCS (n=39) |      |      | Cluster 4 BSCS (n=31) |      |      | Cluster 5 PSCS (n=51) |      |      |
|--------------|--------------------------|-----------------------|------|------|-----------------------|------|------|-----------------------|------|------|-----------------------|------|------|-----------------------|------|------|
|              |                          | Mean <sup>a</sup>     | SD   | Rank | Mean <sup>a</sup>     | SD   | Rank | Mean <sup>a</sup>     | SD   | Rank | Mean <sup>a</sup>     | SD   | Rank | Mean <sup>a</sup>     | SD   | Rank |
| Budget Hotel | Phone Call               | 6.80                  | 0.41 | 1    | 5.33                  | 1.27 | 2    | 4.00                  | 2.50 | 6    | 4.80                  | 2.16 | 2    | 5.36                  | 1.72 | 1    |
|              | Fax                      | 6.00                  | 0.64 | 7    | 2.00                  | 0.00 | 12   | 1.67                  | 0.96 | 22   | 2.80                  | 1.85 | 13   | 3.29                  | 1.58 | 11   |
|              | Direct Mail              | 5.60                  | 1.03 | 14   | 1.67                  | 0.48 | 14   | 1.67                  | 0.96 | 22   | 2.80                  | 1.85 | 13   | 3.29                  | 1.54 | 11   |
|              | Newsletter               | 4.40                  | 1.88 | 24   | 2.00                  | 0.00 | 12   | 3.00                  | 1.66 | 10   | 2.80                  | 1.85 | 13   | 2.79                  | 1.32 | 16   |
|              | E-mail                   | 6.60                  | 0.50 | 2    | 3.33                  | 1.27 | 9    | 6.00                  | 0.83 | 1    | 2.60                  | 1.51 | 16   | 4.14                  | 1.89 | 6    |
|              | Hotel Website            | 6.40                  | 0.50 | 5    | 5.67                  | 0.96 | 1    | 5.00                  | 2.20 | 3    | 4.80                  | 1.18 | 2    | 4.93                  | 1.80 | 2    |
|              | Chain Website            | 6.00                  | 1.11 | 7    | 5.00                  | 1.66 | 4    | 4.67                  | 1.73 | 4    | 5.00                  | 1.43 | 1    | 4.07                  | 1.76 | 7    |
|              | Travel Website           | 5.40                  | 1.21 | 15   | 4.67                  | 1.73 | 5    | 3.67                  | 2.54 | 8    | 4.80                  | 1.49 | 2    | 4.00                  | 1.74 | 8    |
|              | Meta Search              | 5.40                  | 1.21 | 15   | 4.67                  | 1.73 | 5    | 1.67                  | 0.96 | 22   | 3.20                  | 0.76 | 9    | 3.50                  | 1.73 | 9    |
|              | Web Search               | 6.60                  | 0.50 | 2    | 5.33                  | 1.27 | 2    | 3.67                  | 2.54 | 8    | 4.80                  | 1.34 | 2    | 4.64                  | 1.80 | 4    |
|              | CRS                      | 6.20                  | 1.18 | 6    | 4.33                  | 0.48 | 7    | 4.67                  | 1.73 | 4    | 4.20                  | 1.74 | 6    | 4.21                  | 1.75 | 5    |
|              | Cor. Travel Manager      | 4.80                  | 1.74 | 20   | 1.67                  | 0.48 | 14   | 2.00                  | 1.44 | 16   | 3.00                  | 1.69 | 10   | 1.79                  | 1.02 | 24   |
|              | Ind. Travel Agent        | 4.80                  | 1.74 | 20   | 1.67                  | 0.48 | 14   | 2.00                  | 1.44 | 16   | 2.00                  | 0.91 | 23   | 2.29                  | 1.34 | 18   |
|              | Newspaper Ads.           | 4.80                  | 0.99 | 20   | 1.67                  | 0.48 | 14   | 3.00                  | 1.44 | 10   | 2.20                  | 0.99 | 19   | 2.21                  | 1.21 | 20   |
|              | Magazine Ads.            | 5.20                  | 0.99 | 18   | 1.67                  | 0.48 | 14   | 2.00                  | 1.44 | 16   | 2.00                  | 0.91 | 23   | 2.21                  | 1.15 | 20   |
|              | Radio Ads.               | 4.80                  | 0.99 | 20   | 1.67                  | 0.48 | 14   | 2.00                  | 1.44 | 16   | 2.20                  | 1.18 | 19   | 2.00                  | 0.85 | 22   |
|              | TV Ads.                  | 5.40                  | 1.21 | 15   | 1.67                  | 0.48 | 14   | 2.00                  | 1.44 | 16   | 2.20                  | 1.18 | 19   | 1.93                  | 0.80 | 23   |
|              | Web Ads.                 | 5.00                  | 0.91 | 19   | 1.67                  | 0.48 | 14   | 2.00                  | 1.44 | 16   | 2.20                  | 1.18 | 19   | 2.29                  | 1.39 | 18   |
|              | Coupon booklets          | 5.80                  | 1.18 | 11   | 1.67                  | 0.48 | 14   | 4.00                  | 2.50 | 6    | 3.40                  | 1.88 | 8    | 3.21                  | 1.21 | 13   |
|              | Travel Clubs/Web blogs   | 5.80                  | 0.99 | 11   | 1.67                  | 0.48 | 14   | 2.67                  | 1.27 | 12   | 3.00                  | 1.43 | 10   | 3.14                  | 1.25 | 14   |
|              | MKTG Literature          | 6.00                  | 1.11 | 7    | 2.67                  | 0.96 | 10   | 2.67                  | 1.27 | 12   | 3.00                  | 1.28 | 10   | 2.57                  | 1.35 | 17   |
|              | Travel Brochure          | 6.00                  | 1.11 | 7    | 2.67                  | 0.96 | 10   | 2.33                  | 1.27 | 14   | 2.40                  | 1.03 | 17   | 3.36                  | 1.35 | 10   |
|              | Travel Listserves        | 5.80                  | 1.18 | 11   | 1.67                  | 0.48 | 14   | 2.33                  | 1.27 | 14   | 2.40                  | 1.03 | 17   | 3.14                  | 1.56 | 14   |
| WOM          | 6.60                     | 0.81                  | 2    | 4.33 | 2.09                  | 7    | 6.00 | 1.44                  | 1    | 3.80 | 1.49                  | 7    | 4.71 | 1.63                  | 3    |      |

Note:

<sup>a</sup>Mean values were computed on the basis of 7-point Likert-type scale 7 (*Extremely Important*) to 1 (*Not at all Important*).

*Mid price Hotel Type:*

Relationship-Seeking Customer Segment (RSCS) considered “WOM” ( $M = 6.06$ ,  $SD = 0.94$ ) the most important source in the mid-price hotels. “Hotel Website” ( $M = 6.00$ ,  $SD = 1.50$ ) were perceived as the second important source in the mid-price hotels, followed by “Phone Call” ( $M = 5.76$ ,  $SD = 1.52$ ). Next, “Chain Website” ( $M = 5.35$ ,  $SD = 1.61$ )” and “Travel Website” ( $M = 5.35$ ,  $SD = 1.46$ ) were considered important at the same rank in the budget hotels.

In Convenience-Seeking Customer Segment (CSCS), “Phone Call” ( $M = 6.12$ ,  $SD = 1.28$ ) and “Hotel Website” ( $M = 6.12$ ,  $SD = 0.79$ ) were perceived as the most important sources in the mid price hotels. Next, “WOM” ( $M = 5.88$ ,  $SD = 0.93$ ) was evaluated importantly, followed by “Travel Website” ( $M = 5.63$ ,  $SD = 1.12$ ) and “Web Search” ( $M = 5.38$ ,  $SD = 1.33$ ) in the mid-price hotels.

Quality-Seeking Customer Segment (QSCS) considered “Hotel Website” ( $M = 5.60$ ,  $SD = 1.57$ ) the most important source in the mid-price hotels. “WOM” ( $M = 5.25$ ,  $SD = 1.52$ ) was perceived as the second important source, followed by “Phone Call” ( $M = 5.20$ ,  $SD = 1.51$ ), “E-mail” ( $M = 4.95$ ,  $SD = 1.89$ ), and “Travel Website” ( $M = 4.75$ ,  $SD = 1.61$ ) in the mid-price hotels.

Brand Image-Seeking Customer Segment (BSCS) evaluated “WOM” ( $M = 5.67$ ,  $SD = 1.18$ ) as the most significant source in the mid-price hotels. As the second important source, “Phone Call” ( $M = 5.58$ ,  $SD = 1.56$ ) and “Hotel Website” ( $M = 5.58$ ,  $SD = 1.26$ ) were considered important at the same time. Next, “Travel Website” ( $M = 5.25$ ,  $SD = 1.10$ ) and “Web Search” ( $M = 5.25$ ,  $SD = 1.49$ ) were also considered important at the same time.

Finally, Price-Seeking Customer Segment (PSCS) assessed “Phone Call” ( $M = 5.58, SD = 1.50$ ) and “WOM” ( $M = 5.58, SD = 1.58$ ) the most important sources at the same time in the mid-price hotels. “Hotel Website” ( $M = 5.38, SD = 1.32$ ) was perceived as the third important source, followed by “Hotel Website” ( $M = 4.88, SD = 1.95$ ) and “Travel Website” ( $M = 4.87, SD = 1.51$ ) in the mid-price hotels (see Table 35).

Table 35. Importance of Hotel Information Source by Mid-price Hotel

| Hotel Type      | Hotel Information Source | Cluster 1 RSCS (n=32) |      |      | Cluster 2 CSCS (n=22) |      |      | Cluster 3 QSCS (n=39) |      |      | Cluster 4 BSCS (n=31) |      |      | Cluster 5 PSCS (n=51) |      |      |
|-----------------|--------------------------|-----------------------|------|------|-----------------------|------|------|-----------------------|------|------|-----------------------|------|------|-----------------------|------|------|
|                 |                          | Mean <sup>a</sup>     | SD   | Rank | Mean <sup>a</sup>     | SD   | Rank | Mean <sup>a</sup>     | SD   | Rank | Mean <sup>a</sup>     | SD   | Rank | Mean <sup>a</sup>     | SD   | Rank |
| Mid-price Hotel | Phone Call               | 5.76                  | 1.52 | 3    | 6.12                  | 1.28 | 1    | 5.20                  | 1.51 | 3    | 5.58                  | 1.56 | 2    | 5.58                  | 1.50 | 1    |
|                 | Fax                      | 3.76                  | 2.02 | 16   | 2.38                  | 1.59 | 22   | 3.50                  | 1.54 | 13   | 4.25                  | 1.79 | 12   | 3.04                  | 1.91 | 16   |
|                 | Direct Mail              | 3.88                  | 1.94 | 14   | 3.25                  | 1.87 | 14   | 3.20                  | 1.67 | 16   | 4.33                  | 1.94 | 11   | 2.83                  | 1.55 | 22   |
|                 | Newsletter               | 4.00                  | 2.04 | 11   | 2.00                  | 0.87 | 23   | 2.75                  | 1.41 | 21   | 3.42                  | 1.66 | 22   | 2.42                  | 1.23 | 24   |
|                 | E-mail                   | 5.12                  | 2.15 | 8    | 4.88                  | 1.85 | 8    | 4.95                  | 1.89 | 4    | 4.67                  | 2.11 | 8    | 4.88                  | 1.95 | 4    |
|                 | Hotel Website            | 6.00                  | 1.50 | 2    | 6.12                  | 0.79 | 1    | 5.60                  | 1.57 | 1    | 5.58                  | 1.26 | 2    | 5.38                  | 1.32 | 3    |
|                 | Chain Website            | 5.35                  | 1.61 | 4    | 5.25                  | 1.31 | 6    | 4.65                  | 1.69 | 6    | 5.25                  | 1.89 | 4    | 4.08                  | 1.73 | 8    |
|                 | Travel Website           | 5.35                  | 1.46 | 4    | 5.63                  | 1.12 | 4    | 4.75                  | 1.61 | 5    | 5.25                  | 1.10 | 4    | 4.87                  | 1.51 | 5    |
|                 | Meta Search              | 4.12                  | 1.82 | 9    | 3.87                  | 2.04 | 9    | 3.45                  | 2.09 | 14   | 4.08                  | 1.90 | 16   | 3.37                  | 1.89 | 10   |
|                 | Web Search               | 5.18                  | 1.51 | 7    | 5.38                  | 1.33 | 5    | 4.45                  | 1.72 | 7    | 5.25                  | 1.49 | 4    | 4.54                  | 1.81 | 6    |
|                 | CRS                      | 5.24                  | 1.77 | 6    | 5.25                  | 1.49 | 6    | 3.80                  | 1.51 | 9    | 4.83                  | 1.58 | 7    | 4.54                  | 1.83 | 6    |
|                 | Cor. Travel Manager      | 3.47                  | 1.89 | 21   | 1.88                  | 0.79 | 24   | 2.90                  | 1.71 | 18   | 4.25                  | 1.65 | 12   | 3.04                  | 1.49 | 16   |
|                 | Ind. Travel Agent        | 3.47                  | 2.18 | 21   | 2.50                  | 1.01 | 20   | 2.60                  | 1.50 | 23   | 4.67                  | 1.50 | 8    | 3.17                  | 1.65 | 13   |
|                 | Newspaper Ads.           | 3.53                  | 1.89 | 19   | 3.38                  | 1.51 | 12   | 2.85                  | 1.77 | 20   | 3.33                  | 1.50 | 23   | 2.96                  | 1.34 | 18   |
|                 | Magazine Ads.            | 3.71                  | 1.78 | 17   | 3.00                  | 1.67 | 15   | 2.70                  | 1.59 | 22   | 3.75                  | 1.60 | 18   | 2.96                  | 1.43 | 18   |
|                 | Radio Ads.               | 3.59                  | 1.65 | 18   | 2.50                  | 1.13 | 20   | 2.35                  | 1.53 | 24   | 3.17                  | 1.53 | 24   | 2.92                  | 1.42 | 20   |
|                 | TV Ads.                  | 3.94                  | 1.35 | 12   | 3.00                  | 1.42 | 15   | 2.90                  | 1.48 | 18   | 3.83                  | 1.68 | 17   | 2.88                  | 1.40 | 21   |
|                 | Web Ads.                 | 3.41                  | 1.65 | 24   | 2.87                  | 1.70 | 18   | 3.25                  | 1.79 | 15   | 3.75                  | 1.79 | 18   | 2.83                  | 1.60 | 22   |
|                 | Coupon booklets          | 4.12                  | 2.09 | 9    | 3.62                  | 1.88 | 11   | 3.85                  | 1.99 | 8    | 4.50                  | 1.86 | 10   | 3.25                  | 1.74 | 11   |
|                 | Travel Clubs/Web blogs   | 3.47                  | 2.13 | 21   | 2.87                  | 1.70 | 18   | 3.10                  | 1.79 | 17   | 3.67                  | 1.76 | 20   | 3.08                  | 1.61 | 15   |
|                 | MKTG Literature          | 3.88                  | 1.97 | 14   | 3.37                  | 1.81 | 13   | 3.65                  | 1.99 | 12   | 3.67                  | 1.25 | 20   | 3.12                  | 1.51 | 14   |
|                 | Travel Brochure          | 3.94                  | 1.93 | 12   | 3.87                  | 1.78 | 9    | 3.70                  | 1.91 | 10   | 4.17                  | 1.47 | 14   | 3.42                  | 1.76 | 9    |
|                 | Travel Listserves        | 3.53                  | 1.89 | 19   | 3.00                  | 1.33 | 15   | 3.70                  | 1.91 | 10   | 4.17                  | 1.58 | 14   | 3.25                  | 1.81 | 11   |
| WOM             | 6.06                     | 0.94                  | 1    | 5.88 | 0.93                  | 3    | 5.25 | 1.52                  | 2    | 5.67 | 1.18                  | 1    | 5.58 | 1.58                  | 1    |      |

Note:

<sup>a</sup>Mean values were computed on the basis of 7-point Likert-type scale 7 (*Extremely Important*) to 1 (*Not at all Important*).

*High-end Hotel Type:*

Relationship-Seeking Customer Segment (RSCS) considered “Phone Call” ( $M = 6.00$ ,  $SD = 0.71$ ) the most important source in the high-end hotels. “Chain Website” ( $M = 5.63$ ,  $SD = 1.51$ ) was perceived as the second important source in the high-end hotels, followed by “Hotel Website” ( $M = 5.50$ ,  $SD = 1.67$ ). Next, “Travel Website” ( $M = 5.38$ ,  $SD = 1.12$ ) and “Corporate Travel Manager” ( $M = 5.38$ ,  $SD = 1.51$ ) were considered important at the same time in the high-end hotels.

Convenience-Seeking Customer Segment (CSCS) considered “Hotel Website” ( $M = 6.09$ ,  $SD = 1.00$ ) the most significant source in the high-end hotels. “Phone Call” ( $M = 5.45$ ,  $SD = 1.62$ ) was perceived as the second important source in the high-end hotels, followed by “Travel Website” ( $M = 5.27$ ,  $SD = 1.36$ ), “Chain Website” ( $M = 5.18$ ,  $SD = 1.27$ ), and “WOM” ( $M = 4.91$ ,  $SD = 1.51$ ) in the high-end hotels.

Quality-Seeking Customer Segment (QSCS) considered “Phone Call” ( $M = 5.73$ ,  $SD = 1.92$ ) and “WOM” ( $M = 5.73$ ,  $SD = 1.22$ ) the most important source at the same time in the high-end hotels. “Hotel Website” ( $M = 5.64$ ,  $SD = 1.56$ ) was perceived as the third important source, followed by “Chain Website” ( $M = 4.73$ ,  $SD = 1.77$ ). Next, “Travel Website” ( $M = 4.64$ ,  $SD = 1.98$ ) and “Web Search” ( $M = 4.64$ ,  $SD = 2.07$ ) were evaluated as the important sources at the same time in the high-end hotels.

Brand Image-Seeking Customer Segment (BSCS) considered “Hotel Website” ( $M = 5.64$ ,  $SD = 1.07$ ) the most significant source in the high-end hotels. “Phone Call” ( $M = 5.55$ ,  $SD = 1.68$ ) was perceived as the second important source in the high-end hotels, followed by “CRS” ( $M = 4.73$ ,  $SD = 1.87$ ), “Chain Website” ( $M = 4.55$ ,  $SD = 1.84$ ), and “Web Search” ( $M = 4.27$ ,  $SD = 1.55$ ) in the high-end hotels.



Finally, Price-Seeking Customer Segment (PSCS) considered “WOM” ( $M = 5.70$ ,  $SD = 1.35$ ) the most significant source in the high-end hotels. “Hotel Website” ( $M = 5.40$ ,  $SD = 1.57$ ) was perceived as the second important source in the high-end hotels, followed by “E-mail” ( $M = 5.20$ ,  $SD = 2.05$ ), “Web Search” ( $M = 5.10$ ,  $SD = 1.59$ ), and “Travel Website” ( $M = 4.80$ ,  $SD = 1.90$ ) in the high-end hotels (see Table 36).

Table 36. Importance of Hotel Information Source by High-end Hotel

| Hotel Type     | Hotel Information Source | Cluster 1 RSCS (n=32) |      |      | Cluster 2 CSCS (n=22) |      |      | Cluster 3 QSCS (n=39) |      |      | Cluster 4 BSCS (n=31) |      |      | Cluster 5 PSCS (n=51) |      |      |
|----------------|--------------------------|-----------------------|------|------|-----------------------|------|------|-----------------------|------|------|-----------------------|------|------|-----------------------|------|------|
|                |                          | Mean <sup>a</sup>     | SD   | Rank | Mean <sup>a</sup>     | SD   | Rank | Mean <sup>a</sup>     | SD   | Rank | Mean <sup>a</sup>     | SD   | Rank | Mean <sup>a</sup>     | SD   | Rank |
| High-end Hotel | Phone Call               | 6.00                  | 0.71 | 1    | 5.45                  | 1.62 | 2    | 5.73                  | 1.92 | 1    | 5.55                  | 1.68 | 2    | 4.40                  | 2.30 | 7    |
|                | Fax                      | 4.50                  | 1.42 | 13   | 2.73                  | 1.43 | 22   | 3.73                  | 2.15 | 9    | 2.73                  | 0.97 | 20   | 2.90                  | 2.08 | 16   |
|                | Direct Mail              | 4.75                  | 1.49 | 11   | 2.55                  | 1.31 | 24   | 3.27                  | 2.10 | 13   | 2.73                  | 1.43 | 20   | 3.30                  | 2.25 | 10   |
|                | Newsletter               | 4.50                  | 1.42 | 13   | 2.64                  | 1.50 | 23   | 2.55                  | 1.84 | 20   | 2.82                  | 1.59 | 17   | 3.20                  | 2.05 | 11   |
|                | E-mail                   | 5.00                  | 1.51 | 8    | 4.18                  | 1.96 | 8    | 4.64                  | 2.20 | 5    | 4.18                  | 1.71 | 6    | 5.20                  | 2.05 | 3    |
|                | Hotel Website            | 5.50                  | 1.67 | 3    | 6.09                  | 1.00 | 1    | 5.64                  | 1.56 | 3    | 5.64                  | 1.07 | 1    | 5.40                  | 1.57 | 2    |
|                | Chain Website            | 5.63                  | 1.51 | 2    | 5.18                  | 1.27 | 4    | 4.73                  | 1.77 | 4    | 4.55                  | 1.84 | 4    | 4.60                  | 1.75 | 6    |
|                | Travel Website           | 5.38                  | 1.12 | 5    | 5.27                  | 1.36 | 3    | 4.64                  | 1.98 | 5    | 3.73                  | 1.72 | 9    | 4.80                  | 1.90 | 5    |
|                | Meta Search              | 5.00                  | 1.42 | 8    | 4.09                  | 1.51 | 9    | 3.55                  | 1.84 | 10   | 2.91                  | 1.89 | 15   | 3.80                  | 2.19 | 8    |
|                | Web Search               | 5.50                  | 1.59 | 4    | 4.45                  | 1.31 | 7    | 4.64                  | 2.07 | 5    | 4.27                  | 1.55 | 5    | 5.10                  | 1.59 | 4    |
|                | CRS                      | 4.50                  | 1.42 | 13   | 4.55                  | 1.45 | 6    | 4.09                  | 1.74 | 8    | 4.73                  | 1.87 | 3    | 3.70                  | 2.06 | 9    |
|                | Cor. Travel Manager      | 5.38                  | 1.51 | 5    | 3.91                  | 1.57 | 10   | 2.45                  | 1.79 | 21   | 2.73                  | 1.82 | 20   | 2.40                  | 1.81 | 22   |
|                | Ind. Travel Agent        | 4.88                  | 1.98 | 10   | 3.73                  | 2.15 | 11   | 2.82                  | 1.86 | 18   | 3.45                  | 2.32 | 11   | 2.40                  | 1.81 | 22   |
|                | Newspaper Ads.           | 4.38                  | 1.74 | 17   | 3.36                  | 1.88 | 15   | 2.45                  | 1.57 | 21   | 3.18                  | 2.00 | 14   | 3.10                  | 1.71 | 12   |
|                | Magazine Ads.            | 4.50                  | 1.82 | 13   | 3.55                  | 1.73 | 12   | 2.82                  | 1.81 | 18   | 3.45                  | 2.16 | 11   | 2.90                  | 1.82 | 16   |
|                | Radio Ads.               | 4.25                  | 2.00 | 22   | 3.00                  | 1.71 | 19   | 2.45                  | 1.51 | 21   | 2.82                  | 1.91 | 17   | 2.50                  | 1.81 | 21   |
|                | TV Ads.                  | 4.38                  | 1.88 | 17   | 3.45                  | 1.57 | 13   | 2.45                  | 1.51 | 21   | 2.82                  | 1.91 | 17   | 2.70                  | 1.80 | 19   |
|                | Web Ads.                 | 4.25                  | 1.80 | 22   | 3.00                  | 1.60 | 19   | 3.18                  | 1.65 | 15   | 2.64                  | 1.78 | 24   | 2.40                  | 1.81 | 22   |
|                | Coupon booklets          | 3.87                  | 1.46 | 24   | 3.09                  | 1.84 | 18   | 3.36                  | 1.68 | 11   | 2.91                  | 1.69 | 15   | 3.10                  | 1.82 | 12   |
|                | Travel Clubs/Web blogs   | 4.37                  | 1.67 | 20   | 3.00                  | 1.55 | 19   | 3.18                  | 1.86 | 15   | 2.73                  | 1.82 | 20   | 2.70                  | 1.80 | 19   |
|                | MKTG Literature          | 4.37                  | 1.23 | 20   | 3.36                  | 1.50 | 15   | 3.27                  | 2.06 | 13   | 3.64                  | 2.28 | 10   | 2.90                  | 1.82 | 16   |
|                | Travel Brochure          | 4.63                  | 1.51 | 12   | 3.45                  | 1.57 | 13   | 3.36                  | 1.88 | 11   | 3.91                  | 1.94 | 8    | 3.10                  | 1.71 | 12   |
|                | Travel Listserves        | 4.38                  | 1.67 | 17   | 3.27                  | 1.43 | 17   | 3.18                  | 1.96 | 15   | 3.36                  | 2.02 | 13   | 3.00                  | 1.74 | 15   |
| WOM            | 5.12                     | 1.28                  | 7    | 4.91 | 1.51                  | 5    | 5.73 | 1.22                  | 1    | 4.18 | 1.96                  | 6    | 5.70 | 1.35                  | 1    |      |

Note:

<sup>a</sup>Mean values were computed on the basis of 7-point Likert-type scale 7 (*Extremely Important*) to 1 (*Not at all Important*).

### *Multidimensional Scaling –Hotel Information Sources*

Finally, MDS was conducted to visualize which of the hotel information sources were perceived as being similar by each of the market segments. By utilizing the mean and standard deviation scores of the importance of each hotel information source, this study determined the hotel information sources that are most effective for each of the CE segments. From the data set, hotel information sources were selected in the following 24 categories with the number of items in each category shown parenthetically: Phone Call (I1), Fax (I2), Direct Mail (I3), Newsletter (I4), E-mail (I5), Hotel Website (I6), Chain Website (I7), Travel Website (I8), Meta Search (I9), Web Search (I10), CRS (I11), Corporate Travel Manager (I12), Independent Travel Agent (I13), Newspaper Ads. (I14), Magazine Ads. (I15), Radio Ads. (I16), TV Ads. (I17), Web Ads. (I18), Coupon booklets (I19), Travel Clubs/Web blogs (I20), Hotel Marketing Literature (I21), Travel Brochure (I22), Travel Listserves (I23), and WOM (I24). In a MDS map of perceived similarities, this study suggested the effective marketing tools in a similar group. MDS was run by the CE-based segment and hotel type.

Measures of goodness of fit are effect size measures assessing how well the MDS model fits the data. *Stress* is a goodness of fit measure for MDS models. The smaller the stress is, the better the fit is. Others for such measures of goodness of fit are in the following: *Squared correlation index*,  $R^2$ , *Average RSQ*, and *Individual RSQ*. *Squared correlation index*,  $R^2$  is a common fit measure, with  $R^2 \geq .60$  considered acceptable fit. SPSS generates *Stress* and *Squared correlation index*,  $R^2$  as measures of goodness of fit under the label of RSQ. RSQ is simply the squared correlation of the input distances with the scaled p-space distances using MDS coordinates (Abdi, 2007). RSQ reflects the

proportion of variance of the input distance data accounted for by the scaled data or vice versa. In the following sections, the results of MDS by the CE-based segments and hotel type were described.

*Relationship-Seeking Customer Segment (RSCS):*

In the RSCS, goodness of fit is acceptable according to hotel type such as budget, mid-price, and high-end hotels. The resulting two-dimensional preference maps were shown in Figure 11. As for the budget hotels, the results of two-dimensional preference map achieved an excellent statistical fit between the input dissimilarities and the output spatial distances ( $r = 0.808$ ; stress = 0.204). It can be seen there is a “Fax-Direct Mail-Newsletter-Chain Web-CRS-Coupon-Travel Club-MKTG Literature-Brochure-Listerves (I2-3-4-7-11-19-20-21-22-23)” cluster, “Phone Call-Email-Web Search-WOM (I1-5-10-24)” cluster, and “Travel Web-Meta Search-TV Ads. (I8-9-17)” cluster. Each of these clusters was viewed similarly. “Phone Call-Email-Web Search-WOM (I1-5-10-24)” cluster is closer to the first cluster (I2-3-4-7-11-19-20-21-22-23) than the third cluster (I8-9-17). The average importance scores of each cluster may indicate that the higher the average scores, the better similar action plans group. According to the average mean scores of each cluster, it may suggest that the “I1-5-10-24” cluster ( $M = 6.65$ ,  $SD = 0.56$ ) is more effective action plans group than the other clusters: “I2-3-4-7-11-19-20-21-22-23” cluster ( $M = 5.76$ ,  $SD = 1.41$ ); and “I8-9-17” cluster ( $M = 5.4$ ,  $SD = 1.21$ ).

As for the mid-price hotels, the MDS map was acceptable as an excellent statistical fit ( $r=0.832$ ; stress=0.215). It can be seen there is an “Ind. Travel Agent-News Ads.-Travel Club-MKTG Literature-Brochure-Listerves (I13-14-20-21-22-23)” cluster and “Cor. Travel Manager-Magazine Ads.-Web Ads. (I12-15-18)” cluster. Each of these

clusters was viewed similarly. According to the average mean scores of each cluster, it may suggest that the “I13-14-20-21-22-23” cluster ( $M = 3.64$ ,  $SD = 2.00$ ) is more effective action plans group than the “I12-15-18” cluster ( $M = 3.53$ ,  $SD = 1.77$ ).

The MDS map in the high-end hotels was also achieved an excellent statistical fit ( $r = 0.881$ ; stress = 0.206). It can be seen there is a single big cluster, “Fax-Newsletter-Hotel Web-Chain Web-Travel Web-Meta Search-Web Search-CRS-Cor. Travel Manager-Ind. Travel Agent-News Ads.-Magazine Ads.-Radio Ads.-TV Ads.-Web Ads.-Travel Club-MKTG Literature- Brochure-Travel Listserves (I2-4-6-7-8-9-10-11-12-13-14-15-16-17-18-20-21-22-23).” This cluster was viewed similarly. The average importance scores of this cluster is 4.77 ( $M$ ) and 1.58 ( $SD$ ).

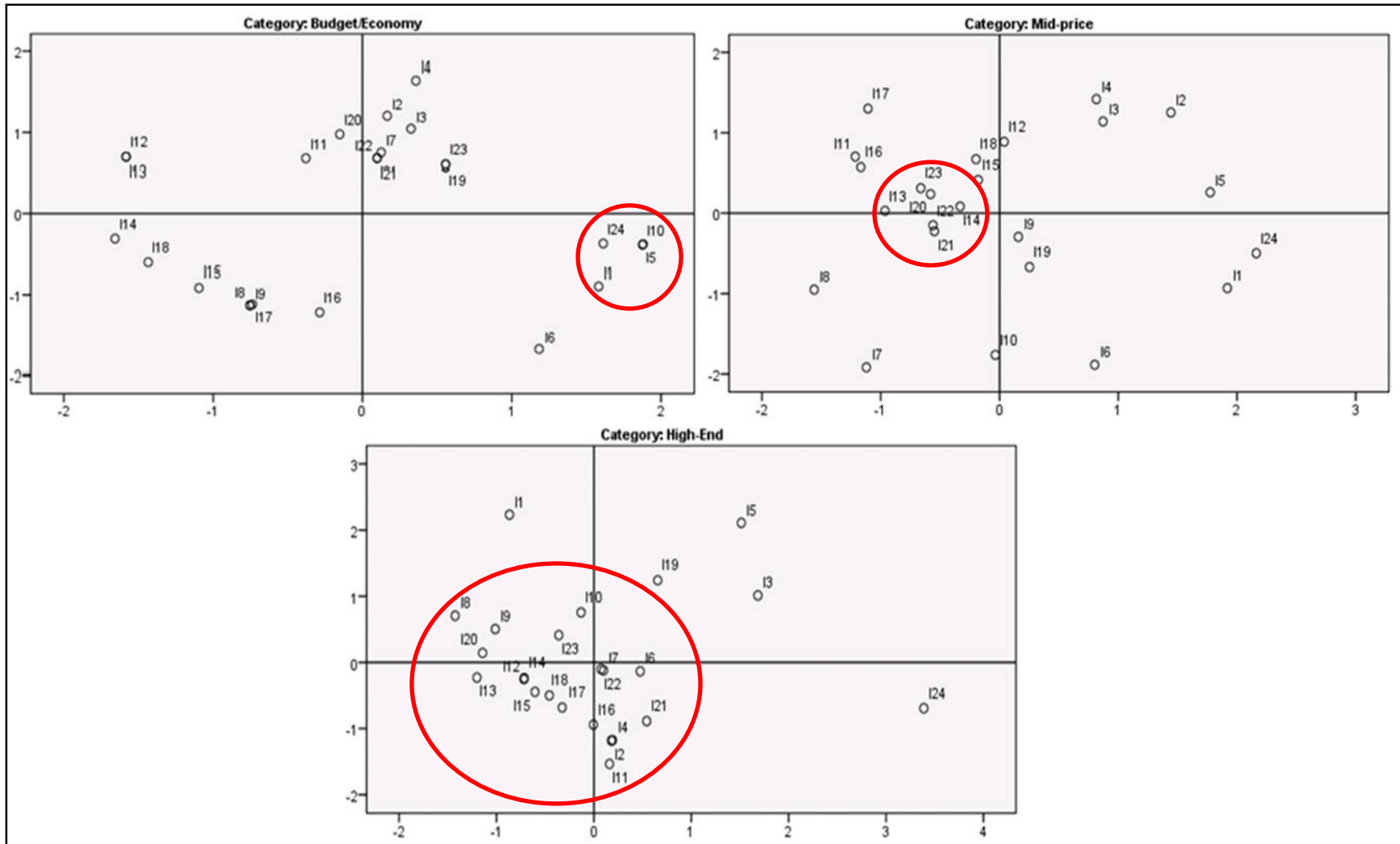


Figure 11. RSCS\_MDS Map of Hotel Information Sources by Hotel Type

*Convenience-Seeking Customer Segment (CSCS):*

In the CSCS, goodness of fit is acceptable according to hotel type such as budget, mid-price, and high-end hotels. The resulting two-dimensional preference maps are shown in Figure 12. As for the budget hotels, the results of two-dimensional preference map achieved an excellent statistical fit between the input dissimilarities and the output spatial distances ( $r = 0.908$ ; stress = 0.203). It can be seen that there is a “Direct Mail-Cor. Travel Manager-Ind. Travel Agent-News Ads. (I3-12-13-14)” cluster, “Hotel Web-Travel Web-Meta Search-CRS-MKTG Literature-Brochure (I6-8-9-11-21-22)” cluster, and “Phone Call-Chain Web-Web Search-WOM (I1-7- 10- 24)” cluster. Each of these clusters was viewed similarly. “I1-7-10-24” cluster is closer to the second cluster (I6-8-9-11-21-22) than the first cluster (I3-12-13-14). The axes are more difficult to interpret than the groups, but it might be said there are two axes: the horizontal and vertical axes. In the budget hotel, it might be said there is the horizontal “I3-12-13-14” versus “I1-7-10-24” axis. The average importance scores of each cluster may indicate that the higher the average scores, the better similar action plans group. According to the average mean scores of each cluster, it may suggest that the “I1-7-10-24” cluster ( $M = 5.00$ ,  $SD = 1.57$ ) is more effective action plans group than the other clusters: “I3-12-13-14” cluster ( $M = 1.67$ ,  $SD = 0.48$ ); and “I6-8-9-11-21-22” cluster ( $M = 4.11$ ,  $SD = 1.13$ ).

As for the mid-price hotels, the MDS map was acceptable as an excellent statistical fit ( $r = 0.857$ ; stress = 0.174). It can be seen there is a “Newsletter-Cor. Travel Manager-Ind. Travel Agents-Magazine Ads.-Radio Ads.-Web Ads.-Travel Club-MKTG Literature (I4-12-13-15-16-18-20-21)” cluster, “News Ads.-TV Ads.-Travel Listerves (I14-17-23)” cluster, and “Chain Web-Travel Web-Web Search (I7-8-10)” cluster. Each

of these clusters was viewed similarly. “I14-17-23” cluster is closer to the first cluster (I4-12-13-15-16-18-20-21) than the third cluster (I7-8-10). It might be said there is the horizontal “I4-12-13-15-16-18-20-21” versus “I7-8-10” axis. According to the average mean scores of each cluster, it may suggest that the “I7-8-10” cluster ( $M = 5.42$ ,  $SD = 1.25$ ) is more effective action plans group than the other clusters: “I4-12-13-15-16-18-20-21” cluster ( $M = 2.62$ ,  $SD = 1.34$ ); and “I14-17-23” cluster ( $M = 3.13$ ,  $SD = 1.42$ ).

The MDS map in the high-end hotels was also achieved an excellent statistical fit ( $r = 0.731$ ; stress = 0.243). It can be seen there is a single big cluster, “News Ads.-Magazine Ads.-Radio Ads.-TV Ads.-Web Ads.-Coupon-Travel Club-MKTG Literature-Brochure-Travel Listserves (I14-15-16-17-18-19-20-21-22-23).” This cluster was viewed similarly. The average importance scores of this group is 3.25 ( $M$ ) and 1.64 ( $SD$ ).



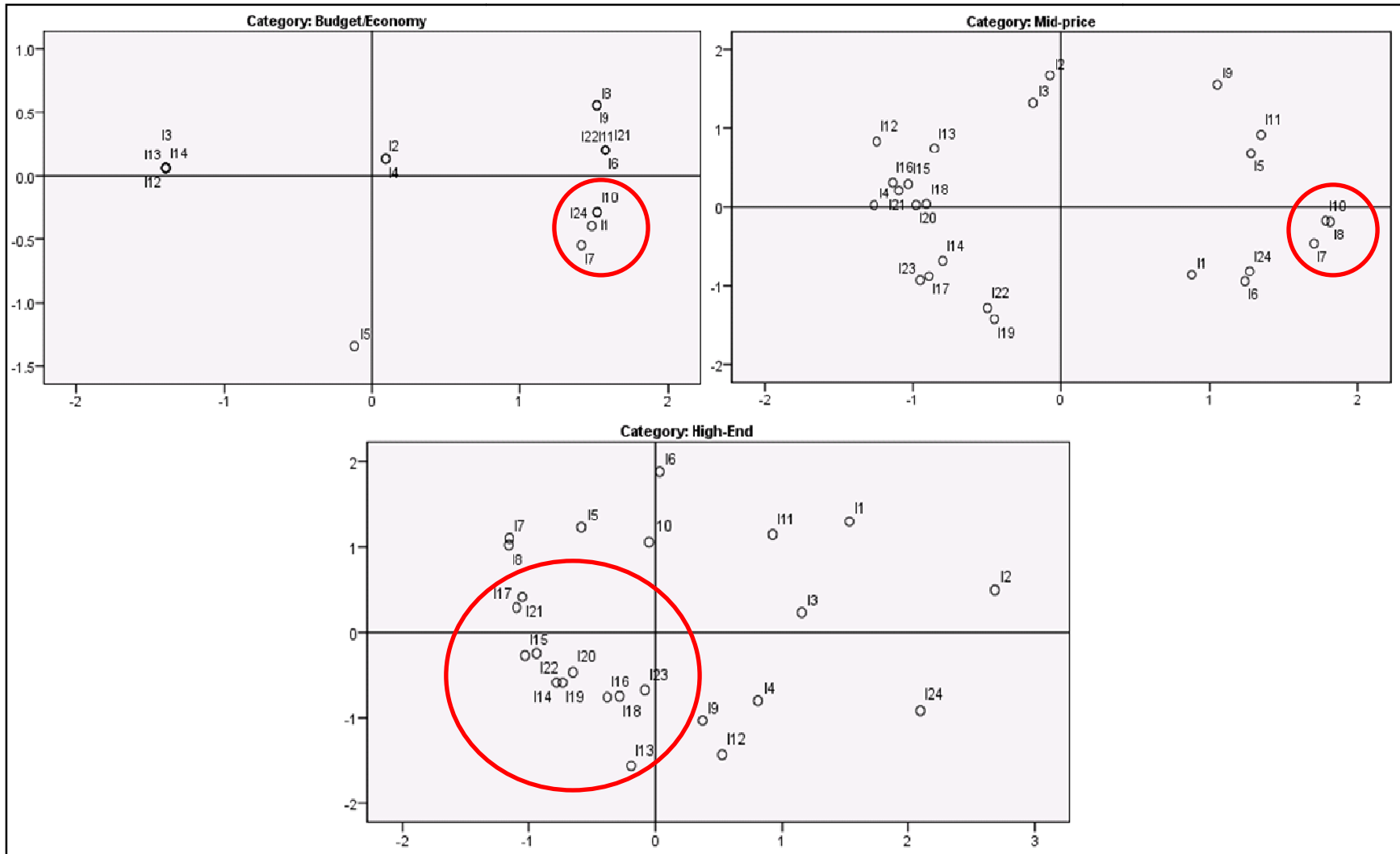


Figure 12. CSCS\_MDS Map of Hotel Information Sources by Hotel Type

*Quality-Seeking Customer Segment (QSCS):*

In the QSCS, goodness of fit is acceptable according to hotel type such as budget, mid-price, and high-end hotel. The resulting two-dimensional preference maps were shown in Figure 13. In the budget hotels, the results of two-dimensional preference map achieved an excellent statistical fit between the input dissimilarities and the output spatial distances ( $r = 0.926$ ; stress = 0.123). It can be seen there is an “Email-Travel Web-Web Search (I5-8-10)” cluster, “Fax-Direct Mail-Meta Search-Cor. Travel Manager (I2-3-9-12)” cluster, and “Phone Call-Travel Club-MKTG Literature (I1-20-21)” cluster. Each of these clusters was viewed similarly. “I2-3-9-12” cluster is closer to the third cluster (I1-20-21) than the first cluster (I5-8-10). It might be said there is the horizontal “I5-8-10” versus “I1-20-21” axis. The average importance scores of each cluster may indicate that the higher the average scores, the better similar action plans group. According to the average mean scores of each cluster, it may suggest that the “I5-8-10” cluster ( $M = 4.45$ ,  $SD = 1.97$ ) is more effective action plans group than the other clusters: “I2-3-9-12” cluster ( $M = 1.75$ ,  $SD = 1.08$ ); and “I1-20-21” cluster ( $M = 3.11$ ,  $SD = 1.68$ ).

As for the mid-price hotels, the MDS map was acceptable as an excellent statistical fit ( $r = 0.658$ ; stress = 0.267). It can be seen there is an “Ind. Travel Agents-Radio Ads.-TV Ads.-Travel club (I13-16-17-20)” cluster and “CRS-Cor. Travel Manger-News Ads.-Magazine Ads. (I11-12-14-15)” cluster. Each of these clusters was viewed similarly. The second cluster (I11-12-14-15) is close to the first cluster (I13-16-17-20). According to the average mean scores of each cluster, it may suggest that the “I11-12-14-15” cluster ( $M = 3.06$ ,  $SD = 1.65$ ) is more effective action plans group than the “I13-16-17-20” cluster ( $M = 2.74$ ,  $SD = 1.58$ ).

The MDS map in the high-end hotels was also achieved an excellent statistical fit ( $r = 0.737$ ; stress = 0.251). It can be seen there is “Fax-Direct Mail-Newsletter-Coupon (I2-3-4-19)” cluster as well as “Ind. Travel Agent-News Ads.-Magazine Ads.-Radio Ads.-TV Ads.-MKTG Literature (I13-14-15-16-17-21)” cluster. Each of these clusters was viewed similarly. According to the average mean scores of each cluster, it may suggest that the “I2-3-4-19” cluster ( $M = 3.23$ ,  $SD = 1.94$ ) is more effective action plans group than the “I13-14-15-16-17-21” cluster ( $M = 2.714$ ,  $SD = 1.72$ ).

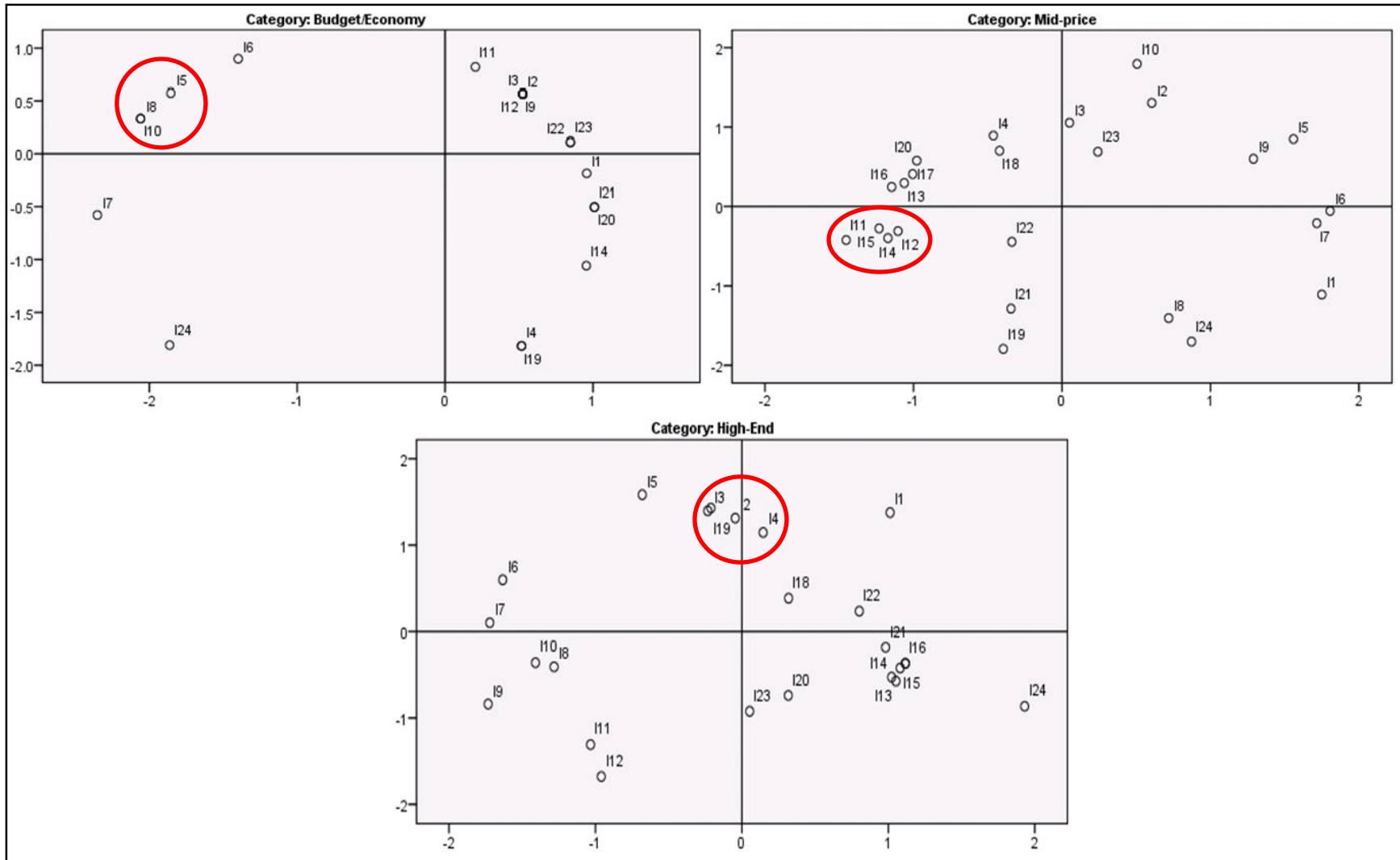


Figure 13. QSCS\_MDS Map of Hotel Information Sources by Hotel Type

*Brand Image-Seeking Customer Segment (BSCS):*

In the BSCS, goodness of fit is acceptable according to hotel type such as budget, mid-price, and high-end hotel. The resulting two-dimensional preference maps were shown in Figure 14. As for the budget hotels, the results of two-dimensional preference map achieved an excellent statistical fit between the input dissimilarities and the output spatial distances ( $r = 0.926$ ; stress = 0.153). It can be seen there is a “Fax-Direct Mail-News letter-Email-Ind. Travel Agent-News Ads.-Magazine Ads.-Radio Ads.-TV Ads.-Brochure-Travel Listserves (I2-3-4-5-13-14-15-16-17-22-23)” cluster, “Hotel Web-Chain Web-Travel Web (I6-7-8)” cluster, and “Web Search-CRS-Cor. Travel Manager-Travel Club-MKTG Literature (I10-11-12-20-21)” cluster. Each of these clusters was viewed similarly. “I6-7-8” cluster is closer to the third cluster (I10-11-12-20-21) than the first cluster (I2-3-4-5-13-14-15-16-17-22-23). The average importance scores of each cluster may indicate that the higher the average scores, the better similar action plans group. According to the average mean scores of each cluster, the results may suggest that the “I6-7-8” cluster ( $M = 4.87$ ,  $SD = 1.37$ ) is more effective action plans group than the other clusters: “I2-3-4-5-13-14-15-16-17-22-23” cluster ( $M = 2.4$ ,  $SD = 1.30$ ); and “I10-11-12-20-21” cluster ( $M = 3.6$ ,  $SD = 1.50$ ).

In the mid-price hotels, the MDS map was acceptable as an excellent statistical fit ( $r = 0.716$ ; stress = 0.234). It can be seen there is a “Travel Web-Meta Search-Travel Club-MKTG Literature-Brochure-Travel Listserves (I8-9-20-21-22-23)” cluster, “CRS-Cor. Travel Agent-Ind. Travel Agent-WOM (I11-12-13-24)” cluster, “News Ads.-Magazine Ads.-Radio Ads.-TV Ads.-Web Ads. (I14-15-16-17-18)” cluster, and “Phone Call-Fax-Direct Mail-Newsletter-Email-Hotel Web-Chain Web (I1-2-3-4-5-6-7)” cluster.

Each of these clusters was viewed similarly. The axes are more difficult to interpret than the groups, but it might be said there are two axes: the horizontal and vertical axes. In mid-price hotel, it can be seen as the horizontal “I11-12-13-24” versus “I14-15-16-17-18” axis. According to the average mean scores of each cluster, it may suggest that the “I11-12-13-24” cluster ( $M = 4.86, SD = 1.48$ ) is more effective action plans group than the other clusters: “I8-9-20-21-22-23” cluster ( $M = 4.17, SD = 1.51$ ), “I14-15-16-17-18” cluster ( $M = 3.57, SD = 1.62$ ), and “I1-2-3-4-5-6-7” cluster ( $M = 4.73, SD = 1.74$ ).

The MDS map in the high-end hotels was also achieved an excellent statistical fit between the input dissimilarities and the output spatial distances ( $r = 0.833$ ; stress = 0.248). It can be seen there is “Direct Mail-Newsletter-Cor. Travel Manager-Ind. Travel Agent-New Ads.-Magazine Ads.-Radio Ads.-TV Ads.-Web Ads.-Coupon-Travel Club-Travel Listserves-WOM (I3-4-12-13-14-15-16-17-18-19-20-23-24)” cluster, “Web Search-MKTG Literature-Brochure (I10,21,22)” cluster, and “Hotel Web-Chain Web-CRS (I6-7-11).” Each of these clusters was viewed similarly. “I10-21-22” cluster is closer to the third cluster (I6-7-11) than the first cluster (I3-4-12-13-14-15-16-17-18-19-20-23-24). According to the average mean scores of each cluster, it may suggest that the “I6-7-11” cluster ( $M = 4.97, SD = 1.59$ ) is more effective action plans group than the other clusters: “I3-4-12-13-14-15-16-17-18-19-20-23-24” cluster ( $M = 3.06, SD = 1.88$ ) and “I10-21-22” cluster ( $M = 3.94, SD = 1.92$ ).

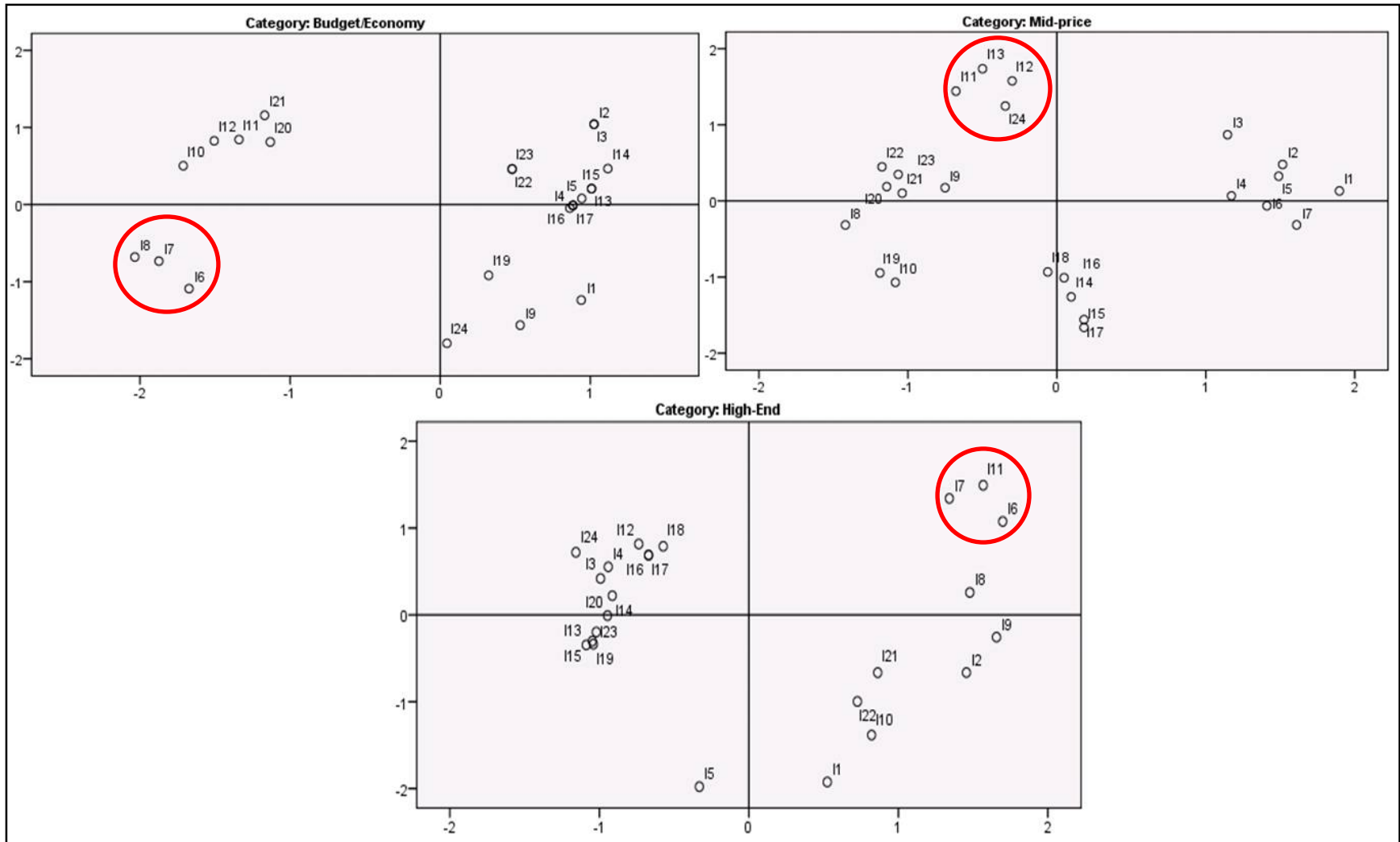


Figure 14. BSCS\_MDS Map of Hotel Information Sources by Hotel Type

*Price-Seeking Customer Segment (PSCS):*

In the PSCS, goodness of fit is acceptable according to hotel type such as budget, mid-price, and high-end hotel. The resulting two-dimensional preference maps were shown in Figure 15. As for the budget hotels, the results of two-dimensional preference map achieved an excellent statistical fit between the input dissimilarities and the output spatial distances ( $r = 0.746$ ; stress = 0.227). It can be seen there are “News Ads.-Magazine Ads.-Radio Ads.-TV Ads.-Web Ads. (I14-15-16-17-18)” cluster, “Email-Hotel Web-Chain Web-Travel Web-Meta Search (I5-6-7-8-9)” cluster, “Phone Call-Direct Mail-Web Search-CRS-Travel Club (I1-3-10-11-20)” cluster, and “Newsletter-MKTG Literature-Brochure (I4-21-22)” cluster. Each of these clusters was viewed similarly. “I4-21-22” cluster is closer to the third cluster (I1-3-10-11-20) than the other clusters. The average importance scores of each cluster may indicate that the higher the average scores, the better similar action plans group. According to the average mean scores of each cluster, it may suggest that the “I5-6-7-8-9” cluster ( $M = 4.13$ ,  $SD = 1.78$ ) and “I1-3-10-11-20” cluster ( $M = 4.13$ ,  $SD = 1.61$ ) are more effective action plans groups than the other clusters: “I14-15-16-17-18” cluster ( $M = 2.13$ ,  $SD = 1.08$ ) and “I4-21-22” cluster ( $M = 2.91$ ,  $SD = 1.34$ ).

In the mid-price hotels, the MDS map was acceptable as an excellent statistical fit between the input dissimilarities and the output spatial distances ( $r = 0.755$ ; stress = 0.262). It can be seen there is a “Newsletter-Cor. Travel Manager-News Ads.-Magazine Ads.-TV Ads.-Web Ads.-MKTG Literature-Brochure-Travel Listserves (I4-12-14-15-17-18-21-22-23)” cluster and “Chain Web-Meta Search-CRS (I7-9-11)” cluster. Each of these clusters was viewed similarly. According to the average mean scores of each



cluster, it may suggest that the “I7-9-11” cluster ( $M = 4.00$ ,  $SD = 1.82$ ) is more effective action plans groups than the “I4-12-14-15-17-18-21-22-23” cluster ( $M = 2.99$ ,  $SD = 1.51$ ).

The MDS map in the high-end hotels was also achieved an excellent statistical fit between the input dissimilarities and the output spatial distances ( $r = 0.784$ ; stress = 0.260). It can be seen there is “Fax-Newsletter-Cor. Travel Manager-Ind. Travel Agent-Magazine Ads.-Radio Ads.-TV Ads.-Web Ads.-Travel Club-MKTG Literature-Brochure (I2-4-12-13-15-16-17-18-20-21-22)” cluster and “Phone Call-Email-Hotel Web (I1-5-6)” cluster. Each of these clusters was viewed similarly. According to the average mean scores of each cluster, it may suggest that the “I1-5-6” cluster ( $M = 5.00$ ,  $SD = 1.97$ ) is more effective action plans groups than the “I2-4-12-13-15-16-17-18-20-21-22” cluster ( $M = 2.74$ ,  $SD = 1.85$ ).

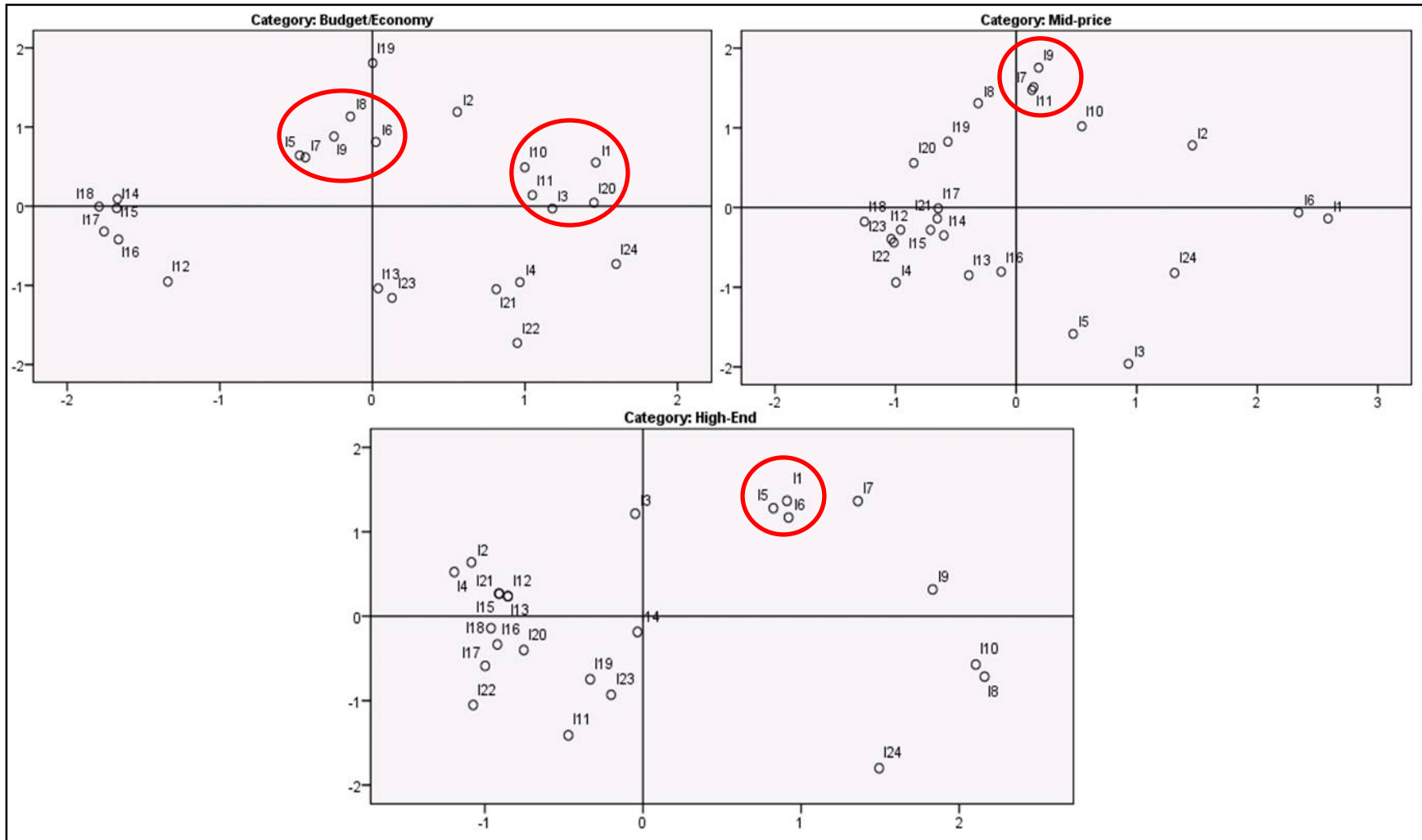


Figure 15. PSCS\_MDS Map of Hotel Information Sources by Hotel Type

## CHAPTER V

### CONCLUSION

#### **Introduction**

This chapter provides a summary of findings in Phases I and II, and provides practical implications along with a discussion of potential topics for future research. The discussion and managerial and theoretical implications are considered separately in two sections. The first section discusses the findings of the qualitative study. The second section discusses the outcome of three research propositions. In each section, a summary of key findings is provided, and then contributions to management practice and theory are discussed. Finally, limitations of this study and future topics are presented.

#### **Phase I**

##### **Discussion and Implications**

This section discusses the key findings of the qualitative study. The focus group was employed to determine the primary sub-drivers of Customer Equity (CE) in the hotel industry. In this study, the focus group discussions identified the primary attributes of CE that influence the selection of a hotel. The five key CE drivers, *Convenience*, *Quality*, *Price*, *Brand Image*, and *Relationship* were observed in the hotel industry as the most significant CE drivers for selecting a hotel. These findings

support previous studies that reported that the key CE drivers were value, brand, and relationship equity (Rust et al., 2000; Lemon et al., 2001; Severt, 2007). In previous studies, value equity constituted of convenience, quality, and price drivers. However, this current research's intent was to identify the five key CE drivers for the hotel industry. The research consequently found that convenience, quality, and price drivers were one of the key drivers respectively in the hotel industry rather than being a sub driver in other industries.

Phase I made an empirical contribution by identifying the primary five CE drivers in the hotel industry. The focus of previous studies on CE were in the airline industry (Rust et al., 2000; Rust, Lemon, & Zeithaml, 2004), the convention industry (Severt, 2007), and the financial industry (Hanssens et al., 2008). Voorhees (2006) collected data from different types of industries including airline, hotel, grocery, and restaurant and his study was also based on previous CE drivers found by Rust, Lemon, and Zeithaml (2004). Unlike previous studies, this current research focused on the hotel industry and determined the five CE drivers.

### **Limitation and Future studies**

The researcher conducted the only one focus group study for this research. The result of the qualitative study was based upon this single focus group study. Thus, the results might not have covered all the divergent views of consumers' perception and preferences for selecting a hotel in all regions. Ideally, future studies should conduct at least four focus group studies based on geographic regions (e.g., West, Midwest, South, and Northeast in the USA). Also, validation is another limitation for the content analysis.

Consensus was used instead. The focus group had a bias because customers were not included.

Alternatively, other characteristics such as the types of hotels stayed at, the payment source, or the purpose of visit could also be used. Such a study will better capture the nuances of a divergent group of customers' idiosyncrasies for choosing a hotel.

## **Phase II**

The first research question was:

*“What are the core Customer Equity drivers for segmentation of the hotel industry?”*

### **Discussion and Implications**

To answer the first research question, the results of the qualitative study regarding the CE drivers were used to build the questionnaire in order to segment customers in terms of the CE drivers. As a result of factor analysis, this study confirmed statistically that CE was comprised of the five key CE drivers in the hotel industry - “Convenience,” “Quality,” “Price,” “Brand Image,” and “Relationship.” Also, in terms of the CE drivers, the customers were segmented into five clusters: “cluster 1: *Relationship-Seeking Customer Segment (RSCS)*,” “cluster 2: *Convenience-Seeking Customer Segment (CSCS)*,” “cluster 3: *Quality-Seeking Customer Segment (QSCS)*,” “cluster 4: *Brand Image-Seeking Customer Segment (BSCS)*,” and “cluster 5: *Price-Seeking Customer Segment (PSCS)*.” The first segment considered “*Relationship*” the most important weighted driver of the five CE drivers. The second segment revealed that “*Convenience*” was the key driver; the third segment revealed “*Quality*” as the primary driver; the fourth segment revealed “*Brand Image*” as the significant driver; and the fifth segment revealed

“Price” as the main driver, respectively. The five-clustering solution was proper for organizing the data concerning customers’ CE drivers they sought. In conclusion, these findings confirmed that CE consisted of the five key CE drivers in the hotel industry; thus, customers were also divided into the five groups in terms of the five CE drivers.

Additionally, according to the results of non-weighted importance scores for the CE drivers, customers in the *Relationship-Seeking Customer Segment* (RSCS) considered all five factors (i.e., convenience, relationship, quality, brand image, and price) important compared to other segments for selecting a hotel.

The current study provides a valid solution for segmenting customers more precisely unlike the traditional segmentation method. The CE-based segmentation supported the necessity of customization (Rust & Kannan, 2003), customer-centered management (Rust, Lemon, Zeithaml, 2004), and finer segmentation (Kara & Kaynak, 1997). The CE-based segmentation approach added a better understanding of the precise needs of an individual customer and his/her patterns for purchasing. Therefore, the CE-based segmentation approach contributed to managerial as well as theoretical foundations by identifying means for measuring marketing effectiveness.

### **Limitation and Future studies**

The hotel patronizing characteristics of frequent travelers may be different than that of an average hotel customer. Small sample size for the luxury hotels was another limitation. Thus, this might affect the results of cross tabulation which were not significant in terms of socio-demographic characteristics. If future studies collect much

larger data, the results of statistical analyses may not be rejected significantly. Future research should be conducted by type of payment (i.e., personal and business funds).

### ***Proposition 1***

#### **Discussion and Implications**

This section discusses the key findings of the analyses that tested hypotheses 1, 2, 3, 4, and 5 of the first research proposition. Consistent with the findings of Phase I and the results of the CE-based segmentation in Phase II, the results of Proposition 1 indicated that the CE drivers are dependent on the CE-based segments and hotel type. The CE-based segments were *Relationship-Seeking Customer Segment (RSCS)*, *Convenience-Seeking Customer Segment (CSCS)*, *Quality-Seeking Customer Segment (QSCS)*, *Brand Image-Seeking Customer Segment (BSCS)*, and *Price-Seeking Customer Segment (PSCS)*.

Considering the RSCS for the budget hotels, the price driver is more important than brand image and relationship drivers. This observation seemed appropriate because customers in the budget hotels considered price more important than other drivers. On the other hand, considering the RSCS for the mid-price hotels, quality, price, and relationship drivers are more important than the brand image driver. This observation seemed especially appropriate because customers in the mid-price hotels considered the relationship driver important as the segment pursuing “relationship.” In addition, customers in the mid-price hotels considered quality and price drivers to be as important as the relationship driver.

Considering the CSCS, the convenience driver was the most important driver for all hotel types. This observation seemed appropriate because of this segment identifying “convenience.” Moreover, customers staying in the mid-price and high-end hotels of the CSCS considered quality and price drivers more important than brand image and relationship drivers. These results confirm the notion that customers staying in mid-price and high-end hotels also considered quality and price drivers as being important.

As for the QSCS, the quality driver was the most important driver for all hotel types. This observation seemed appropriate because of this segment identifying “quality.” Additionally, customers of the budget hotels perceived the price driver to be more important than convenience, brand image, and relationship drivers. This observation also seemed appropriate because customers in the budget hotels considered price important compared to other hotel types. Also, customers staying in the mid-price hotels of the QSCS considered convenience and price drivers more important than brand image and relationship drivers. The interesting finding was that customers in the high-end hotels also considered the price driver as being more important than the brand image driver although they were staying at the high-end hotels.

Considering the BSCS for the budget hotels, the relationship driver was less important than convenience, quality, and price drivers. These results revealed that customers of the budget hotels also considered these three drivers important despite this segment identifying “brand image.” On the other hand, customers of the mid-price hotel proposed that the brand image driver was more important than convenience and relationship drivers. This observation seemed especially appropriate because of this segment identifying “brand image.” Additionally, the quality driver was also considered



more important than convenience and relationship drivers to customers of the mid-price hotels. Of particular the interesting finding was that customers of the mid-price hotels considered the price driver more important than the relationship driver. Considering the BSCS for the high-end hotels, the relationship driver was the least important. This observation seemed interesting because customers of the high-end hotels considered the relationship driver less important than other drivers, despite this segment pursuing “brand image.” Finally, considering the BSCS for the luxury hotels, convenience, quality, and brand image drivers were more important than the price driver. This observation seemed appropriate because they considered the price driver unimportant as the group pursuing “brand image.” Moreover, they considered convenience and quality drivers more important than price and relationship drivers.

Finally, considering the PSCS, the price driver was the most important driver for all hotel types. This observation seemed appropriate because of this segment identifying “price.” Additionally, customers staying in all hotel types proposed that convenience and quality drivers were more important than brand image and relationship drivers. These findings revealed that this segment was most affected by the price driver, and brand image and relationship drivers were unimportant.

These findings verified the notion that different segments of customers based on the CE drivers have different values in terms of the five CE drivers. This approach of the CE-based segmentation provided new insight into how consumers form their importance opinion about the CE drivers depending on the five CE segments. The results provide a few implications for marketing managers. These meaningful findings suggest that hotel managers should be advised to segment customers in terms of Customer Equity so that

they can understand customers' specific needs at a deeper level. This deeper understanding of customers may assist hotels to develop more customized services in order to better meet the needs of their customers. Ultimately, the customized services based on the importance of the CE drivers may assist to maximize a hotels' CE in terms of each of hotel type.

Additionally, to compare the importance of the CE drivers, a part-worth and a relative weighted importance scores were calculated for each CE driver. By doing this, the results took into account the relative importance of the drivers that individual respondents assigned and thus may lead to more accurate results. This study statistically tested the notion that there were significant differences between the CE drivers depending on the CE-based segments and hotel type.

### **Limitation and Future Studies**

This study has a few limitations regarding participants of this study and the sample size of hotel type. First, this study collected data from frequent travelers in the United States only since all the respondents to the survey were obtained from a commercially available database of frequent travelers in the USA. The hotel patronizing characteristics of frequent travelers may be different than that of an average hotel customer. Thus, the results may not be generalized in the hotel industry.

Second, the sample size of the luxury hotels was small, so the results of the luxury hotel sector in two segments, CSCS and PSCS were not presented. Thus, this study could not obtain any significant results for the luxury hotels within the CSCS and the PSCS. This study just concluded that there were statistically significant differences between

budget, mid-price, and high-end hotels within the CE-based segments. This study could not compare the significant differences between the luxury hotels and other hotel types. If future studies collected larger sample of data for the luxury hotels, the results of the difference between all hotel types would be more reliable. In particular, these findings may assist managers in the luxury hotels to develop customized services for their customers.

### ***Proposition 2***

The second research question was:

*“How do the CE-based customer segments respond to marketing efforts?”*

### **Discussion and Implications**

This section discusses the key findings of the analyses that tested hypotheses 6, 7, 8, 9, and 10 of the second research proposition. The results of the regression model in Conjoint Analysis for Proposition 2 indicated that, considering the CE segments and hotel type, there were statistically significant relationships between each CE driver and the market responsiveness in terms of three dependent variables. These dependent variables were the probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to stay as key components to affect a hotel’s CE. Also, this study controlled for funding sources such as personal and business funds. Thus, all results were also presented by funding sources.

First, in the case of using personal funds of the Relationship-Seeking Customer Segment (RSCS), “*convenience driver* (above expected)” for the mid-price hotels was

responsive to the probability of brand switching. “*Brand image driver (above expected)*” for the high-end hotels was responsive to the probability of brand switching.

Convenience and brand image drivers influenced the decision of brand switching to customers in the mid-price and high-end hotels respectively. Moreover, “*brand image driver (above expected)*” for the budget hotels was responsive to the room rate. “*Price driver (above expected)*” for the high-end hotels was responsive to the room rate. Brand image and price drivers influenced the room rate they are willing to stay in the budget and high-end hotels respectively.

In the case of using business funds for the Relationship-Seeking Customer Segment (RSCS), “*brand image driver (above expected)*” for the budget hotels was responsive to the probability of brand switching. “*Convention drivers (as expected and above expected)*” for the high-end hotels were responsive to the probability of brand switching. Brand image and convention drivers influenced the room rate they are willing to stay in the budget and high-end hotels respectively. Thus, although the RSCS was the segment identifying “relationship,” convenience, brand image, and price drivers were also responsive to the probability of brand switching and room rate in this segment.

Second, in the case of using personal funds for the Convenience-Seeking Customer Segment (CSCS), “*quality driver (as expected)*” for the budget hotels was responsive to the room-nights. “*Price driver (as expected)*” for the high-end hotels was responsive to the room-nights. Also, for the budget hotels, “*relationship driver (above expected)*” was responsive to the room rate. For the high-end hotels, “*convenience driver (above expected)*” and “*price driver (as expected)*” were responsive to the room rate. The interesting findings were that quality and relationship drivers effected the decision of

customers in the budget hotels in terms of the room-nights and room rate while the price driver effected the decision of customers in the high-end hotels in terms of the room-nights. The appropriate observation was that the convenience driver affected the customer in the high-end hotels in terms of the room rate because the CSCS was the segment identifying “convenience.” Additionally, the price driver also affected the customer in the high-end hotels in terms of the room rate.

When using business funds for the CSCS, only “*price driver* (as expected)” for the high-end hotels was responsive to the room-nights and room rate. The interesting finding was that the price driver effected the decision of customers in the high-end hotels although this hotel type was “high-end.”

Third, when using personal funds for the Quality-Seeking Customer Segment (QSCS), only “*price driver* (above expected)” for the high-end hotels was responsive to the room-nights. When using business funds for the QSCS, “*price driver* (above expected)” for the budget hotels were responsive to the probability of brand switching. For the high-end hotels, “*brand image driver* (above expected)” was responsive to the room-nights. And for the high-end hotels, “*relationship driver* (above expected)” was responsive to the room rate. The interesting finding was that the quality driver was not significant in this segment despite this segment identifying “quality.” Price, brand image, and relationship drivers rather than the quality driver affected the decision of customers in this segment.

Fourth, there were many significant CE drivers in the Brand Image-Seeking Customer Segment (BSCS) compared to other segments. In the case of using personal funds for the BSCS, “*convenience driver* (above expected)” for the budget hotels was

responsive to the probability of brand switching. “*Quality driver* (above expected)” and “*price driver* (above expected)” for the high-end hotels were responsive to the probability of brand switching. To the room-nights they desire to stay, “*convenience driver* (as expected)” for the budget hotels, and “*brand image driver* (above expected)” for the mid-price hotels were responsive respectively. To the room rate they are willing to stay, “*price driver* (as expected)” for the mid-price hotels, and “*brand image driver* (above expected)” for the high-end hotels were responsive respectively. The observations for the mid-price hotels in terms of room-nights and for the high-end hotels in terms of room rate seemed appropriate because of this segment identifying “brand image.” However, convenience, quality, and price drivers were also considered significant in this segment.

When using business funds for the BSCS, three drivers: “*convenience driver* (above expected),” “*relationship driver* (as expected),” and “*brand image driver* (as expected)” were responsive to the probability of brand switching for the budget hotels. For the high-end hotels, “*price driver* (above expected)” and “*quality driver* (above expected)” were responsive to the probability of brand switching. For the luxury hotels, “*convenience driver* (above expected)” was responsive to the probability of brand switching. For the budget hotels, the two drivers, “*convenience driver* (as expected)” and “*relationship driver* (as expected and above expected)” were responsive to the room-nights. For the mid-price hotels, “*brand image driver* (as expected)” was responsive to the room-nights. “*Price driver* (as expected)” and “*relationship driver* (above expected)” for the mid-price hotels were responsive to the room rate. “*Convenience driver* (as expected)” and “*brand image driver* (above expected)” for the high-end hotels were responsive to the room rate. The observations for the budget hotels in terms of the

probability of brand switching, for the mid-price hotels in terms of room-nights they desire to stay, and for the high-end hotels in terms of room rate they are willing to stay seemed appropriate because of this segment identifying “brand image.” However, in this segment, all five drivers were considered important drivers related to marketing effort.

Finally, in the case of personal funds for the Price-Seeking Customer Segment (PSCS), “*quality driver* (above expected)” and “*convenience driver* (as expected)” for the high-end hotels were responsive to the probability of brand switching. Moreover, “*quality driver* (as expected)” for the budget hotels was responsive to the room-nights. “*Price driver* (above expected)” for the mid-price hotels was responsive to the room-nights. The unexpected result was that the budget hotels considered quality driver in this segment. The finding for the mid-price hotels was appropriate because this segment pursued “price.” When using business funds of the PSCS, only “*quality driver* (as expected)” for the budget hotels was responsive to the room-nights. Although this segment pursued “price,” quality and convenience drivers were also considered significant marketing effort drivers.

In conclusion, the CE drivers that are most effective in terms of marketing effort are different for each of the CE-based segments and hotel type. The CE driver that identified the CE-based segments was not always the significant driver in terms of the probability of brand switching, the change in the number of room-nights they desire to stay, and the change in room rate they are willing to stay. In the RSCS, convenience, brand image, and price drivers were responsive; in the CSCS, convenience, quality, price, and relationship drivers were; in the QSCS, price, brand image, and relationship drivers were; in the BSCS, convenience, quality, price, brand image, and relationship were; and

in the PSCS, convenience, quality, and price drivers were responsive in terms of these three variables, respectively.

Therefore, it behooves the hotel manager to target marketing efforts for each segment separately by clearly identifying what works for them rather than assuming the same efforts would work for all. Also, this study implies that segmenting the hotel customers by the CE drivers makes better sense than traditional segmenting methods since it allows better targeting of marketing effort. Finally, managers will be able to study the effectiveness of marketing effort by simply calculating the expected change in CE from the reported responsiveness of the customers directly.

There are theoretical contributions. First, to measure marketing effort, Conjoint Analysis was conducted. This approach of Conjoint Analysis was initiated in Customer Equity studies by using dummy variables in terms of the five key CE drivers. This analysis was to test the effects of each of the CE drivers on marketing effort responsiveness. Thus, this study was able to identify the significant CE drivers related to marketing effort. To do this, the part-worth of each driver was applied to define dummy variables. By using dummy variables in terms of the five key CE drivers, each of the CE drivers related to marketing effort was to determine the greatest impact of the each driver on marketing effort responsiveness. These significant CE drivers related to marketing effort differently affected the measurement of Customer Lifetime Value (CLV). Thus, this study was able to calculate the change in CLVs depending on these drivers.

Second, this study measured the marketing effort responsiveness in terms of not the only one variable but three dependent variables, the probability of brand switching, the change of the room-night they desire to stay, and the change of the room rate they are



willing to stay. It was reasonable because these three dependent variables were key components to calculate CE. This measurement by these three variables was useful to measure the marketing effort responsiveness in detail.

### **Limitations and Future studies**

This study has limitations although managerial and theoretical implications exist. Participants had to answer repeatedly those questions on several hypothetical hotel profiles. Also, it was not very easy to measure the marketing effort responsiveness in terms of three dependent variables. Especially, the model of this study applied take a “snapshot” approach to brand switching. It assumes that the probability of brand switching of the customers remains constant with time and as determined by the one-time survey conducted for this study. This may not reflect reality since the customers’ preferences for a hotel brand may depend on other factors that may have not been completely considered in this study.

Thus, future studies should consider other factors such as situational factors more important for customers to select a hotel. Also, future studies should try to find a better measurement method of marketing effort responsiveness. If these variables are measured exactly, it may result in more meaningful and powerful figures and assist hotel managers to develop the specific and practical strategies.

### ***Proposition 3***

The third research question was:

*“Which of the drivers maximize the Return-On-Investment (ROI) of marketing effort exerted by a hotel?”*

This section discusses the key findings of the analyses in the analyzing and developing process for the third research proposition. This process was called the Customer Equity Management (CEM) in this study.

### **Discussion**

#### *Step 1:*

In the first step of the CEM process, CLVs were calculated by the CE-based segments and hotel type. In result, the different CLVs were calculated depending on the CE segments and hotel type. Relationship-Seeking Customer Segment (RSCS) revealed the initial CLV of \$2,284.37 for the budget hotel sector, the initial CLV of \$2,798.36 for the mid-price hotel sector, and the initial CLV of \$3,628.77 for the high-end hotel sector. Convenience-Seeking Customer Segment (CSCS) showed the initial CLV of \$709.09 for the budget hotel sector, the initial CLV of \$858.09 for the mid-price hotel sector, and the initial CLV of \$2,068.11 for the high-end hotel sector. Quality-Seeking Customer Segment (QSCS) obtained the initial CLV of \$364.81 for the budget hotel sector, the initial CLV of \$4,563.18 for the mid-price hotel sector, and the initial CLV of \$5,963.82 for the high-end hotel sector. As a result, the high-end hotel sector in three segments, RSCS, CSCS, and QSCS earned the highest CLV compared to other hotel types. Brand Image-Seeking Customer Segment (BSCS) revealed the initial CLV of \$4,872.87 for the

budget hotel sector, the initial CLV of \$3,513.89 for the mid-price hotel sector, and the initial CLV of \$4,626.41 for the high-end hotel sector. In the BSCS, the budget hotel sector earned the highest CLV. Price-Seeking Customer Segment (PSCS) showed the initial CLV of \$399.13 for the budget hotel sector, the initial CLV of \$5,221.53 for the mid-price hotel sector, and the initial CLV of \$4,046.16 for the high-end hotel sector. In the PSCS, the mid-price earned the highest CLV. Thus, the results revealed that the high-end hotel sector did not always gain the highest profit compared to the budget and mid-price hotel sector. The CE-based segment had impacted the profit regardless of hotel type. The hotel management should understand that each of the CE-based segments and hotel type has different CLVs to continuously increase its profitability.

*Step 2:*

The second step was to determine the drivers that maximize the ROI of marketing effort. The results of @Risk® simulation provided the return on investment (ROI) on marketing effort responsiveness in terms of the significant CE drivers for the CE-based segments and hotel type. In the RSCS when using personal funds, *brand image driver* (above expected) contributed to an increase of 149.44 % (ROI) for the budget hotel sector. *Convenience driver* (above expected) contributed to an increase of 249.83 % (ROI) for the mid-price hotel sector. Also, for the high-end hotel sector, *price driver* (above expected), *brand image driver* (above expected), and *relationship driver* (above expected) contributed to an increase of 9.07 % (ROI), 74.72 % (ROI), and 19.27 % (ROI) respectively. In other words, of CE drivers, if customers spent their personal funds, the convenience driver influenced the increase of the highest ROI for the mid-price hotel

sector in the RSCS. Specifically, the mid-price hotel sector can increase their profitability dramatically if they provide better service related to the convenience driver than other drivers. As a result, better services related to brand image, convenience, price, and relationship drivers in the RSCS made the hotel obtain the positive ROI. In the case of using business funds, all ROIs were obtained negatively. The results seemed appropriate because of the negative probability of brand switching. It means that the brand switching drastically influenced the profitability of the hotel.

In the CSCS when using personal funds, *quality driver* (as expected) and *relationship driver* (above expected) contributed to an increase of 7.97 % (ROI) and 11.93% (ROI) for the budget hotel sector, respectively. For the high-end hotel sector, *convenience driver* (above expected) and *price driver* (as expected) contributed to an increase of 51.91 % (ROI) and 30.84% (ROI) respectively. In the case of using business funds, *price driver* (as expected) contributed to an increase of 32.61 % (ROI) for the high-end hotel sector. In other words, of the CE drivers, if customers spent their personal funds, the the convenience driver influenced the increase of the highest ROI for the high-end hotel sector in the CSCS. The results seemed appropriate because this segment considered “convenience” as being most important. It means that the the convenience driver most influenced profitability of the high-end hotel sector compared to other drivers. As a result, better services related to quality, relationship, convenience, and price drivers in the CSCS can assist the hotel to obtain the positive ROI.

In the QSCS when using personal funds, only *price driver* (above expected) contributed to an increase of 167.29 % (ROI) for the high-end hotel sector. When using business funds, *price driver* (above expected) contributed to an increase of 402.57 %

(ROI) for the budget hotel sector. For the high-end hotel sector, *brand image driver* (above expected) and *relationship driver* (above expected) contributed to an increase of 165.13 % (ROI) and 203.49% (ROI) for the high-end hotel sector. In other words, among all the CE drivers when customers spending business funds for the stay, the price driver most influenced the increase in ROI for the budget hotel sector in the QSCS. Specifically, the budget hotel sector can increase their profitability dramatically if they provide cheaper room rate than customers expected. As a result, providing better services related to price, brand image, and relationship drivers in the QSCS can have positive effect on the hotels marketing ROI.

In the BSCS, when using personal funds, *convenience driver* (as expected) influenced the negative ROI (-63.13%) for the budget hotel sector because customers in the budget hotel sector stayed for an average of one night. *Convenience drivers* (above expected) also influenced the ROI negatively (-19.95%) in the budget hotel sector because customers in the budget hotel sector had a 21.53% brand switching probability. It means that the length of stay and brand switching influenced the ROI of the budget hotel sector. The budget hotel sector should make customers satisfied by improving the convenience driver. If customers in the budget hotel sector are satisfied, customers can stay for more than one night and cannot switch their preference of staying in the hotel sector. For the mid-price hotel sector, *price driver* (as expected) and *brand image driver* (above expected) contributed to an increase of 102.89 % (ROI) and 68.95% (ROI) respectively. If the mid-price hotel sector provides a cheaper room rate and provides a better brand image, their profitability in the mid-price hotel sector may increase. For the high-end hotel sector, *quality driver* (above expected), *price driver* (above expected), and

*brand image driver* (above expected) contributed to an increase of 102.83 % (ROI), 102.7 % (ROI), and 19.2% (ROI) respectively. If the high-end hotels provide better services related to quality, brand image, and price drivers, the ROIs may increase. In particular, the brand image driver influenced the ROI positively in the mid-price and high-end hotel sectors. The results seemed appropriate because this segment pursued “brand image.” Moreover, the mid-price hotels should focus on improving the price driver, and the high-end hotels should focus on improving quality and price drivers.

When using business funds, in the BSCS, the three drivers, *price driver* (as expected), *brand image driver* (as expected), and *relationship driver* (above expected) affected an increase of 118.98%, 35.16%, and 119.73% ( ROIs) respectively in the mid-price hotel sector. The mid-price hotels should consider not only offering better services related to the brand image driver but also price and relationship drivers. For the high-end hotel sector, four drivers, convenience (as expected), quality (above expected), price driver (above expected), and brand image driver (as expected) affected an increase of 17.7%, 134.07%, 134.04%, and 17.54% (ROIs) respectively. The high-end hotels should consider all five CE drivers except relationship driver important to increasing their profitability. On the other hand, for the budget hotel sector, the ROIs were estimated negatively in the following drivers: *convenience drivers* (as expected, -76.35% and above expected, -23.75%), *brand image driver* (as expected, -24.59%), *relationship driver* (as expected, -45.98%), and *relationship driver* (above expected,-76.35% and above expected, -23.75%). The results of the negative ROI were because customers in the budget hotel sector intended to switch their hotel and they will not stay long. Once again, this result confirmed that the brand switching and the length of stay are important factors

for the budget hotel sector. To make customers stay longer, the budget hotels should provide various attractions related to convenience, brand image, and relationship drivers.

In the PSCS, the only *quality driver* (as expected) contributed to an increase of 41.62 % (ROI) in the case of using personal funds, and 49.38 % (ROI) in the case of using business funds for the budget hotel sector. In the case of using personal funds, *price driver* (above expected) affected negatively the ROI for the mid-price hotel sector because the average length of stay was one night. The mid-price hotels should provide cheaper room rates to attract the customers to stay for more than two nights. In the case of using personal funds, *convenience driver* (as expected) and *quality driver* (above expected) affected the negative -427.99% and -427.23% (ROIs) respectively for the high-end hotel sector because customers in the high-end hotel sector had the negative probability of brand switching. These results confirmed over again that the brand switching tremendously influenced the profitability of the high-end hotels.

In conclusion, these outcomes confirmed that the each of the CE drivers has a different impact on the ROI of marketing effort exerted by a hotel in terms of the change in CE depending on the CE-based segments and hotel type. First, this study calculated all CLVs of a single customer and then presented the average of CLVs in terms of the CE-based segments and hotel type. This study achieved the measurement of CLV at the aggregate level.

By using the @Risk® simulation program, this study predicted the ROI on marketing effort. After building the @Risk® simulation model for calculating the change in CE based on the expected marketing effort exerted, the key variable (parameter) values in the model were determined from the statistical analysis conducted separately for

each CE-based market segment and for each hotel type. The values of the key variables were input into the @Risk model and the ROI was automatically calculated by simulating the results through 10,000 iterations. Change in CLV was simply calculated from the mean difference between the current CLV before any marketing effort is exerted and the new CLV after the effort as determined from the 10,000 simulated iterations. Thus, the ROIs were predicted differently depending on CE drivers.

It should be noted that the CLVs were calculated in terms of the CE drivers separately. Specifically, this study found the significant CE drivers to maximize the ROI of marketing effort. The results of @Risk® simulation were presented in terms of the CE-based segments and hotel type. Thus, the results were able to suggest more accurate results and the expected financial impact after considering the CE-based segment type and the hotel type. The statistically significant CE drivers were the ones that assist hotels to achieve the positive ROI. Hotels can obtain positive profitability by focusing on the significant CE drivers for each market segment.

*Step 3:*

The third step identified the marketing action plans that would be effective for the CE-based segment and hotel type. Hotel information sources for selecting a hotel were considered key measure for developing effective action plans. The results of the cross tabulation and MDS of hotel information sources revealed the effective marketing tools (action plans) depending on the CE-based segments and hotel type.

First, without the consideration of hotel type, this study suggested that customers in the Relationship-Seeking Customer Segment (RSCS) considered “Hotel Website” the



most important source. First of all, hotels should focus on updating the clear information and attractive images of the hotel on its website in order to attract customers in the RSCS. “Word-of-Mouth” was also perceived as the second important source, so hotels should attempt to give customers a good impression by serving all guests sincerely. These customers who had a satisfactory experience in the hotel can then recommend this hotel to their friends and family. Moreover, “Phone Call” was considered as the third important source so hotels should answer the hotel phone politely because customers in the RSCS directly call the hotel to make a reservation. Also, the “Chain Website” should be well managed because most customers access the website recently. A “Web Search” was the broad tool recently. Through a web search, customers can access the hotel website and the chain website. Thus, hotels should improve the quality of their websites and focus on their employees’ kind and professional service training.

In the convenience-Seeking Customer Segment (CSCS), “Hotel Website” was also perceived as the most important source, followed by “Phone Call,” “Travel Website,” “Chain website,” and “WOM.” The findings confirmed that most customers in the CSCS also used web and booked rooms by accessing hotel, chain, and travel websites. It means the website is also effective marketing tools in this segment. This segment also considered “Phone Call” and “WOM.”

The Quality-Seeking Customer Segment (QSCS) also considered “Hotel Website” the most important source, followed by “WOM,” “Phone Call,” “E-mail,” and “Chain Website.” The interesting finding in the QSCS was that “E-mail” was considered the important tool. Customers in the QSCS preferred to make a reservation by websites, call,

and email. The results of the QSCS also confirmed the notion that most customers use the web.

Once again, the Brand Image-Seeking Customer Segment (BSCS) considered “Hotel Website” followed by “Phone Call,” “Chain Website,” “CRS,” and “WOM.” The interesting finding of the BSCS was that “CRS” was considered the effective tool important. Accessing websites is common, but calling must be still the effective tool.

The Price-Seeking Customer Segment (PSCS) considered “WOM” the most important source, followed by “Phone Call,” “Hotel Website,” “E-mail,” and “Web Search.” Specifically, customers in the PSCS were influenced most by their friends or family when selecting a hotel.

In conclusion, customers in all segments considered “Hotel Website” the most effective tool. Also, “Web search, Travel website, Chain website, and E-mail” were evaluated as important marketing tools. This study shows that the electronic media is gaining more importance in marketing within hotels compared to other marketing tools. It means that hotels should provide the high quality of hotel website because the Internet has penetrated consumers’ lives and customers have used it frequently. Hotels should take advantage of the Internet as a marketing tool because the Internet provides the direct contact with customers. If hotels maintain their website effectively and conveniently, the customer can feel comfortable and absorbed while experiencing the content in the hotel website. To do it, the hotel website should provide the accurate, clear, and complete information related to products and services that hotels make available. This promotion would be more effective by using multimedia such as virtual technology and videos.

Also, hotels should provide kind and quick response to “Phone Call” because the call is still important marketing tool which customers use to make a reservation commonly.

Compared to the segments, the importance index scores revealed that all hotel information sources except “Hotel Website” were evaluated highly in the RSCS. “Hotel Website” was evaluated highly in the CSCS. Within the segments compared to the hotel information sources, “Hotel Website” had the highest index score in the RSCS, CSCS, QSCS, and BSCS while “WOM” had the highest score in the PSCS. These findings supported the result of the cross tabulation for the hotel information sources that hotel website as marketing tools was most essential to all segments.

Additionally, the most effective marketing tools were revealed differently depending on hotel type. First, in the case of the budget hotels, customers in the RSCS considered “Phone Call” the most important source. In the CSCS, “Hotel Website” was perceived as the most important source. The QSCS considered “E-mail” and “WOM” the most important sources. The BSCS evaluated “Chain Website” as the most important tool. Finally, the PSCS assessed “Phone Call” as the most important sources.

Secondly, in the case of the mid-price hotels, the RSCS considered “WOM,” the CSCS “Phone Call” and “Hotel Website,” the QSCS considered “Hotel Web,” the BSCS considered “WOM,” and the PSCS considered “Phone Call” and “WOM” the most important tools.

Finally, in the case of the high-end hotels, the RSCS considered “Phone Call,” the CSCS considered “Hotel Website,” the QSCS considered “Phone Call” and “WOM,” the BSCS considered “Hotel Website,” and the PSCS considered “WOM” the most important tools. In conclusion, this study found that “Phone Call,” “Hotel Website,” “E-mail,”

“WOM,” and “Chain Website” were the most effective tools for the CE-based segments and hotel type. Therefore, hotels should try to provide better services related to call, hotel website, e-mail, WOM, and chain website because most customers use these marketing tools for selecting a hotel. Hotels should ensure that customers can access these marketing tools easily and conveniently, and make customers feel satisfied while using these marketing tools.

In addition to their primary marketing tools, in order for hotels to attract a single customer, hotels should also focus on various marketing tools continuously and simultaneously evaluated in this study. Thus, the results of MDS suggested the similar action plan groups of marketing tools in terms of the CE-based segments and hotel type should be applied at the same time. It would be effective action plan groups.

First, the results of the RSCS suggested that “Fax-Direct Mail-Newsletter-Chain Web-CRS-Coupon-Travel Club-MKTG Literature-Brochure-Listerves” may be applied simultaneously as marketing tools the budget hotels. “Phone Call-Email-Web Search-WOM” should be developed simultaneously and “Travel Web-Meta Search-TV Ads.” may be developed concurrently for the budget hotels. Among these groups, the “Phone Call-Email-Web Search-WOM” cluster was considered more effective action plans group than the others. Also, the mid-price hotels should develop “Ind. Travel Agent-News Ads.-Travel Club-MKTG Literature-Brochure-Listerves” simultaneously. Also, “Cor. Travel Manager-Magazine Ads.-Web Ads.” should be applied simultaneously for the mid-price sector. Among these two clusters, the first cluster was considered more effective action plans group than the second group. The high-end hotels should develop “Fax-Newsletter-Hotel Web-Chain Web-Travel Web-Meta Search-Web Search-CRS-

Cor. Travel Manager-Ind. Travel Agent-News Ads.-Magazine Ads.-Radio Ads.-TV Ads.-Web Ads.-Travel Club-MKTG Literature- Brochure-Travel Listserves” simultaneously.

Second, the results of the CSCS suggested that in the case of the budget hotels, as similar marketing tools, “Direct Mail-Cor. Travel Manager-Ind. Travel Agent-News Ads.” should be developed simultaneously. Also, “Hotel Web-Travel Web-Meta Search-CRS-MKTG Literature-Brochure” should be developed simultaneously, and “Phone Call-Chain Web-Web Search-WOM” should be applied simultaneously as similar marketing tools for the budget hotel sector. Among these clusters, the “Phone Call-Chain Web-Web Search-WOM” cluster was considered more effective action plans group than the others. In the case of the mid-price hotels, “Newsletter-Cor. Travel Manager-Ind. Travel Agents-Magazine Ads.-Radio Ads.-Web Ads.-Travel Club-MKTG Literature” should be developed simultaneously. Also, “News Ads.-TV Ads.-Travel Listserves” should be developed simultaneously, and “Chain Web-Travel Web-Web Search” should be developed simultaneously as similar marketing tools for the mid-price hotel sector. Among these clusters, the “Chain Web-Travel Web-Web Search” cluster was considered more effective action plans group than the others. In the case of the high-end hotels, “News Ads.-Magazine Ads.-Radio Ads.-TV Ads.-Web Ads.-Coupon-Travel Club-MKTG Literature-Brochure-Travel Listserves” should be developed simultaneously as the similar marketing tool.

Third, the results of the QSCS suggested that the budget hotels should develop “Email-Travel Web-Web Search” simultaneously. Also, “Fax-Direct Mail-Meta Search-Cor. Travel Manager” and “Phone Call-Travel Club-MKTG Literature” should be developed simultaneously as similar marketing tools for the budget hotel sector. Among

these clusters, the “Email-Travel Web-Web Search” cluster was considered more effective action plans group than the others. In the case of mid-price hotels, “Ind. Travel Agents-Radio Ads.-TV Ads.-Travel club” should be developed simultaneously for the mid-price hotel sector. Also, “CRS-Cor. Travel Manger-News Ads.-Magazine Ads.” should be developed simultaneously as similar marketing tools for the mid-price hotel sector. Among these clusters, the “CRS-Cor. Travel Manger-News Ads.-Magazine Ads.” cluster was considered more effective action plans group than the other. In the case of the high-end hotels, “Fax-Direct Mail-Newsletter-Coupon” should be developed simultaneously. Also, “Ind. Travel Agent-News Ads.-Magazine Ads.-Radio Ads.-TV Ads.-MKTG Literature” should be developed simultaneously as the similar marketing tool for the high-end hotel sector. Among these clusters, the “Fax-Direct Mail-Newsletter-Coupon” cluster was considered more effective action plans group than the other.

Fourth, the BSCS suggested that budget hotels should develop “Fax-Direct Mail-News letter-Email-Ind. Travel Agent-News Ads.-Magazine Ads.-Radio Ads.-TV Ads.-Brochure-Travel Listserves” simultaneously. Also, “Hotel Web-Chain Web-Travel Web” should be developed simultaneously, and “Web Search-CRS-Cor. Travel Manager-Travel Club-MKTG Literature” should be developed simultaneously as similar marketing tools for the budget hotel sector. Among these clusters, the “Hotel Web-Chain Web-Travel Web” cluster was considered more effective action plans group than the others. In the case of mid-price hotels, “Travel Web-Meta Search-Travel Club-MKTG Literature-Brochure-Travel Listserves,” “CRS-Cor. Travel Agent-Ind. Travel Agent-WOM,” and “News Ads.-Magazine Ads.-Radio Ads.-TV Ads.-Web Ads.” should be developed

simultaneously. Also, “Phone Call-Fax-Direct Mail-Newsletter-Email-Hotel Web-Chain Web” should be developed simultaneously as similar marketing tools for the mid-price hotel sector. Among these clusters, the “CRS-Cor. Travel Agent-Ind. Travel Agent-WOM” cluster was considered more effective action plans group than the others. In the case of high-end hotels, “Direct Mail-Newsletter-Cor. Travel Manager-Ind. Travel Agent-New Ads.-Magazine Ads.-Radio Ads.-TV Ads.-Web Ads.-Coupon-Travel Club-Travel Listserves-WOM” should be developed simultaneously. Also, “Web Search-MKTG Literature-Brochure” should be developed simultaneously, and “Hotel Web-Chain Web-CRS” should be developed simultaneously as similar marketing tools for the high-end hotel sector. Among these clusters, the “Hotel Web-Chain Web-CRS” cluster was considered more effective action plans group than the others.

Finally, the PSCS proposed that budget hotels should develop “News Ads.-Magazine Ads.-Radio Ads.-TV Ads.-Web Ads.” simultaneously. Also, “Email-Hotel Web-Chain Web-Travel Web-Meta Search” should be developed simultaneously for the budget hotel sector. “Phone Call-Direct Mail-Web Search-CRS-Travel Club” should be also developed simultaneously for the budget hotel sector. Also, “Newsletter-MKTG Literature-Brochure” should be developed simultaneously as similar marketing tools for the budget hotel sector. Among these clusters, the second and third clusters were considered more effective action plans group than the others. In the case of the mid-price hotels, “Newsletter-Cor. Travel Manager-News Ads.-Magazine Ads.-TV Ads.-Web Ads.-MKTG Literature-Brochure-Travel Listserves” should be developed simultaneously. Also, “Chain Web-Meta Search-CRS” should be developed simultaneously as similar marketing tools for the mid-price hotel sector. Among these clusters, the “Chain Web-

Meta Search-CRS” cluster was considered more effective action plans group than the others. In the case of the high-end hotels, “Fax-Newsletter-Cor. Travel Manager-Ind. Travel Agent-Magazine Ads.-Radio Ads.-TV Ads.-Web Ads.-Travel Club-MKTG Literature-Brochure” should be developed simultaneously. “Phone Call-Email-Hotel Web” should be developed simultaneously as similar marketing tools for the high-end hotel sector. Among these clusters, the “Phone Call-Email-Hotel Web” cluster was considered more effective action plans group than the other.

### **Implications**

This study provided the CEM process through three steps to maximize CE in hotels. First, CE was measured and second marketing efforts were analyzed. The third step was to evaluate marketing strategies, and then this study recommended action plans for the CE-based segments and hotel type. This study called these steps the CEM process. The valuable point was the fact that this study developed the CEM process in the hotel industry. Considering the market effort responsiveness, this study presented the marketing strategies and action plans in order to maximize CE in the hotel industry.

Previous studies just have measured CE at the aggregate level (Berger & Nasr-Bechwati, 2001; Blattberg & Deighton, 1996; Hansotia, 2004; Hanssens et al., 2008; Rust, Lemon, & Zeithaml, 2004) or disaggregate level (Bayon et al., 2002; Venkatesan & Kumar, 2004; Wiesel et al., 2008). This study calculated the CE at the aggregate level as well as maximized it by measuring the probability of brand switching and by analyzing marketing effort responsiveness in terms of the CE drivers. Several studies maximized CE (Berger & Nasr-Bechwati, 2001; Hansotia, 2004); however, they faced obstacles to



maximize it. In the current study, by analyzing marketing effort responsiveness through Conjoint Analysis, a new method to maximize CE was determined.

Additionally, several recent studies mentioned CEM (Bell et al., 2002; Bruhn et al., 2008; Hogan et al., 2002). However, their process of CEM did not suggest the practical action plans. Most of the CEM literature discussed conceptualization. It is not enough to report strategies and action plans in marketing for implementing CE (Blattberg & Deighton, 1996; Hogan et al., 2002; Kumar & George, 2006; Richards & Jones, 2008). The literature on CEM revealed that there is uncertainty as to how CEM could be conducted in order to maximize profits or CE. However, this current study analyzed the ROI of marketing effort exerted by a hotel in terms of the change in CE by using @Risk® simulation program. The financial outcome derived through this analysis provided realistic results on what marketing efforts the hotels should invest in. Based on this financial analysis, this study analyzed and determined practical action plans for each of the CE segments and hotel type. The analyses based on the CE-based segments and hotel type resulted in specific findings for each market segment. It is more functional and efficient marketing when hotel managers develop their strategies and action plans based on customer responsiveness as directly reported by them. The strategies and action plans can satisfy the divergent needs and views of customers. Consequently, the CEM process assists hotels to improve their performance, hold existing customers, and acquire new ones. It ultimately can improve their profitability. Thus, this study incorporates many impacts as well as makes a unique contribution to the literature.

### **Limitations and Future studies**

While this study offers much contribution to the CE and CEM research, it is not without limitation. First, the model of this study does not take into account other CE-related factors such as cost of acquisition and retention of customers, direct cost of marketing, etc. Second, this study does not also consider cultural and ethnic difference in hotel purchasing patterns of customers and thus, the results may not be applicable globally. If future studies consider these cultural and ethnic differences, the findings may be interesting and meaningful in the CE studies.

Third, the sample size of the luxury hotel was relatively small after segmenting customers based on CE. Thus, this study was not able to present the practical action plans for the luxury hotel type. However, this study suggested overall action plans for all types of hotel. It may assist luxury hotels to develop action plans. However, this study recommends that future studies collect larger customers in the luxury hotel as well as in other hotel types. And then the results of the difference between all hotel types would be generalized and the specific action plans for luxury hotel would be found. In particular, these findings may assist managers in the luxury hotel to develop the specific customized services for their customers.

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## **APPENDICES**

**Appendix A**  
**Survey/Informed Consent Form**

# Customer Equity Study

## Informed Consent Form

Thank you for agreeing to participate in this research project. This form outlines the purpose of the study and provides a description of your involvement and rights.

1. **Project Title:**

A Study of Market Segmentation in the Hotel Industry: Customer Equity Approach

2. **Investigators:**

Yumi Park, Ph.D student

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3. **Purpose of the Study:** The focus of the current study is to evaluate Customer Equity-based segmentation in the hotel industry. The specific objectives of the research are; 1) To determine the core Customer Equity (CE) drivers in the hotel industry, 2) To find the impact of CE-based segmentation in order to measure Customer Equity in the hotel industry, and 3) To evaluate CE strategy to maximize Customer Equity in the hotel industry.
4. **Procedures:** To address the objectives, you will be asked questions related to typical hotel stay and your responsiveness to hotel marketing programs. It will take 10 to 15 minutes to complete the survey.
5. **Risks of Participation:** There are no known risks associated with this project which are greater than those ordinarily encountered in daily life.
6. **Benefits:** Through this research, the hotel industry will be able to identify sub-drivers of Customer Equity. This research will provide action plans for satisfying customers' individual needs.

7. **Confidentiality and Participant Rights:**

The researcher guarantees the following conditions will be met:

- 1) Your name or any identifying information will not be used at any point in the process of information collection or in the report.
- 2) Your participation in this research is totally voluntary. Your identity will be kept confidential. You may at any time choose not to participate in this study or refuse to answer specific question. There will be no penalty associated with non-participation or non-response to any questions.
- 3) All data from this study will be destroyed within one year of the completion of this project, or approximately June 2010.

8. **Contacts:**

If you have questions about your rights as a research volunteer, you may contact Dr.Shelia Kennison, IRB Chair.

Dr.Shelia Kennison, IRB Chair.  
219 Cordell North,  
Stillwater, OK 74078.  
Tel: 405-744-1676  
Email:irb@okstate.edu

If you wish to contain to the survey, please click on this link: [Complete survey](#).  
By clicking on the link, you are consenting to the terms of this research and agreeing to participate.

- I. **Have you stayed at any type of commercial hotel/motel/lodging establishment at least once during the past 12 months?**  Yes  No

***Definition of a typical hotel stay:***

For the purpose of this study, a typical hotel stay can be defined as a type of hotel at which **you most frequently stay** given your brand preferences and budget constraints for business or leisure purposes.

For example, if you most frequently travel on business and stay at mid-priced hotels such as Holiday Inn or Hampton Inn, then mid-priced hotels would be your typical hotel type.

II. **Please give us some details about the hotel/motel type where you typically stay.**

1. How did you pay for your last typical hotel stay?
  - 1) Personally paid for it. 2) My company paid for it. 3) Other means.
  
2. How would you categorize the hotel?
  - 1) Budget/Economy (e.g., Motel 6, Quality Inn, La Quinta, etc.)
  - 2) Mid-price (e.g., Hampton Inn, Holiday Inn, etc.)
  - 3) High-End (e.g., Hyatt, JW Marriott, Hilton, etc.)
  - 4) Luxury (e.g., Four Seasons, Ritz Carlton, etc.)
  
3. What was the purpose of your visit?
  - 1) Business 2) Pleasure/Leisure 3) Conference 4) Others
  
4. On average, how many nights did you stay during your last visit? ( \_\_\_\_\_ nights)
  
5. On average, how much did you pay for the room per night during your last visit? (\$ \_\_\_\_\_)
  
6. On average, how much did you spend for all other expenses together per person and per night (e.g., Food & Beverage, Movies, Gift shop, Spa, Meetings, etc.) during your last visit? (\$ \_\_\_\_\_)

7. In all, how many times have you stayed at hotels similar to your typical hotel during the past 12 months? ( \_\_\_\_\_ times)
8. How long have you been a customer of hotels similar to your typical hotel? ( \_\_\_Year \_\_\_Months)

**III. For the next section, please think of *Convenience, Quality, Price, Brand image, and Relationship* as the 5 key features that are frequently considered by customers while choosing a hotel. For each of these 5 key features listed in the table below, allocate points to represent the degree of importance to you, where the more points you allocated to an attribute, the more important it is to you.**

(Note. The allocated points for all 5 key features must total 100.)

| <b>The key attributes for selecting a hotel</b>  | <b>Points</b> |
|--|---------------|
| <b><u>Convenience</u></b><br>(e.g., Accessibility, Ease of booking/reservation, Operating hours, Providing various service options, Physical location, etc.) |               |
| <b><u>Quality</u></b><br>(e.g., Service quality, Amenities, Facilities, Cleaning, Room suppliers, System/process, Service recovery, etc.)                    |               |
| <b><u>Price</u></b><br>(e.g., Room rate, Value for money, Additional charges for extra services, Discounts because of membership, etc.)                      |               |
| <b><u>Brand image</u></b><br>(e.g., Chain brand image, Property brand image, Uniqueness, Impressions gained from standards of service established, etc.)     |               |
| <b><u>Relationship</u></b><br>(e.g., Loyalty program, Reward program, Affiliation, Hotel's community enrichment programs, Co-brandings, etc.)                |               |
|  | <b>100</b>    |

**IV. Please rate the importance of the following features for selecting a hotel.  
Use the 1 to 7 scale where 1=poor and 7=excellent.**

| <b>Hotel Section Features</b>   | <i>Poor</i> → <i>Excellent</i> |
|---|--------------------------------|
| Convenient location (e.g., easily access the hotel, airport, downtown, etc.)  | 1-2-3-4-5-6-7                  |
| Ease of making reservations.  | 1-2-3-4-5-6-7                  |
| Ease of ordering services (e.g., room service, wake-up call, etc.)  | 1-2-3-4-5-6-7                  |
| Providing various room types (e.g., suites, standard, non-smoking rooms etc.)   | 1-2-3-4-5-6-7                  |
| Availability of providing various service options (e.g., express check out, TV bill viewing, etc.)  | 1-2-3-4-5-6-7                  |
| Options for ease of access to amenities (e.g., spa, swimming pool, gym, etc.)   | 1-2-3-4-5-6-7                  |
| Various methods of payments (e.g., credit card, on-line payment, monthly statement, etc.)   | 1-2-3-4-5-6-7                  |
| Quality of service performance (e.g., competency, knowledge training, grooming, etc.)   | 1-2-3-4-5-6-7                  |
| Quality of amenities (e.g., spa, gym, Internet, etc.)   | 1-2-3-4-5-6-7                  |
| Quality of room supplies (e.g., shampoo, soap, body lotion etc.)  | 1-2-3-4-5-6-7                  |
| Quality of room service   | 1-2-3-4-5-6-7                  |
| Quality of facilities' upkeep (e.g., cleanliness, updated facilities, etc.)   | 1-2-3-4-5-6-7                  |
| Quality of service recovery (e.g., problem solving, problem resolution, etc.)   | 1-2-3-4-5-6-7                  |
| Perceived value for the price paid for the room   | 1-2-3-4-5-6-7                  |
| Additional charges for extra services/facilities (e.g., parking, room services, Internet, etc.)   | 1-2-3-4-5-6-7                  |
| Discounts received because of membership (e.g., AAA, AARP, etc.) and rewards program (e.g., airline mileage, prizes, catalog merchandise, etc.) | 1-2-3-4-5-6-7                  |
| General brand image (e.g., Marriott, Hilton, etc.)  | 1-2-3-4-5-6-7                  |
| Uniqueness of hotel (e.g., Boutique, Art-Deco, etc.)  | 1-2-3-4-5-6-7                  |
| Impression gained from on-line reviews or hotel websites  | 1-2-3-4-5-6-7                  |
| Impression gained from the reputation of the neighborhood where the hotel is located.   | 1-2-3-4-5-6-7                  |
| Impression gained from the quality of room amenities  | 1-2-3-4-5-6-7                  |
| Impression gained from standards of service established (e.g., guardian service, French, plate services, Buffet, etc.)                          | 1-2-3-4-5-6-7                  |
| Impression gained from company advertisements   | 1-2-3-4-5-6-7                  |
| Impression gained from word-of-mouth (e.g., recommendation from friends, etc.)  | 1-2-3-4-5-6-7                  |
| Availability of loyalty programs (e.g., frequent stay, membership, etc.)  | 1-2-3-4-5-6-7                  |
| Provision of non-incentive loyalty (e.g., emotional attachment to brand, etc.)  | 1-2-3-4-5-6-7                  |
| Hotel's involvement with resolving social issues (e.g., environmental, homeless, community service, etc.)                                       | 1-2-3-4-5-6-7                  |
| Hotel's participation in referral group programs (e.g., leading hotels of the world, historic hotels, etc.)                                     | 1-2-3-4-5-6-7                  |
| Hotel's involvement with community enrichment programs (e.g., back-to-work, food bank, etc.*)   | 1-2-3-4-5-6-7                  |
| Hotel's programs for co-branding (e.g., Starbucks coffee in hotel rooms, etc.) and partnership programs (e.g., AA & Best western, etc.)         | 1-2-3-4-5-6-7                  |

**V. How important is each of the following information sources for selecting hotel? Please rate the importance of the following sources on a scale of 1 to 7 where 1=Not at all important and 7=Extremely important.**

| <b>Information Sources</b>                            | Not at all Important $\longrightarrow$ Extremely Important |
|---|--|
| Directly hotel by telephones (Call)                   | 1-2-3-4-5-6-7  |
| Fax   | 1-2-3-4-5-6-7  |
| Direct mail   | 1-2-3-4-5-6-7  |
| E-mail  | 1-2-3-4-5-6-7  |
| Newsletter  | 1-2-3-4-5-6-7  |
| Hotel (property) Web site                             | 1-2-3-4-5-6-7  |
| Chain Web site  | 1-2-3-4-5-6-7  |
| Travel Web site (e.g., Expedia, Hotels.com)           | 1-2-3-4-5-6-7  |
| Meta search (e.g., Kayak)                             | 1-2-3-4-5-6-7  |
| Web Search (e.g., Google)                             | 1-2-3-4-5-6-7  |
| CRS: Central Reservation System (e.g.,1-800-###-####) | 1-2-3-4-5-6-7  |
| Corporate Travel Managers                             | 1-2-3-4-5-6-7  |
| Independent Travel Agents                             | 1-2-3-4-5-6-7  |
| Newspaper Advertisements                              | 1-2-3-4-5-6-7  |
| Magazine Advertisements                               | 1-2-3-4-5-6-7  |
| Radio Advertisements                                  | 1-2-3-4-5-6-7  |
| TV Advertisements                                     | 1-2-3-4-5-6-7  |
| Web Advertisements (e.g., Banner) or Youtube videos   | 1-2-3-4-5-6-7  |
| Coupon booklets (Entertainment)                       | 1-2-3-4-5-6-7  |
| Travel clubs, or Web blogs                            | 1-2-3-4-5-6-7  |
| Hotel Marketing Literature                            | 1-2-3-4-5-6-7  |
| Travel Broachers                                      | 1-2-3-4-5-6-7  |
| Travel Listserves                                     | 1-2-3-4-5-6-7  |
| Recommendation from friends or others (Word-of-Mouth) | 1-2-3-4-5-6-7  |



### Profile 1 (Hotel A)

**Hotel A is described by 5 key features listed in the table below.**

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is farther</u> than you thought it would be from the airport.  | Convenience     | Below Expected |
| The hotel's quality <u>is below</u> what you expected.  | Quality         | Below Expected |
| You were asked to pay a <u>higher price</u> for the room than what you expected.  | Price           | Below Expected |
| The brand image of the hotel <u>is below</u> what you would expect to stay at normally.   | Brand image     | Below Expected |
| The hotel engages in customer relationship building efforts <u>below what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Below Expected |

**Considering the profile of Hotel A described above, please answer the following questions.**

|  |                          |   |                       |   |   |   |   |
|--|--------------------------|---|-----------------------|---|---|---|---|
| <b>Overall Satisfaction</b>  | Strongly<br>Dissatisfied | → | Strongly<br>Satisfied |   |   |   |   |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1                        | 2 | 3                     | 4 | 5 | 6 | 7 |

**Assume you are paying for the hotel from personal funds.**

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel A</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel A if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel A compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

**Assume you are paying for the hotel from business funds.**

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel A</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel A if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel A compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

## Profile 2 (Hotel B)

Hotel B is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel is <u>farer</u> than you thought it would be from the airport.  | Convenience     | Below Expected |
| The hotel's quality is <u>same as</u> what you expected.  | Quality         | As Expected    |
| You were asked to pay a <u>lower price</u> for the room than what you expected.   | Price           | Above Expected |
| The brand image of the hotel is <u>below</u> what you would expect to stay at normally.   | Brand image     | Below Expected |
| The hotel engages in customer relationship building efforts <u>below what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Below Expected |

Considering the profile of Hotel B described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied → Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7                              |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel B</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel B if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel B compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel B</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel B if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel B compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

### Profile 3 (Hotel C)

Hotel C is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is farer</u> than you thought it would be from the airport.  | Convenience     | Below Expected |
| The hotel's quality <u>is above</u> what you expected.  | Quality         | Above Expected |
| You were asked to pay a price for the room <u>as you expected</u> .   | Price           | As Expected    |
| The brand image of the hotel <u>is below</u> what you would expect to stay at normally.   | Brand image     | Below Expected |
| The hotel engages in customer relationship building efforts <u>below what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Below Expected |

Considering the profile of Hotel C described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied $\longrightarrow$ Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7  |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel C</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel C if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel C compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel C</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel C if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel C compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

### Profile 4 (Hotel D)

Hotel D is described by 5 key features listed in the table below.

| Description   | Profile summary |                   |
|---|-----------------|-------------------|
|   | Attributes      | Level             |
| The hotel <u>is same as</u> you thought it would be from the airport.   | Convenience     | As<br>Expected    |
| The hotel's quality <u>is below</u> what you expected.  | Quality         | Below<br>Expected |
| You were asked to pay <u>a higher price</u> for the room than what you expected.  | Price           | Below<br>Expected |
| The brand image of the hotel <u>is above</u> what you would expect to stay at normally.   | Brand image     | Above<br>Expected |
| The hotel engages in customer relationship building efforts <u>as you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | As<br>Expected    |

Considering the profile of Hotel D described above, please answer the following questions.

|  |                          |   |                       |   |   |   |   |
|--|--------------------------|---|-----------------------|---|---|---|---|
| <b>Overall Satisfaction</b>  | Strongly<br>Dissatisfied | → | Strongly<br>Satisfied |   |   |   |   |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1                        | 2 | 3                     | 4 | 5 | 6 | 7 |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel D</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel D if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel D compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel D</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel D if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel D compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

### Profile 5 (Hotel E)

Hotel E is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is same as</u> you thought it would be from the airport.   | Convenience     | As Expected    |
| The hotel's quality <u>is same as</u> you expected.   | Quality         | As Expected    |
| You were asked to pay <u>a lower price</u> for the room than what you expected.   | Price           | Above Expected |
| The brand image of the hotel <u>is above</u> what you would expect to stay at normally.   | Brand image     | Above Expected |
| The hotel engages in customer relationship building efforts <u>as you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | As Expected    |

Considering the profile of Hotel E described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied $\longrightarrow$ Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1   2   3   4   5   6   7                                  |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel E</b> compared to your past experience with your typical hotel? | _____ (%)    |
| <b>How many nights would you desire to stay</b> in Hotel E if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel E compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel E</b> compared to your past experience with your typical hotel? | _____ (%)    |
| <b>How many nights would you desire to stay</b> in Hotel E if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel E compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

## Profile 6 (Hotel F)

Hotel F is described by 5 key features listed in the table below.

| Description   | Profile summary |                   |
|---|-----------------|-------------------|
|   | Attributes      | Level             |
| The hotel <u>is same as</u> you thought it would be from the airport.   | Convenience     | As<br>Expected    |
| The hotel's quality <u>is above</u> what you expected.  | Quality         | Above<br>Expected |
| You were asked to pay a price for the room <u>as you expected</u> .   | Price           | As<br>Expected    |
| The brand image of the hotel <u>is above</u> what you would expect to stay at normally.   | Brand image     | Above<br>Expected |
| The hotel engages in customer relationship building efforts <u>as you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | As<br>Expected    |

Considering the profile of Hotel F described above, please answer the following questions.

|  |                          |   |                       |   |   |   |   |
|--|--------------------------|---|-----------------------|---|---|---|---|
| <b>Overall Satisfaction</b>  | Strongly<br>Dissatisfied | → | Strongly<br>Satisfied |   |   |   |   |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1                        | 2 | 3                     | 4 | 5 | 6 | 7 |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel F</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel F if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel F compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel F</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel F if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel F compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

## Profile 7 (Hotel G)

Hotel G is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is closer</u> than you thought it would be from the airport.   | Convenience     | Above Expected |
| The hotel's quality <u>is below</u> what you expected.  | Quality         | Below Expected |
| You were asked to pay <u>a higher price</u> for the room than what you expected.  | Price           | Below Expected |
| The brand image of the hotel <u>is same as</u> you would expect to stay at normally.  | Brand image     | As Expected    |
| The hotel engages in customer relationship building efforts <u>above what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Above Expected |

Considering the profile of Hotel G described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied $\longrightarrow$ Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1   2   3   4   5   6   7                                  |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel G</b> compared to your past experience with your typical hotel? | _____ (%)    |
| <b>How many nights would you desire to stay</b> in Hotel G if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ___ (nights) |
| <b>How much would you be willing to pay</b> for Hotel G compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel G</b> compared to your past experience with your typical hotel? | _____ (%)    |
| <b>How many nights would you desire to stay</b> in Hotel G if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ___ (nights) |
| <b>How much would you be willing to pay</b> for Hotel G compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

## Profile 8 (Hotel H)

Hotel H is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is closer</u> than you thought it would be from the airport.   | Convenience     | Above Expected |
| The hotel's quality <u>is same as</u> you expected.   | Quality         | As Expected    |
| You were asked to pay <u>a lower price</u> for the room than what you expected.   | Price           | Above Expected |
| The brand image of the hotel <u>is same as</u> you would expect to stay at normally.  | Brand image     | As Expected    |
| The hotel engages in customer relationship building efforts <u>above what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Above Expected |

Considering the profile of Hotel H described above, please answer the following questions.

|  |                       |   |                    |   |   |   |   |
|--|-----------------------|---|--------------------|---|---|---|---|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied | → | Strongly Satisfied |   |   |   |   |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1                     | 2 | 3                  | 4 | 5 | 6 | 7 |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel H</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel H if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel H compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel H</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel H if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel H compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |



## Profile 9 (Hotel I)

Hotel I is described by 5 key features listed in the table below.

| Description   | Profile summary |                   |
|---|-----------------|-------------------|
|   | Attributes      | Level             |
| The hotel <u>is closer</u> than you thought it would be from the airport.   | Convenience     | Above<br>Expected |
| The hotel's quality <u>is above</u> what you expected.  | Quality         | Above<br>Expected |
| You were asked to pay a price for the room <u>as you expected</u> .   | Price           | As<br>Expected    |
| The brand image of the hotel <u>is same as</u> you would expect to stay at normally.  | Brand image     | As<br>Expected    |
| The hotel engages in customer relationship building efforts <u>above what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Above<br>Expected |

Considering the profile of Hotel I described above, please answer the following questions.

|  |                          |   |                       |   |   |   |   |
|--|--------------------------|---|-----------------------|---|---|---|---|
| <b>Overall Satisfaction</b>  | Strongly<br>Dissatisfied | → | Strongly<br>Satisfied |   |   |   |   |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1                        | 2 | 3                     | 4 | 5 | 6 | 7 |

Assume **you are paying for the hotel from personal funds.**

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel I</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel I if you had no constraints compared to the number of <u>nights</u> you actually stayed at your last typical hotel?                 | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel I compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume **you are paying for the hotel from business funds.**

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel I</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel I if you had no constraints compared to the number of <u>nights</u> you actually stayed at your last typical hotel?           | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel I compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

**VI. Please answer the following questions.**

- 1) **Age**
  - a. 21 – 24
  - b. 25 – 34
  - c. 35 – 44
  - d. 45 – 54
  - e. 55 – 64
  - f. 65 and higher
- 2) **Gender**
  - a. Male
  - b. Female
- 3) **Occupation**
  - a. Manager/Professional
  - b. Clerical/ Sales/Service
  - c. Not in workforce (e.g., Housewife, student, Retired, etc.)
  - d. Others
- 4) **Total annual household income from all sources (e.g., salary, alimony, etc.)**
  - a. Less than \$50K
  - b. \$ 50 – 74 K
  - c. \$ 75 – 99 K
  - d. \$ 100 – 149 K
  - e. \$ 150 – 199 K
  - f. \$ 200,000 and more
- 5) **Ethnic Background**
  - a. Caucasian (non-Hispanic)
  - b. African-American
  - c. Hispanic
  - d. Asian/Pacific Islander
  - e. Native American
  - f. Other
- 6) **Highest level of education completed:**
  - a. Some high school
  - b. High school graduate
  - c. Some college/ technical
  - d. College graduate
  - e. Post-graduate degree

**Profile 10 (Hotel A)**

Hotel A is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is farther</u> than you thought it would be from the airport.  | Convenience     | Below Expected |
| The hotel's quality <u>is below</u> what you expected.  | Quality         | Below Expected |
| You were asked to pay a price for the room <u>as you expected</u> .   | Price           | As Expected    |
| The brand image of the hotel <u>is above</u> what you would expect to stay at normally.   | Brand image     | Above Expected |
| The hotel engages in customer relationship building efforts <u>above what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Above Expected |

Considering the profile of Hotel A described above, please answer the following questions.

|  |                          |   |                       |   |   |   |   |
|--|--------------------------|---|-----------------------|---|---|---|---|
| <b>Overall Satisfaction</b>  | Strongly<br>Dissatisfied | → | Strongly<br>Satisfied |   |   |   |   |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1                        | 2 | 3                     | 4 | 5 | 6 | 7 |

Assume **you are paying for the hotel from personal funds.**

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel A</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel A if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel A compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume **you are paying for the hotel from business funds.**

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel A</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel A if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel A compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

## Profile 11 (Hotel B)

Hotel B is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is farer</u> than you thought it would be from the airport.  | Convenience     | Below Expected |
| The hotel's quality <u>is same as</u> what you expected.  | Quality         | As Expected    |
| You were asked to pay <u>a higher price</u> for the room than what you expected.  | Price           | Below Expected |
| The brand image of the hotel <u>is above</u> what you would expect to stay at normally.   | Brand image     | Above Expected |
| The hotel engages in customer relationship building efforts <u>above what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Above Expected |

Considering the profile of Hotel B described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied → Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7                              |

Assume **you are paying for the hotel from personal funds.**

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel B</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel B if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel B compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume **you are paying for the hotel from business funds.**

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel B</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel B if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel B compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

## Profile 12 (Hotel C)

Hotel C is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is farer</u> than you thought it would be from the airport.  | Convenience     | Below Expected |
| The hotel's quality <u>is above</u> what you expected.  | Quality         | Above Expected |
| You were asked to pay <u>a lower price</u> for the room than what you expected.   | Price           | Above Expected |
| The brand image of the hotel <u>is above</u> what you would expect to stay at normally.   | Brand image     | Above Expected |
| The hotel engages in customer relationship building efforts <u>above what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Above Expected |

Considering the profile of Hotel C described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied → Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7                              |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel C</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel C if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel C compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel C</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel C if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel C compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

### Profile 13 (Hotel D)

Hotel D is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is same as</u> you thought it would be from the airport.   | Convenience     | As Expected    |
| The hotel's quality <u>is below</u> what you expected.  | Quality         | Below Expected |
| You were asked to pay a price for the room <u>as you expected</u> .   | Price           | As Expected    |
| The brand image of the hotel <u>is same as</u> you would expect to stay at normally.  | Brand image     | As Expected    |
| The hotel engages in customer relationship building efforts <u>below what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Below Expected |

Considering the profile of Hotel D described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied $\longrightarrow$ Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7  |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel D</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel D if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel D compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel D</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel D if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel D compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

### Profile 14 (Hotel E)

Hotel E is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is same as</u> you thought it would be from the airport.   | Convenience     | As Expected    |
| The hotel's quality <u>is same as</u> you expected.   | Quality         | As Expected    |
| You were asked to pay <u>a higher price</u> for the room than what you expected.  | Price           | Below Expected |
| The brand image of the hotel <u>is same as</u> you would expect to stay at normally.  | Brand image     | As Expected    |
| The hotel engages in customer relationship building efforts <u>below what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Below Expected |

Considering the profile of Hotel E described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied $\longrightarrow$ Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? |  |
| 1  | 2  |
| 3  | 4  |
| 5  | 6  |
| 7  |  |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel E</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel E if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel E compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel E</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel E if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel E compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

## Profile 15 (Hotel F)

Hotel F is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is same as</u> you thought it would be from the airport.   | Convenience     | As Expected    |
| The hotel's quality <u>is above</u> what you expected.  | Quality         | Above Expected |
| You were asked to pay <u>a lower price</u> for the room than what you expected.   | Price           | Above Expected |
| The brand image of the hotel <u>is same as</u> you would expect to stay at normally.  | Brand image     | As Expected    |
| The hotel engages in customer relationship building efforts <u>below what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Below Expected |

Considering the profile of Hotel F described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied $\longrightarrow$ Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7  |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel F</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel F if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel F compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel F</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel F if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel F compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |



## Profile 16 (Hotel G)

Hotel G is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is closer</u> than you thought it would be from the airport.   | Convenience     | Above Expected |
| The hotel's quality <u>is below</u> what you expected.  | Quality         | Below Expected |
| You were asked to pay a price for the room <u>as you expected</u> .   | Price           | As Expected    |
| The brand image of the hotel <u>is below</u> what you would expect to stay at normally.   | Brand image     | Below Expected |
| The hotel engages in customer relationship building efforts <u>as you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | As Expected    |

Considering the profile of Hotel G described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied → Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7                              |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel G</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel G if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel G compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel G</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel G if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel G compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

### Profile 17 (Hotel H)

Hotel H is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is closer</u> than you thought it would be from the airport.   | Convenience     | Above Expected |
| The hotel's quality <u>is same as</u> you expected.   | Quality         | As Expected    |
| You were asked to pay <u>a higher price</u> for the room than what you expected.  | Price           | Below Expected |
| The brand image of the hotel <u>is below</u> what you would expect to stay at normally.   | Brand image     | Below Expected |
| The hotel engages in customer relationship building efforts <u>as you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | As Expected    |

Considering the profile of Hotel H described above, please answer the following questions.

|  |                       |   |                    |   |   |   |   |
|--|-----------------------|---|--------------------|---|---|---|---|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied | → | Strongly Satisfied |   |   |   |   |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1                     | 2 | 3                  | 4 | 5 | 6 | 7 |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel H</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel H if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel H compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel H</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel H if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel H compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

## Profile 18 (Hotel I)

Hotel I is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is closer than</u> you thought it would be from the airport.   | Convenience     | Above Expected |
| The hotel's quality <u>is above</u> what you expected.  | Quality         | Above Expected |
| You were asked to pay <u>a lower price</u> for the room than what you expected.   | Price           | Above Expected |
| The brand image of the hotel <u>is below</u> what you would expect to stay at normally.   | Brand image     | Below Expected |
| The hotel engages in customer relationship building efforts <u>as you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | As Expected    |

Considering the profile of Hotel I described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied $\longrightarrow$ Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7  |

Assume **you are paying for the hotel from personal funds.**

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel I</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel I if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel I compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume **you are paying for the hotel from business funds.**

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel I</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel I if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel I compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

**Profile 19 (Hotel A)**

Hotel A is described by 5 key features listed in the table below.

| Description  | Profile summary |                |
|--|-----------------|----------------|
|  | Attributes      | Level          |
| The hotel <u>is farther</u> than you thought it would be from the airport.   | Convenience     | Below Expected |
| The hotel's quality <u>is below</u> what you expected.   | Quality         | Below Expected |
| You were asked to pay a <u>lower price</u> for the room than what you expected.  | Price           | Above Expected |
| The brand image of the hotel <u>is same as</u> you would expect to stay at normally.   | Brand image     | As Expected    |
| The hotel engages in customer relationship building efforts <u>as what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | As Expected    |

Considering the profile of Hotel A described above, please answer the following questions.

|  |                       |   |                    |   |   |   |   |
|--|-----------------------|---|--------------------|---|---|---|---|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied | → | Strongly Satisfied |   |   |   |   |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1                     | 2 | 3                  | 4 | 5 | 6 | 7 |

Assume **you are paying for the hotel from personal funds.**

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel A</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel A if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel A compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume **you are paying for the hotel from business funds.**

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel A</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel A if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel A compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

## Profile 20 (Hotel B)

Hotel B is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is farer</u> than you thought it would be from the airport.  | Convenience     | Below Expected |
| The hotel's quality <u>is same as</u> what you expected.  | Quality         | As Expected    |
| You were asked to pay a price for the room <u>as you expected</u> .   | Price           | As Expected    |
| The brand image of the hotel <u>is same as</u> you would expect to stay at normally.  | Brand image     | As Expected    |
| The hotel engages in customer relationship building efforts <u>as you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | As Expected    |

Considering the profile of Hotel B described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied $\longrightarrow$ Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7  |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel B</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel B if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel B compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel B</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel B if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel B compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

## Profile 21 (Hotel C)

Hotel C is described by 5 key features listed in the table below.

| Description  | Profile summary |                |
|--|-----------------|----------------|
|  | Attributes      | Level          |
| The hotel <u>is farer</u> than you thought it would be from the airport.   | Convenience     | Below Expected |
| The hotel's quality <u>is above</u> what you expected.   | Quality         | Above Expected |
| You were asked to pay <u>a higher price</u> for the room than what you expected.   | Price           | Below Expected |
| The brand image of the hotel <u>is same as</u> you would expect to stay at normally.   | Brand image     | As Expected    |
| The hotel engages in customer relationship building efforts <u>as what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | As Expected    |

Considering the profile of Hotel C described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied $\longrightarrow$ Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7  |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel C</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel C if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel C compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel C</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel C if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel C compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

## Profile 22 (Hotel D)

Hotel D is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is same as</u> you thought it would be from the airport.   | Convenience     | As Expected    |
| The hotel's quality <u>is below</u> what you expected.  | Quality         | Below Expected |
| You were asked to pay <u>a lower price</u> for the room than what you expected.   | Price           | Above Expected |
| The brand image of the hotel <u>is below</u> what you would expect to stay at normally.   | Brand image     | Below Expected |
| The hotel engages in customer relationship building efforts <u>above what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Above Expected |

Considering the profile of Hotel D described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied → Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7                              |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel D</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel D if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel D compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel D</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel D if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel D compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

### Profile 23 (Hotel E)

Hotel E is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is same as</u> you thought it would be from the airport.   | Convenience     | As Expected    |
| The hotel's quality <u>is same as</u> you expected.   | Quality         | As Expected    |
| You were asked to pay a price for the room <u>as you expected</u> .   | Price           | As Expected    |
| The brand image of the hotel <u>is below</u> what you would expect to stay at normally.   | Brand image     | Below Expected |
| The hotel engages in customer relationship building efforts <u>above what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Above Expected |

Considering the profile of Hotel E described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied $\longrightarrow$ Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7  |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel E</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel E if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel E compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel E</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel E if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel E compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |



## Profile 24 (Hotel F)

Hotel F is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is same as</u> you thought it would be from the airport.   | Convenience     | As Expected    |
| The hotel's quality <u>is above</u> what you expected.  | Quality         | Above Expected |
| You were asked to pay <u>a higher price</u> for the room than what you expected.  | Price           | Below Expected |
| The brand image of the hotel <u>is below</u> what you would expect to stay at normally.   | Brand image     | Below Expected |
| The hotel engages in customer relationship building efforts <u>above what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Above Expected |

Considering the profile of Hotel F described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied → Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7                              |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel F</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel F if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel F compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel F</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel F if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel F compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

## Profile 25 (Hotel G)

Hotel G is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is closer</u> than you thought it would be from the airport.   | Convenience     | Above Expected |
| The hotel's quality <u>is below</u> what you expected.  | Quality         | Below Expected |
| You were asked to pay <u>a lower price</u> for the room than what you expected.   | Price           | Above Expected |
| The brand image of the hotel <u>is above</u> what you would expect to stay at normally.   | Brand image     | Above Expected |
| The hotel engages in customer relationship building efforts <u>below what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Below Expected |

Considering the profile of Hotel G described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied $\longrightarrow$ Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7  |

Assume you are paying for the hotel from personal funds.

|  |            |
|--|------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel G</b> compared to your past experience with your typical hotel? | _____(%)   |
| <b>How many nights would you desire to stay</b> in Hotel G if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | __(nights) |
| <b>How much would you be willing to pay</b> for Hotel G compared to what you actually paid for your typical hotel on your last visit?  | \$ _____   |

Assume you are paying for the hotel from business funds.

|  |            |
|--|------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel G</b> compared to your past experience with your typical hotel? | _____(%)   |
| <b>How many nights would you desire to stay</b> in Hotel G if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | __(nights) |
| <b>How much would you be willing to pay</b> for Hotel G compared to what you actually paid for your typical hotel on your last visit?  | \$ _____   |

## Profile 26 (Hotel H)

Hotel H is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is closer</u> than you thought it would be from the airport.   | Convenience     | Above Expected |
| The hotel's quality <u>is same as</u> what you expected.  | Quality         | As Expected    |
| You were asked to pay a price for the room <u>as you expected</u> .   | Price           | As Expected    |
| The brand image of the hotel <u>is above</u> what you would expect to stay at normally.   | Brand image     | Above Expected |
| The hotel engages in customer relationship building efforts <u>below what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Below Expected |

Considering the profile of Hotel H described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied → Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7                              |

Assume you are paying for the hotel from personal funds.

|  |            |
|--|------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel H</b> compared to your past experience with your typical hotel? | _____(%)   |
| <b>How many nights would you desire to stay</b> in Hotel H if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | __(nights) |
| <b>How much would you be willing to pay</b> for Hotel H compared to what you actually paid for your typical hotel on your last visit?  | \$ _____   |

Assume you are paying for the hotel from business funds.

|  |            |
|--|------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel H</b> compared to your past experience with your typical hotel? | _____(%)   |
| <b>How many nights would you desire to stay</b> in Hotel H if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | __(nights) |
| <b>How much would you be willing to pay</b> for Hotel H compared to what you actually paid for your typical hotel on your last visit?  | \$ _____   |

## Profile 27 (Hotel I)

Hotel I is described by 5 key features listed in the table below.

| Description   | Profile summary |                |
|---|-----------------|----------------|
|   | Attributes      | Level          |
| The hotel <u>is closer</u> than you thought it would be from the airport.   | Convenience     | Above Expected |
| The hotel's quality <u>is above</u> what you expected.  | Quality         | Above Expected |
| You were asked to pay <u>a higher price</u> for the room than what you expected.  | Price           | Below Expected |
| The brand image of the hotel <u>is above</u> what you would expect to stay at normally.   | Brand image     | Above Expected |
| The hotel engages in customer relationship building efforts <u>below what you expected</u> such as customer loyalty programs, reward programs, etc. | Relationship    | Below Expected |

Considering the profile of Hotel I described above, please answer the following questions.

|  |  |
|--|--|
| <b>Overall Satisfaction</b>  | Strongly Dissatisfied $\longrightarrow$ Strongly Satisfied |
| Compared to the typical hotel where you stay, how would you rate your perceived <b>overall satisfaction</b> with a hotel that has a profile as identified above? | 1 2 3 4 5 6 7  |

Assume you are paying for the hotel from personal funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you would consider switching your stay to Hotel I</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel I if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                        | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel I compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

Assume you are paying for the hotel from business funds.

|  |              |
|--|--------------|
| Given the identified profile of the hotel, <b>what is the probability % that you consider switching your stay to Hotel I</b> compared to your past experience with your typical hotel? | _____(%)     |
| <b>How many nights would you desire to stay</b> in Hotel I if you had no constraints compared to the number of nights you actually stayed at your last typical hotel?                  | ____(nights) |
| <b>How much would you be willing to pay</b> for Hotel I compared to what you actually paid for your typical hotel on your last visit?  | \$ _____     |

## **Appendix B**

### **Types of Customer Lifetime Value**

## **Appendix B**

### **Types of Customer Lifetime Value**

Recognizing the importance of CLV, there are several CLV modeling approaches and each CLV consists of various components to calculate CLV (Reinartz and Kumar, 2003; Gupta, Lehmann, and Stuart, 2004; Wangenheim, 2005; Gupta et al, 2006). This section identifies some of the most commonly used approaches.

#### **Gupta, Lehmann, and Stuart's (2004) & Reinartz and Kumar (2003)'s studies**

Gupta, Hanssens, Hardie, Kahn, Lin, and Ravishanker (2006) generally defined CLV as “the present value of all future profits obtained from a customer over his or her life of relationship with a firm” (p. 141). The fundamentals of CLV used the combination of ‘price paid by a customer at time  $t$  ( $p_t$ ),’ ‘direct cost of servicing the customer at time  $t$  ( $c_t$ ),’ ‘discount rate or cost of capital for the firm ( $i$ ),’ ‘probability of customer repeat buying or being “alive” at time  $t$  ( $r_t$ ),’ ‘acquisition cost ( $AC$ ),’ and ‘time horizon for estimating CLV ( $T$ ).’ Gupta et al. (2006) discussed the differences among different CLV modeling approaches even though the key substantive questions are the same (e.g. evaluating valuable customers, allocating resources, etc.). The studies of Gupta, Lehmann, and Stuart (2004) and Reinartz and Kumar (2003) used the fundamentals of CLV modeling. The formula derived by the above studies for CLV is shown below.

$$CLV = \sum_{t=0}^T \frac{(p_t - c_t)r_t}{(1 + i)^t} - AC$$

where

$p_t$  = price paid by a consumer at time  $t$ ,  
 $c_t$  = direct cost of servicing the customer at time  $t$ ,  
 $i$  = discount rate or cost of capital for the firm,  
 $r_t$  = probability of customer repeat buying or being  
 “alive” at time  $t$ ,  
 $AC$  = acquisition cost, and  
 $T$  = time horizon for estimating CLV.

### **Gupta and Lehmann’s (2003, 2005) study**

Gupta and Lehmann (2003, 2005) also showed that if margins ( $p - c$ ) and retention rates are constant over time and we use an infinite time horizon, then CLV simplifies to the expression described below. CLV simply becomes margin ( $m$ ) times a *margin multiple* ( $r/1 + i - r$ ). The formula of CLV is shown below.

$$CLV = \sum_{t=0}^{\infty} \frac{(p - c)r^t}{(1 + i)^t} = m \frac{r}{(1 + i - r)}$$

where

$pt$  = price paid by a consumer at time  $t$ ,  
 $ct$  = direct cost of servicing the customer at time  $t$ ,  
 $i$  = discount rate or cost of capital for the firm,  
 $rt$  = probability of customer repeat buying or being “alive” at time  $t$ ,  
 $AC$  = acquisition cost, and  
 $T$  = time horizon for estimating CLV.  
 margin ( $m$ ) times a margin multiple ( $r/1 + i - r$ ).

### **Rust, Lemon, and Zeithaml’s (2004) study**

Rust, Lemon, & Zeithaml’s (2004) study used the brand-switching matrices as a CLV model. Rust et al (2004) approach means that CLV is calculated by putting

information about the acquisition and retention of customers on competing brands in terms of brand switching. The Markov switching matrix models an individual customer's probability of switching from one brand to another on the basis of individual-level utilities. The lifetime value,  $CLV_{ij}$  of customer  $i$  to brand  $j$  is shown below.

$$CLV_{ij} = \sum_{t=0}^{T_{ij}} \frac{1}{(1 + d_j)^{t/f_i}} V_{ijt} \times \pi_{ijt} \times B_{ijt}$$

where,

- $T_{ij}$  number of purchases customer  $i$  makes during the specified time period
- $d_j$  firm  $j$ 's discount rate
- $f_i$  average number of purchases customer  $i$  makes in a unit time (e.g., per year)
- $V_{ijt}$  customer  $i$ 's expected purchase volume of brand  $j$  in purchase  $t$
- $\pi_{ijt}$  expected contribution margin per unit of brand  $j$  from customer  $i$  in purchase  $t$
- $B_{ijt}$  probability that customer  $i$  buys brand  $j$  in purchase  $t$

### Wangenheim's (2005) approach

Wangenheim (2005) aimed to examine how future customer transaction behavior and lifetime value can be forecasted by differentiating between *frequency of customer transactions* and *upgraded transactions*. The formula for calculating, using Wangenheim's (2005) study, is shown below.

$$CLV_i = \sum_{t=1}^T \frac{TNT_{it} [CM_{NRT} + (PUP_{it} \cdot \Delta CM)]}{(1 + d)^t}$$



where

- $CLV$ , = Lifetime value of customer  $I$ .
- $TNT$ , = Total number of transactions made by customer  $I$  in period  $t$ .
- $CM_{NRT}$  = Average contribution margin of base transaction.
- $PUP_{it}$  = Proportion of “upgrade” transactions by customer  $I$  in period  $t$ .
- $\Delta CM_{Up}$  = Additional contribution margin for high value transactions.
- $d$  = Discount rate.
- $t = 1 \dots T$  = Number of time periods considered.

### **Kumar & George’s (2006) approach**

Kumar and George (2006) presented two different aggregate and disaggregate level approaches. According to Kumar & George’s (2006) study, the aggregate-level approach means top-down approach where it is computed by using firm-level measures when the individual CLV data are not available, and therefore all the customers average CLV is calculated. On the other hand, the disaggregate-level approach, also called the bottom-up approach, is one where a firm calculates the CLV of all the customers first, and then aggregated them (Kumar & George, 2006).

Kumar and George (2006) identified both studies that used the aggregate-level approach such as Berger and Nasr (1998), Gupta and Lehmann (2003), Blattberg, Getz, and Thomas (2001) approach, and Rust, lemon, and Zeithaml (2004). On the other hand, Kumar and George (2006) identified Venkatesan and Kumar’s (2004) study as the disaggregate-level approach. Venkatesan and Kumar’s (2004) used a predicted purchase

frequency for the customers as a key element for calculating CLV. The CLV formula for Venkatesan and Kumar's (2004) study is shown as below.

$$CLV_i = \sum_{y=1}^{T_i} \frac{CM_{i,y}}{(1+r)^{y/\text{frequency}_i}} - \sum_{l=1}^n \frac{\sum_m c_{i,m,l} \times x_{i,m,l}}{(1+r)^{l-1}} \quad (9)$$

where,

|                      |  |
|----------------------|--|
| $CLV_i$              | lifetime value of customer $i$ ,   |
| $CM_{i,y}$           | predicted contribution margin from customer $i$ in purchase occasion $y$ ,               |
| $r$                  | discount rate,   |
| $c_{i,m,l}$          | unit marketing cost for customer $i$ in channel $m$ in year $l$ ,                        |
| $x_{i,m,l}$          | number of contacts to customer $i$ in channel $m$ in year $l$ ,                          |
| $\text{frequency}_i$ | predicted purchase frequency for customer $i$ ,  |
| $n$                  | number of years to forecast, and   |
| $T_i$                | predicted number of purchases made by customer $i$ until the end of the planning period. |

### Fader, Hardie, and Berger's (2004) approach

Fader, Hardie, and Berger (2004) used *Recency* and *Frequency* of purchase to calculate the average transaction value of the customer. Using the average value and applying a pre-determined discount rate, the authors suggested a formula for calculating CLV as shown below (Fader et al, 2004). The authors call this approach as probability models (Fader et al, 2004).

$$CLV(\delta|r, \alpha, s, \beta, p, q, \gamma, x, t_x, T) = \frac{\alpha^r \beta^s \delta^{s-1} \Gamma(r+x-1) \Psi(s, s; \delta(\beta+T))}{\Gamma(r)(\alpha+T)^{r+x+1} L(r, \alpha, s, \beta|x, t_x, T)} \times \frac{(\gamma + m_x x)p}{px + q - 1}$$

Where;

$(r, \alpha, s, \beta)$  are the Pareto/NBD parameters,

$(p, q, \gamma)$  are the parameters of the transaction value model,

$\psi(\cdot)$  is the confluent hypergeometric function of the second kind,  
 $L(\cdot)$  is the Pareto/NBD likelihood function.  
 “recency”  $t_x$ ,  
 “frequency”  $x$  (in a time period of length  $T$ ),  
 an average transaction value of  $mx$ ,  
 continuous compounding at rate of interest  $\delta$ :

### Persistence models

Gupta et al (2006) discussed that persistence models focuses on modeling the behavior of its components; acquisition, retention, and cross-selling (expansion or margin). Persistence modeling assumes that components can be treated as being part of a *dynamic system* when data is available for a long period of time. Such analysis would then be based on multivariate time series techniques, particularly, vectorautoregressive (VAR) Gupta et al (2006).

Yoo and Hanssens (2005) used in a CLV context to measure the impact of advertising, discounting, and product quality on Customer Equity. Villanueva, Yoo, and Hanssens (2006) also examined the differences in CLV among different customer acquisition methods. The persistence model included three steps; 1) the examination of the evolution of each system’s variable over time; 2) the estimation of the VAR model, typically with least squares methods; and 3) the derivation of the impulse response functions of customers (Dekimpe & Hanssens, 2004). Villanueva, Yoo, and Hanssens’s (2006) study presents the VAR model as below:

$$\begin{pmatrix} AM_t \\ AW_t \\ V_t \end{pmatrix} = \begin{pmatrix} a_{10} \\ a_{20} \\ a_{30} \end{pmatrix} + \sum_{l=1}^p \begin{pmatrix} a_{11}^l & a_{12}^l & a_{13}^l \\ a_{21}^l & a_{22}^l & a_{23}^l \\ a_{31}^l & a_{32}^l & a_{33}^l \end{pmatrix} \begin{pmatrix} AM_{t-l} \\ AW_{t-l} \\ V_{t-l} \end{pmatrix} + \begin{pmatrix} e_{1t} \\ e_{2t} \\ e_{3t} \end{pmatrix}$$

Where;

$AM$  stands for the number of customers acquired through the firm's marketing actions,  $AW$  stands for the number of customers acquired from word of mouth, and  $V$  is the firm's performance.

The subscript  $t$  stands for time,

$p$  is the lag order of the model.

In this VAR model,  $(e1t, e2t, e3t)'$  are white-noise disturbances distributed as  $N(0, \Sigma)$ .

The direct effects of acquisition on firm performance are captured by  $a31, a32$ .

The cross effects among acquisition methods are estimated by  $a12, a21$ ;

performance feedback effects by  $a13, a23$ ; and finally, reinforcement effects by  $a11, a22, a33$ .

Note that, as with all VAR models, instantaneous effects are reflected in the variance-covariance matrix of the residuals ( $\Sigma$ ).

### **Other models**

Gupta et al (2006) identified that other CLV modeling such as: RFM models, Econometric models, Computer Science models. The RFM model creates "cells" or groups of customers on three variables such as Recency, Frequency, and Monetary. The simplest models classify customers into five groups based on each of these three variables (e.g.  $5 \times 5 \times 5$  or 125 cells). The Econometric model is analyzed by using customer acquisition, retention, and expansion; then, combining them to estimate CLV. Regarding Computer Science Models, Gupta et al (2006) mentioned that computer science literature emphasize predictive ability such as neural network models, decision tree models etc.

## **Appendix C**

### **Descriptive Statistics of 27 Hotel Profiles**

## Appendix C

**Table C1. Descriptive Statistics of Part-Worth by 27 Hotel Profiles**

| <b>Profile Number</b> | <b>N</b> | <b>Mean<sup>a</sup></b> | <b>STD</b> | <b>Rank</b> |
|-----------------------|----------|-------------------------|------------|-------------|
| 1                     | 78       | 0.34                    | 0.23       | 27          |
| 2                     | 73       | 0.36                    | 0.22       | 25          |
| 3                     | 74       | 0.35                    | 0.22       | 26          |
| 4                     | 72       | 0.39                    | 0.23       | 20          |
| 5                     | 79       | 0.40                    | 0.23       | 19          |
| 6                     | 70       | 0.38                    | 0.24       | 21          |
| 7                     | 74       | 0.37                    | 0.23       | 22          |
| 8                     | 71       | 0.37                    | 0.24       | 23          |
| 9                     | 74       | 0.37                    | 0.25       | 24          |
| 10                    | 69       | 0.51                    | 0.20       | 12          |
| 11                    | 64       | 0.50                    | 0.20       | 13          |
| 12                    | 72       | 0.48                    | 0.20       | 15          |
| 13                    | 70       | 0.48                    | 0.20       | 16          |
| 14                    | 68       | 0.48                    | 0.18       | 17          |
| 15                    | 69       | 0.48                    | 0.18       | 18          |
| 16                    | 64       | 0.53                    | 0.20       | 11          |
| 17                    | 72       | 0.54                    | 0.19       | 10          |
| 18                    | 66       | 0.50                    | 0.20       | 14          |
| 19                    | 61       | 0.64                    | 0.20       | 2           |
| 20                    | 68       | 0.65                    | 0.20       | 1           |
| 21                    | 59       | 0.64                    | 0.18       | 3           |
| 22                    | 63       | 0.63                    | 0.19       | 4           |
| 23                    | 59       | 0.62                    | 0.22       | 5           |
| 24                    | 65       | 0.62                    | 0.18       | 6           |
| 25                    | 65       | 0.61                    | 0.21       | 7           |
| 26                    | 61       | 0.60                    | 0.20       | 9           |
| 27                    | 62       | 0.61                    | 0.20       | 8           |

Note:

<sup>a</sup> Part-worth was calculated by weighted scores and 3 levels (below expected, as expected, and above expected) of the five CE drivers.

<sup>b</sup> Please refer the description of 27 profiles in the methodology of Chapter 3 and 9 profiles in the 3 sets of surveys of Appendix A.

<sup>c</sup>  $N = 1842$  (Each respondent answered 9 hotel profiles. Thus, the total number was increased.)

**Table C2. Descriptive Statistics of Dependent Variables by 29 Hotel Profiles**

| Profile | Mean /SD | Personal funding    |             |                | Business funding    |             |                |
|---------|----------|---------------------|-------------|----------------|---------------------|-------------|----------------|
|         |          | Brand Switching (%) | Room-nights | Room rate (\$) | Brand Switching (%) | Room-nights | Room rate (\$) |
| 1       | Mean     | 0.83                | 2.23        | 66.67          | -0.63               | 2.42        | 71.88          |
|         | SD       | 56.26               | 2.42        | 46.22          | 54.52               | 2.53        | 56.41          |
| 2       | Mean     | 18.14               | 2.16        | 56.4           | 21.4                | 2.49        | 57.56          |
|         | SD       | 47.32               | 2.56        | 40.12          | 45.54               | 2.53        | 39.92          |
| 3       | Mean     | 4.55                | 2.02        | 50.57          | 4.77                | 2.48        | 62.5           |
|         | SD       | 49.20               | 2.37        | 41.93          | 51.74               | 2.55        | 48.38          |
| 4       | Mean     | 19.15               | 2.49        | 65.96          | 13.19               | 2.68        | 73.4           |
|         | SD       | 45.34               | 2.54        | 46.46          | 49.04               | 2.66        | 50.65          |
| 5       | Mean     | 20.23               | 2.09        | 53.49          | 20.23               | 2.44        | 64.53          |
|         | SD       | 49.26               | 1.93        | 36.02          | 50.50               | 2.64        | 46.04          |
| 6       | Mean     | 13.73               | 2.57        | 73.08          | 11.37               | 2.84        | 79.9           |
|         | SD       | 44.04               | 2.59        | 60.71          | 45.83               | 2.84        | 64.42          |
| 7       | Mean     | 6.32                | 2.26        | 69.08          | 10.53               | 2.45        | 81.58          |
|         | SD       | 50.85               | 2.21        | 60.53          | 49.75               | 2.41        | 60.60          |
| 8       | Mean     | 10.21               | 2.51        | 73.4           | 8.09                | 2.6         | 78.19          |
|         | SD       | 42.71               | 2.19        | 56.72          | 42.00               | 2.16        | 52.03          |
| 9       | Mean     | 11.28               | 2.31        | 61.54          | 12.82               | 2.51        | 70.51          |
|         | SD       | 47.91               | 2.07        | 42.86          | 51.14               | 2.21        | 46.20          |
| 10      | Mean     | 23.94               | 2.61        | 71.21          | 25.76               | 3           | 79.55          |
|         | SD       | 48.54               | 2.16        | 64.08          | 50.50               | 2.66        | 68.88          |
| 11      | Mean     | 7.5                 | 2.88        | 82.5           | 2.75                | 2.9         | 82.5           |
|         | SD       | 33.95               | 2.36        | 59.97          | 35.08               | 2.35        | 59.16          |
| 12      | Mean     | 14.59               | 2.24        | 62.16          | 10.81               | 2.54        | 67.57          |
|         | SD       | 49.53               | 2.11        | 47.00          | 52.46               | 2.36        | 55.24          |
| 13      | Mean     | -0.24               | 2.4         | 71.43          | -3.81               | 2.5         | 66.67          |
|         | SD       | 43.70               | 2.58        | 56.73          | 46.64               | 2.57        | 54.57          |
| 14      | Mean     | 24.87               | 2.69        | 60.26          | 26.41               | 2.82        | 66.03          |
|         | SD       | 49.04               | 2.89        | 42.04          | 51.68               | 2.81        | 48.49          |
| 15      | Mean     | 13.68               | 2.82        | 70.42          | 12.63               | 3.08        | 75.03          |
|         | SD       | 46.47               | 2.88        | 55.49          | 48.81               | 3.14        | 58.78          |
| 16      | Mean     | 28.25               | 3.32        | 67.5           | 29.5                | 3.45        | 78.12          |
|         | SD       | 38.89               | 2.92        | 47.77          | 37.21               | 2.77        | 49.74          |
| 17      | Mean     | 19.21               | 2.32        | 57.92          | 21.84               | 2.95        | 71.74          |
|         | SD       | 57.49               | 2.48        | 58.82          | 55.40               | 3.05        | 64.32          |
| 18      | Mean     | 6.34                | 2.61        | 64.02          | 13.9                | 2.9         | 67.07          |
|         | SD       | 55.67               | 3.15        | 59.96          | 52.72               | 3.11        | 59.80          |
| 19      | Mean     | 25.14               | 3.71        | 71.43          | 28.29               | 3.89        | 84.29          |
|         | SD       | 35.35               | 3.04        | 44.20          | 41.69               | 2.99        | 54.60          |

**Table C2. Descriptive Statistics of Dependent Variables by 29 Hotel Profiles**  
(continued)

| Profile | Mean /SD | Personal funding    |             |                | Business funding    |             |                |
|---------|----------|---------------------|-------------|----------------|---------------------|-------------|----------------|
|         |          | Brand Switching (%) | Room-nights | Room rate (\$) | Brand Switching (%) | Room-nights | Room rate (\$) |
| 20      | Mean     | 27.35               | 2.97        | 75.76          | 27.35               | 3.71        | 86.06          |
|         | SD       | 49.81               | 3.01        | 67.07          | 51.54               | 3.75        | 77.72          |
| 21      | Mean     | 24.72               | 3.03        | 74.31          | 20                  | 2.83        | 88.19          |
|         | SD       | 32.73               | 2.50        | 60.20          | 39.06               | 2.29        | 65.05          |
| 22      | Mean     | 21.11               | 3.15        | 80.59          | 20.74               | 3.56        | 88.93          |
|         | SD       | 45.69               | 3.01        | 70.92          | 50.91               | 3.25        | 76.77          |
| 23      | Mean     | 14.24               | 2.94        | 91.67          | 13.03               | 3.12        | 103.03         |
|         | SD       | 40.00               | 2.36        | 68.37          | 45.17               | 2.34        | 70.64          |
| 24      | Mean     | 12.86               | 2.11        | 70.54          | 9.29                | 2.32        | 75.89          |
|         | SD       | 37.80               | 1.71        | 50.49          | 43.46               | 1.81        | 54.64          |
| 25      | Mean     | 12.29               | 2.74        | 77.86          | 9.43                | 3.03        | 80.71          |
|         | SD       | 41.59               | 2.47        | 59.95          | 45.89               | 2.74        | 62.45          |
| 26      | Mean     | 34.19               | 3.26        | 70.97          | 37.74               | 3.39        | 74.19          |
|         | SD       | 55.60               | 3.44        | 49.20          | 51.94               | 3.55        | 50.20          |
| 27      | Mean     | 5.59                | 2.53        | 63.97          | 7.35                | 2.85        | 73.56          |
|         | SD       | 46.00               | 2.92        | 55.11          | 46.34               | 3.01        | 57.81          |

Note:

<sup>a</sup> Please refer the description of 27 profiles in the methodology of Chapter 3 and 9 profiles in the 3 sets of surveys of Appendix A.

<sup>b</sup>  $N = 1041$  (Each respondent answered 9 hotel profiles. Thus, the total number was increased.)



## **Appendix D**

### **Population for Calculating CE**

## Appendix D

Based on the population in the hotel industry by Smith Travel Research (2008), the total room-nights per year were calculated in the following formula: 4,476,192 (Total number of rooms)  $\times$  63.1 (average occupancy rate)  $\times$  365 (days) = 1,030,934,160). The final population for calculating CE was obtained through three steps in the following.

### Step 1

Table D1. Population by the CE-based Segments based on percentage of Survey Participants

|                  | <b>N</b> | <b>Percentage (%)</b> | <b>Room-Nights</b> |
|------------------|----------|-----------------------|--------------------|
| Cluster 1 (RSCS) | 32       | 18                    | 188,394,060        |
| Cluster 2 (CSCS) | 22       | 13                    | 135,408,230        |
| Cluster 3 (QSCS) | 39       | 22                    | 229,605,260        |
| Cluster 4 (BSCS) | 31       | 18                    | 182,506,745        |
| Cluster 5 (PSCS) | 51       | 29                    | 295,019,864        |
| <i>Total</i>     | 175      | 100                   | 1,030,934,160      |

### Step 2

Table D2. Population by the CE-based Segments and Hotel type

| <b>CE-based Segments</b> | <b>Hotel Type</b> |                  |                 |               |
|--------------------------|-------------------|------------------|-----------------|---------------|
|                          | <b>Budget</b>     | <b>Mid-Price</b> | <b>High-End</b> | <b>Luxury</b> |
| Cluster 1 (RSCS)         | 7,405,427         | 5,299,735        | 10,364,241      | 30,417,791    |
| Cluster 2 (CSCS)         | 22,031,558        | 10,189,957       | 17,476,956      | 15,419,312    |
| Cluster 3 (QSCS)         | 38,644,935        | 5,486,468        | 7,594,650       | 6,403,745     |
| Cluster 4 (BSCS)         | 14,218,420        | 4,096,762        | 13,589,246      | 1,659,152     |
| Cluster 5 (PSCS)         | 23,333,423        | 5,946,834        | 11,023,345      | 11,054,315    |
| <i>Sub Total</i>         | 105,633,764       | 31,019,757       | 60,048,439      | 64,954,316    |
| <i>Percentage</i>        | 40%               | 12%              | 23%             | 25%           |

**Step 3**

Table D3. Population by the CE-based Segments and Hotel type in terms of key five CE drivers

| CE-based Segments   | CE Drivers       | Hotel Type |            |            |            |
|---------------------|------------------|------------|------------|------------|------------|
|                     |                  | Budget     | Mid-Price  | High-End   | Luxury     |
| Cluster 1<br>(RSCS) | Convenience      | 1,481,085  | 1,059,947  | 1,899,765  | 1,520,890  |
|                     | Quality          | 1,629,194  | 1,131,493  | 2,360,974  | 7,604,448  |
|                     | Price            | 2,073,520  | 1,153,222  | 1,784,722  | 7,604,448  |
|                     | Brand Image      | 962,705    | 657,697    | 1,899,765  | 4,562,669  |
|                     | Relationship     | 1,258,923  | 1,296,845  | 2,417,978  | 9,125,337  |
|                     | <i>Sub Total</i> | 7,405,427  | 5,299,205  | 10,363,205 | 30,417,791 |
| Cluster 2<br>(CSCS) | Convenience      | 11,383,706 | 3,600,112  | 7,228,469  | 6,597,410  |
|                     | Quality          | 3,672,661  | 2,671,807  | 4,687,320  | 3,582,934  |
|                     | Price            | 3,672,661  | 2,671,807  | 3,654,432  | 3,279,174  |
|                     | Brand Image      | 1,835,229  | 679,670    | 1,223,387  | 1,130,750  |
|                     | Relationship     | 1,469,505  | 566,562    | 683,349    | 829,559    |
|                     | <i>Sub Total</i> | 22,033,762 | 10,189,957 | 17,476,956 | 15,419,826 |
| Cluster 3<br>(QSCS) | Convenience      | 4,830,617  | 833,395    | 1,076,162  | 1,280,749  |
|                     | Quality          | 17,873,283 | 2,672,459  | 3,860,361  | 3,842,247  |
|                     | Price            | 11,593,481 | 1,300,842  | 1,487,032  | 640,375    |
|                     | Brand Image      | 1,932,247  | 350,037    | 506,563    | 480,281    |
|                     | Relationship     | 2,415,308  | 329,188    | 664,532    | 160,094    |
|                     | <i>Sub Total</i> | 38,644,935 | 5,485,920  | 7,594,650  | 6,403,745  |
| Cluster 4<br>(BSCS) | Convenience      | 2,900,558  | 693,172    | 2,717,849  | 497,746    |
|                     | Quality          | 3,270,237  | 1,031,155  | 3,544,075  | 539,224    |
|                     | Price            | 3,952,721  | 921,771    | 3,397,312  | 66,366     |
|                     | Brand Image      | 2,729,937  | 1,058,194  | 2,944,790  | 414,788    |
|                     | Relationship     | 1,364,968  | 392,470    | 985,220    | 141,028    |
|                     | <i>Sub Total</i> | 14,218,420 | 4,096,762  | 13,589,246 | 1,659,152  |
| Cluster 5<br>(PSCS) | Convenience      | 4,200,016  | 1,225,048  | 2,344,666  | 2,206,073  |
|                     | Quality          | 4,823,019  | 1,427,835  | 2,905,754  | 2,617,662  |
|                     | Price            | 11,356,377 | 2,401,926  | 4,299,105  | 4,718,719  |
|                     | Brand Image      | 1,477,006  | 450,770    | 671,322    | 736,954    |
|                     | Relationship     | 1,477,006  | 441,255    | 801,397    | 774,539    |
|                     | <i>Sub Total</i> | 23,333,423 | 5,946,834  | 11,022,243 | 11,053,947 |

**Appendix E**  
**Results of Calculating CE**

## Appendix E

Table E1. Customer Equity

| CE-based Segments | Funding Sources | Hotel Type | CE Drivers <sup>a</sup> | Initial CLVs | New CLVs       | Delta CLV     | POP <sup>b</sup> | Initial CE <sup>c</sup> | New CE <sup>c</sup>    | Delta CE <sup>c</sup>  |
|-------------------|-----------------|------------|-------------------------|--------------|----------------|---------------|------------------|-------------------------|------------------------|------------------------|
| Cluster1 (RSCS)   | Personal funds  | Budget     | B2                      | \$ 2,284.37  | \$ 5,698.17    | \$ 3,413.80   | 962,705          | \$ 2,199,174,420.85     | \$ 5,485,656,749.85    | \$ 3,286,482,329.00    |
|                   |                 | Mid-price  | C2                      | \$ 2,798.36  | \$ 9,789.50    | \$ 6,991.14   | 1,059,947        | \$ 2,966,113,286.92     | \$ 10,376,351,156.50   | \$ 7,410,237,869.58    |
|                   |                 | High-end   | P2                      | \$ 3,628.77  | \$ 3,957.82    | \$ 329.05     | 1,784,722        | \$ 6,476,345,651.94     | \$ 7,063,608,426.04    | \$ 587,262,774.10      |
|                   |                 |            | B2                      | \$ 3,628.77  | \$ 6,340.21    | \$ 2,711.44   | 1,899,765        | \$ 6,893,810,239.05     | \$ 12,044,909,050.65   | \$ 5,151,098,811.60    |
|                   |                 |            | R2                      | \$ 3,628.77  | \$ 4,327.88    | \$ 699.11     | 2,417,978        | \$ 8,774,286,027.06     | \$ 10,464,718,626.64   | \$ 1,690,432,599.58    |
|                   | Business funds  | Budget     | B2                      | \$ 2,284.37  | \$ (10,392.59) | \$(12,676.96) | 962,705          | \$ 2,199,174,420.85     | \$ (10,004,998,355.95) | \$ (12,204,172,776.80) |
|                   |                 | High-end   | C1                      | \$ 3,628.77  | \$ (6,933.53)  | \$(10,562.30) | 1,899,765        | \$ 6,893,810,239.05     | \$ (13,172,077,620.45) | \$ (20,065,887,859.50) |
|                   |                 |            | C2                      | \$ 3,628.77  | \$ (6,904.76)  | \$(10,533.53) | 1,899,765        | \$ 6,893,810,239.05     | \$ (13,117,421,381.40) | \$ (20,011,231,620.45) |
| Cluster 2 (CSCS)  | Personal funds  | Budget     | Q1                      | \$ 709.09    | \$ 765.63      | \$ 56.54      | 3,672,661        | \$ 2,604,247,188.49     | \$ 2,811,899,441.43    | \$ 207,652,252.94      |
|                   |                 |            | R2                      | \$ 709.09    | \$ 793.70      | \$ 84.61      | 1,469,505        | \$ 1,042,011,300.45     | \$ 1,166,346,118.50    | \$ 124,334,818.05      |
|                   |                 | High-end   | C2                      | \$ 2,068.11  | \$ 3,141.67    | \$ 1,073.56   | 7,228,469        | \$ 14,949,269,023.59    | \$ 22,709,464,203.23   | \$ 7,760,195,179.64    |
|                   |                 |            | P1                      | \$ 2,068.11  | \$ 2,705.85    | \$ 637.74     | 3,654,432        | \$ 7,557,767,363.52     | \$ 9,888,344,827.20    | \$ 2,330,577,463.68    |
|                   | Business funds  | High-end   | P1                      | \$ 2,068.11  | \$ 2,742.54    | \$ 674.43     | 3,654,432        | \$ 7,557,767,363.52     | \$ 10,022,425,937.28   | \$ 2,464,658,573.76    |
| Cluster 3 (QSCS)  | Personal funds  | High-end   | P2                      | \$ 5,963.82  | \$ 15,940.57   | \$ 9,976.75   | 1,487,032        | \$ 8,868,391,182.24     | \$ 23,704,137,688.24   | \$ 14,835,746,506.00   |
|                   | Business funds  | Budget     | P2                      | \$ 364.81    | \$ 1,833.42    | \$ 1,468.61   | 11,593,481       | \$ 4,229,417,803.61     | \$ 21,255,719,935.02   | \$ 17,026,302,131.41   |
|                   |                 | High-end   | B2                      | \$ 5,963.82  | \$ 15,811.74   | \$ 9,847.92   | 506,563          | \$ 3,021,050,550.66     | \$ 8,009,642,449.62    | \$ 4,988,591,898.96    |
|                   |                 |            | R2                      | \$ 5,963.82  | \$ 18,099.51   | \$ 12,135.69  | 664,532          | \$ 3,963,149,232.24     | \$ 12,027,703,579.32   | \$ 8,064,554,347.08    |

Table E2. Customer Equity (continued)

| CE-based Segments   | Funding Sources | Hotel Type     | CE Drivers <sup>a</sup> | Initial CLVs | New CLVs       | Delta CLV      | POP <sup>b</sup>     | Initial CE <sup>c</sup> | New CE <sup>c</sup>    | Delta CE <sup>c</sup>  |                       |
|---------------------|-----------------|----------------|-------------------------|--------------|----------------|----------------|----------------------|-------------------------|------------------------|------------------------|-----------------------|
| Cluster 4<br>(BSCS) | Personal funds  | Budget         | C1                      | \$ 4,872.87  | \$ 1,796.66    | \$ (3,076.21)  | 2,900,558            | \$ 14,134,042,061.46    | \$ 5,211,316,536.28    | \$ (8,922,725,525.18)  |                       |
|                     |                 |                | C2                      | \$ 4,872.87  | \$ 3,900.83    | \$ (972.04)    | 2,900,558            | \$ 14,134,042,061.46    | \$ 11,314,583,663.14   | \$ (2,819,458,398.32)  |                       |
|                     |                 | Mid-price      | P1                      | \$ 3,518.89  | \$ 7,139.65    | \$ 3,620.76    | 921,771              | \$ 3,243,610,754.19     | \$ 6,581,122,320.15    | \$ 3,337,511,565.96    |                       |
|                     |                 |                | B2                      | \$ 3,518.89  | \$ 5,945.29    | \$ 2,426.40    | 1,058,194            | \$ 3,723,668,284.66     | \$ 6,291,270,206.26    | \$ 2,567,601,921.60    |                       |
|                     |                 | High-end       | Q2                      | \$ 4,626.41  | \$ 9,383.54    | \$ 4,757.13    | 3,544,075            | \$ 16,396,344,020.75    | \$ 33,255,969,525.50   | \$ 16,859,625,504.75   |                       |
|                     |                 |                | P2                      | \$ 4,626.41  | \$ 9,377.90    | \$ 4,751.49    | 3,397,312            | \$ 15,717,358,209.92    | \$ 31,859,652,204.80   | \$ 16,142,293,994.88   |                       |
|                     | B2              |                | \$ 4,626.41             | \$ 5,514.66  | \$ 888.25      | 2,944,790      | \$ 13,623,805,903.90 | \$ 16,239,515,621.40    | \$ 2,615,709,717.50    |                        |                       |
|                     |                 |                |                         |              |                |                |                      |                         |                        |                        |                       |
|                     | Business funds  | Budget         | C1                      | \$ 4,872.87  | \$ 1,152.50    | \$ (3,720.37)  | 2,900,558            | \$ 14,134,042,061.46    | \$ 3,342,893,095.00    | \$ (10,791,148,966.46) |                       |
|                     |                 |                | C2                      | \$ 4,872.87  | \$ 3,715.34    | \$ (1,157.53)  | 2,900,558            | \$ 14,134,042,061.46    | \$ 10,776,559,159.72   | \$ (3,357,482,901.74)  |                       |
|                     |                 |                | B1                      | \$ 4,872.87  | \$ 3,674.84    | \$ (1,198.03)  | 2,729,937            | \$ 13,302,628,109.19    | \$ 10,032,081,685.08   | \$ (3,270,546,424.11)  |                       |
|                     |                 |                | R1                      | \$ 4,872.87  | \$ 2,632.34    | \$ (2,240.53)  | 1,364,968            | \$ 6,651,311,618.16     | \$ 3,593,059,865.12    | \$ (3,058,251,753.04)  |                       |
|                     |                 |                | R2                      | \$ 4,872.87  | \$ 2,135.92    | \$ (2,736.95)  | 1,364,968            | \$ 6,651,311,618.16     | \$ 2,915,462,450.56    | \$ (3,735,849,167.60)  |                       |
|                     |                 | Mid-price      | P1                      | \$ 3,518.89  | \$ 7,705.61    | \$ 4,186.72    | 921,771              | \$ 3,243,610,754.19     | \$ 7,102,807,835.31    | \$ 3,859,197,081.12    |                       |
|                     |                 |                | B1                      | \$ 3,518.89  | \$ 4,756.30    | \$ 1,237.41    | 1,058,194            | \$ 3,723,668,284.66     | \$ 5,033,088,122.20    | \$ 1,309,419,837.54    |                       |
|                     |                 |                | R2                      | \$ 3,518.89  | \$ 7,732.20    | \$ 4,213.31    | 392,470              | \$ 1,381,058,758.30     | \$ 3,034,656,534.00    | \$ 1,653,597,775.70    |                       |
|                     |                 | High-end       | C1                      | \$ 4,626.41  | \$ 5,445.10    | \$ 818.69      | 2,717,849            | \$ 12,573,883,792.09    | \$ 14,798,959,589.90   | \$ 2,225,075,797.81    |                       |
|                     |                 |                | Q2                      | \$ 4,626.41  | \$ 10,828.88   | \$ 6,202.47    | 3,544,075            | \$ 16,396,344,020.75    | \$ 38,378,362,886.00   | \$ 21,982,018,865.25   |                       |
|                     |                 |                | P2                      | \$ 4,626.41  | \$ 10,827.75   | \$ 6,201.34    | 3,397,312            | \$ 15,717,358,209.92    | \$ 36,785,245,008.00   | \$ 21,067,886,798.08   |                       |
|                     |                 |                | B2                      | \$ 4,626.41  | \$ 5,437.76    | \$ 811.35      | 2,944,790            | \$ 13,623,805,903.90    | \$ 16,013,061,270.40   | \$ 2,389,255,366.50    |                       |
| Cluster 5<br>(PSCS) |                 | Personal funds | Budget                  | Q1           | \$ 399.13      | \$ 565.23      | \$ 166.10            | 4,823,019               | \$ 1,925,011,573.47    | \$ 2,726,115,029.37    | \$ 801,103,455.90     |
|                     |                 |                | Mid-price               | P2           | \$ 5,221.53    | \$ 2,347.38    | \$ (2,874.15)        | 2,401,926               | \$ 12,541,728,666.78   | \$ 5,638,233,053.88    | \$ (6,903,495,612.90) |
|                     | High-end        |                | C1                      | \$ 4,046.16  | \$ (13,271.15) | \$ (17,317.32) | 2,344,666            | \$ 9,486,893,782.56     | \$ (31,116,414,185.90) | \$ (40,603,331,415.12) |                       |
|                     |                 |                | Q2                      | \$ 4,046.16  | \$ (13,199.80) | \$ (17,245.96) | 2,905,754            | \$ 11,757,145,604.64    | \$ (38,355,371,649.20) | \$ (50,112,517,253.84) |                       |
|                     | Business funds  | Budget         | Q1                      | \$ 399.13    | \$ 596.21      | \$ 197.08      | 4,823,019            | \$ 1,925,011,573.47     | \$ 2,875,532,157.99    | \$ 950,520,584.52      |                       |

Notes:

<sup>a</sup> In terms of the marketing effort responsiveness, drivers were represented in the following categories: C1 (Convenience: As expected), C2 (Convenience: Above expected), Q1 (Quality: As expected), Q2 (Quality: Above expected), P1 (Price: As expected), P2 (Price: Above expected), B1 (Brand Image: As expected), B2 (Brand Image: Above expected), R1 (Relationship: As expected), and R2 (Relationship: Above expected).

<sup>b</sup> POP was derived from the total population of the hotel industry by hotel type as well as five CE drivers. Please refer Appendix B

<sup>c</sup> The values of actual Initial CE, New CE, and Delta CE were computed by multiplying initial CLVs, New CLVs, and Delta CLVs and POP.

## **Appendix F**

### **Results of @Risk® simulation Graphs**

## Appendix F

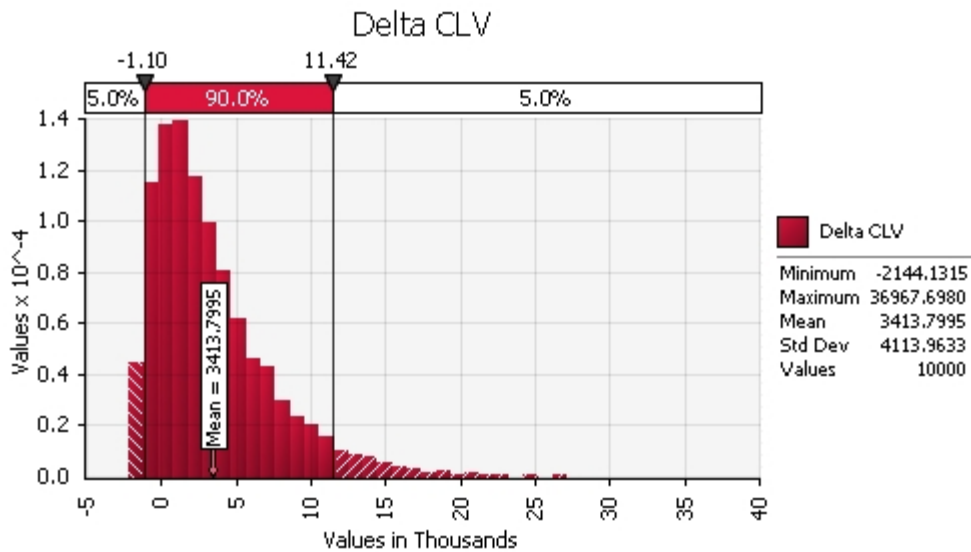
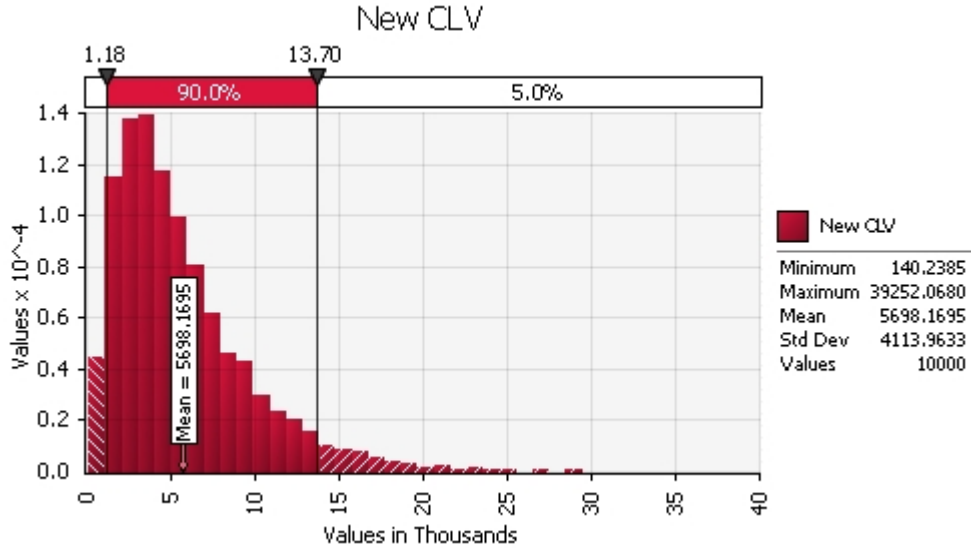
### 1. Clusters and Hotel Type

#### 1.1. Cluster 1 by Hotel Type

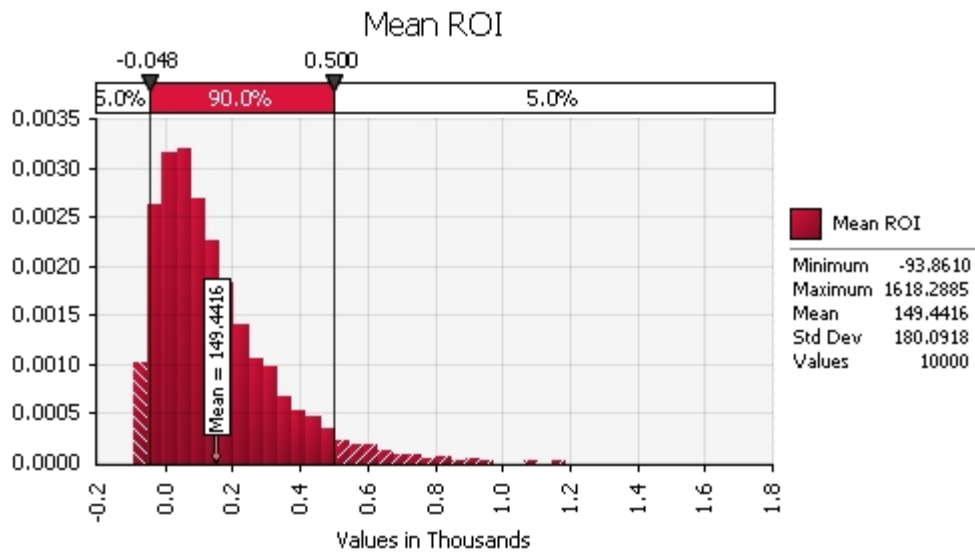
##### 1.1.1. Personal funds source

##### 1.1.1.1. Budget Hotel

B2

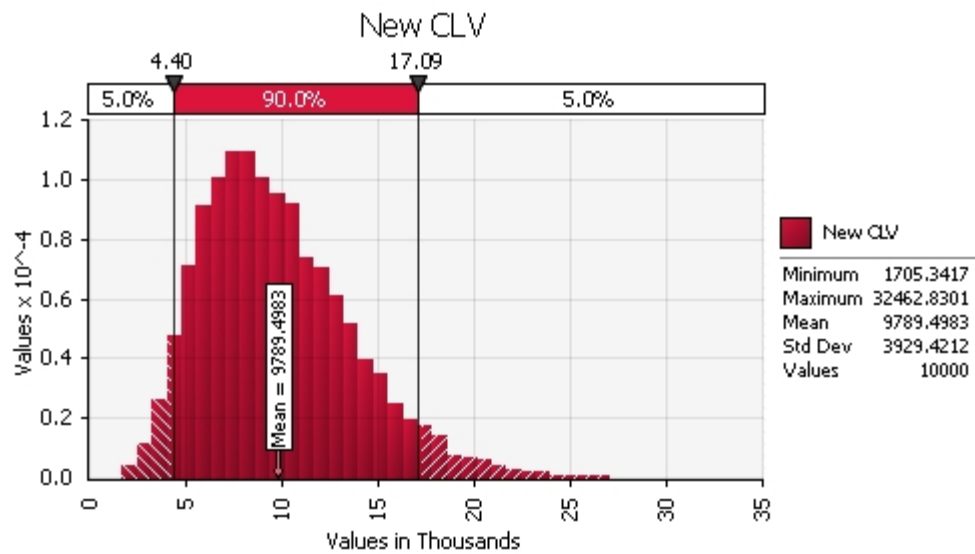


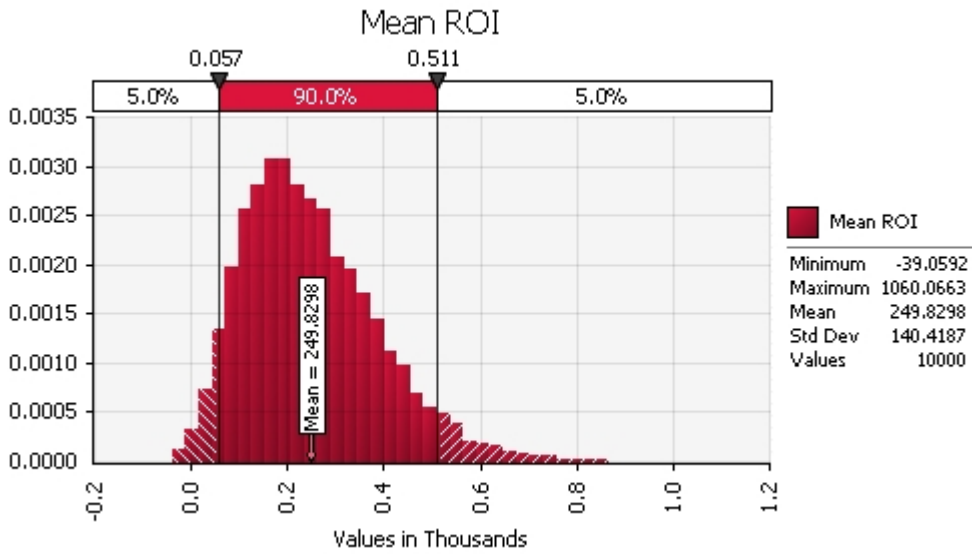
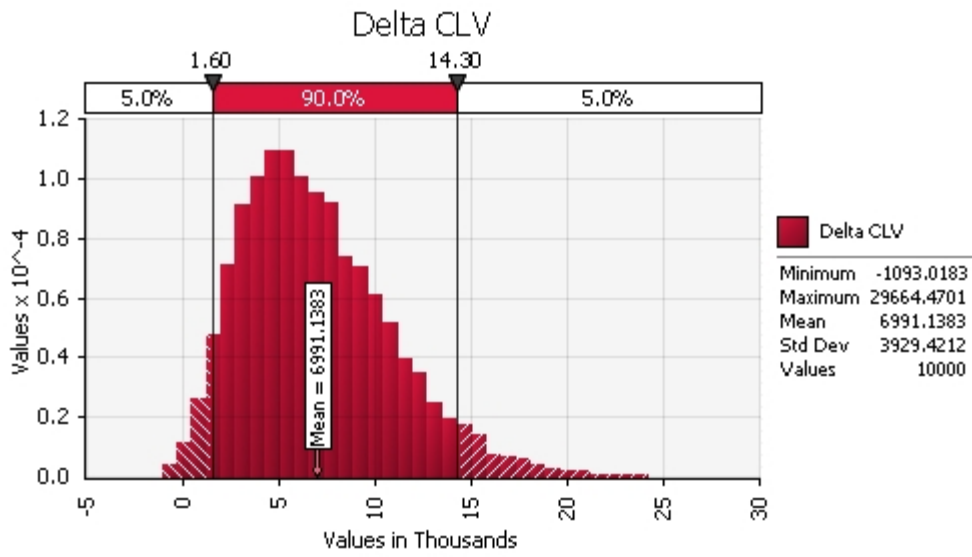




### 1.1.1.2. Mid-price Hotel

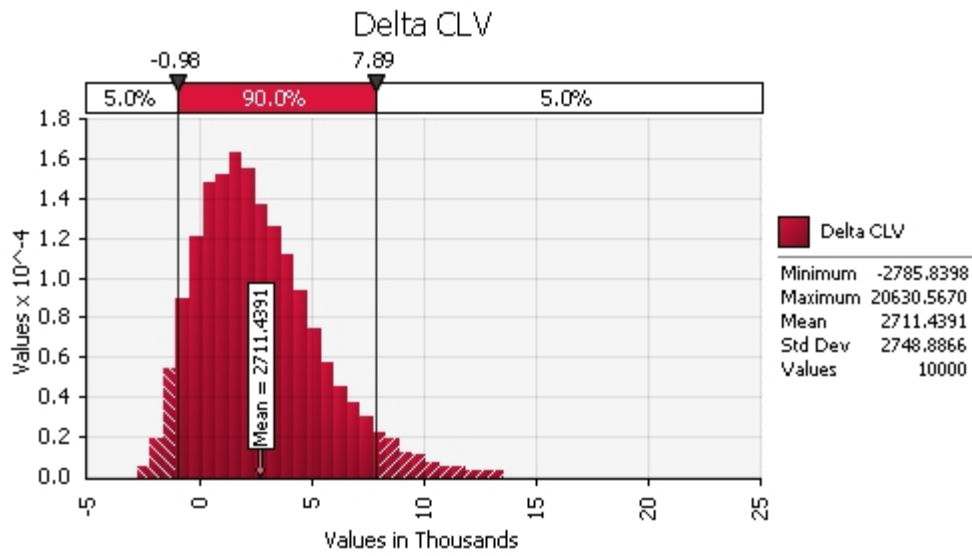
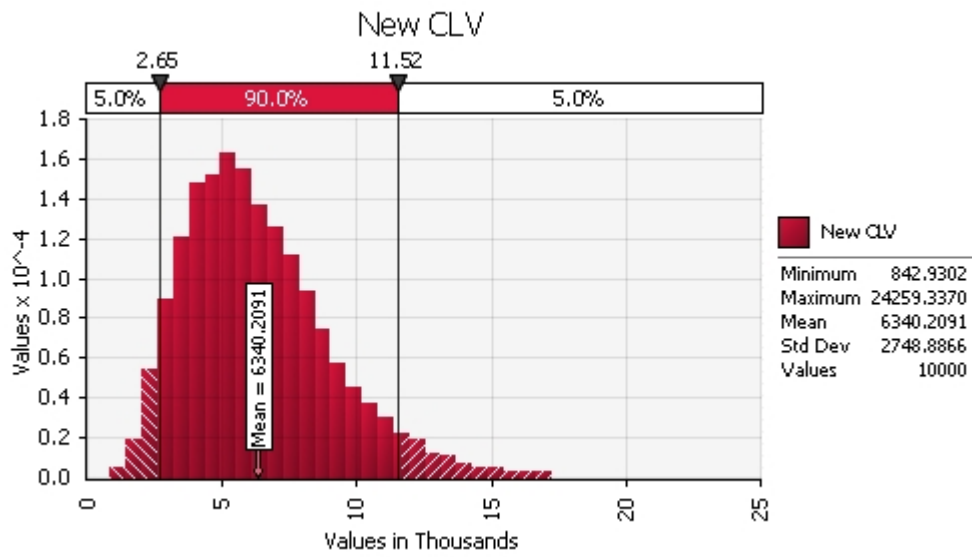
C2

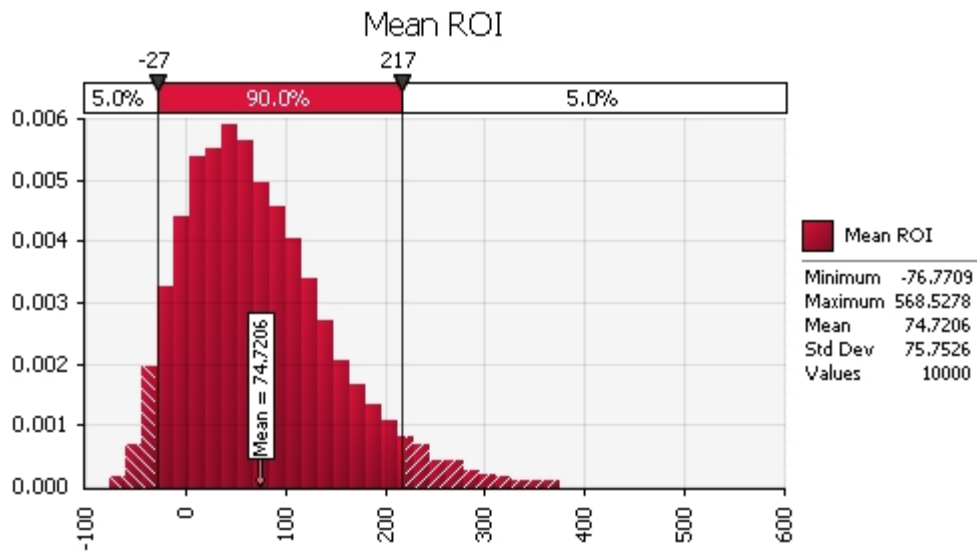




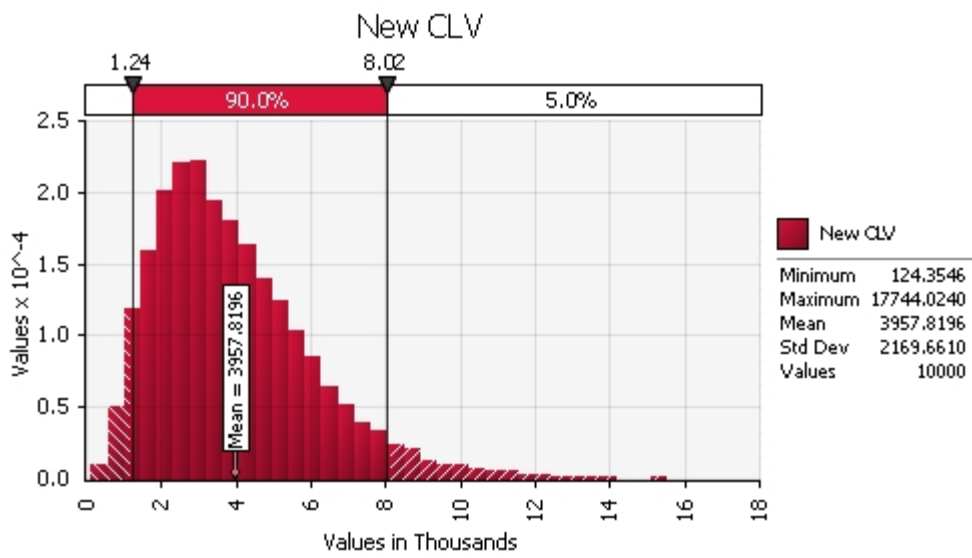
### 1.1.1.3. High-end Hotel

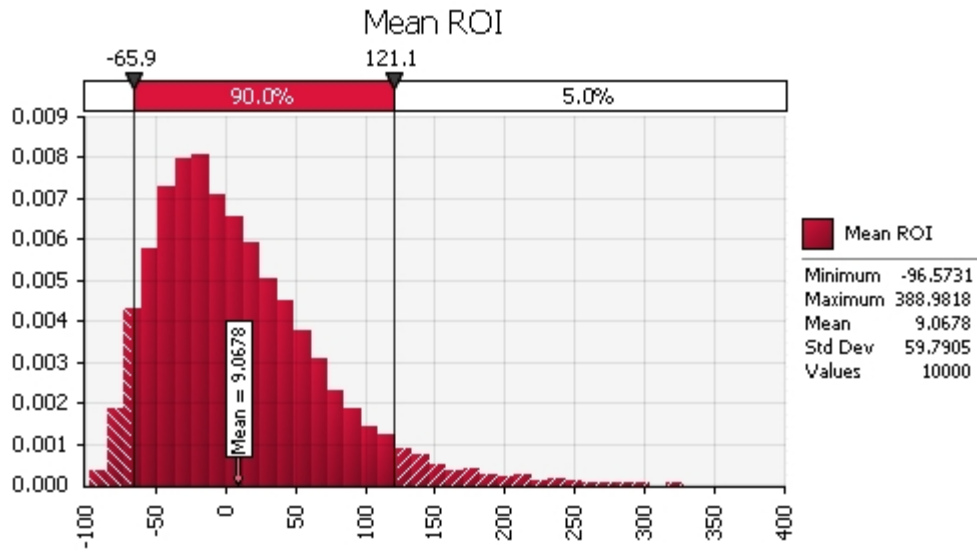
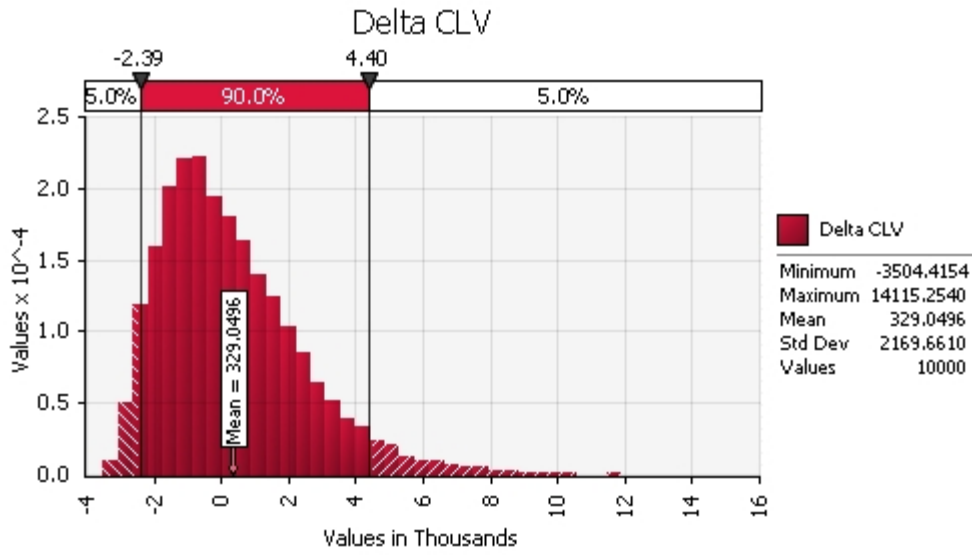
B2



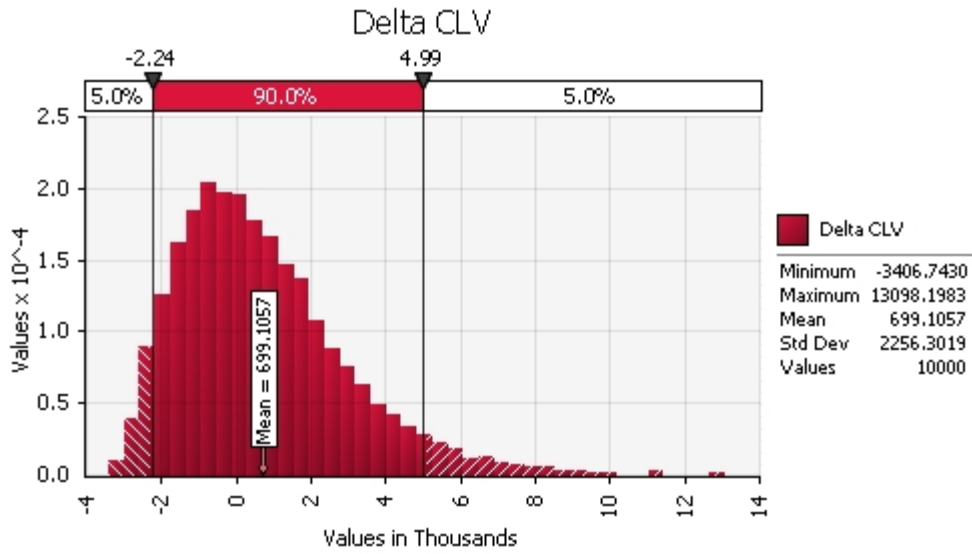
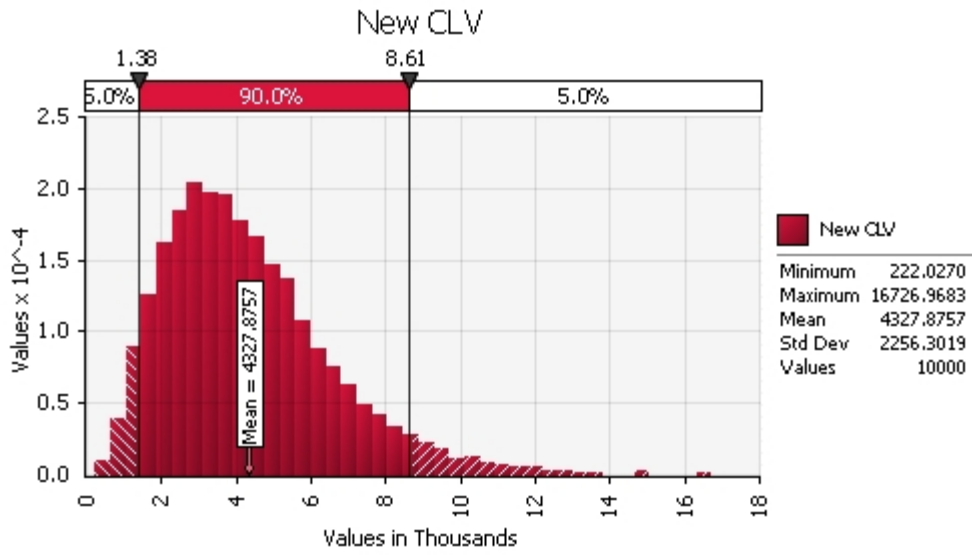


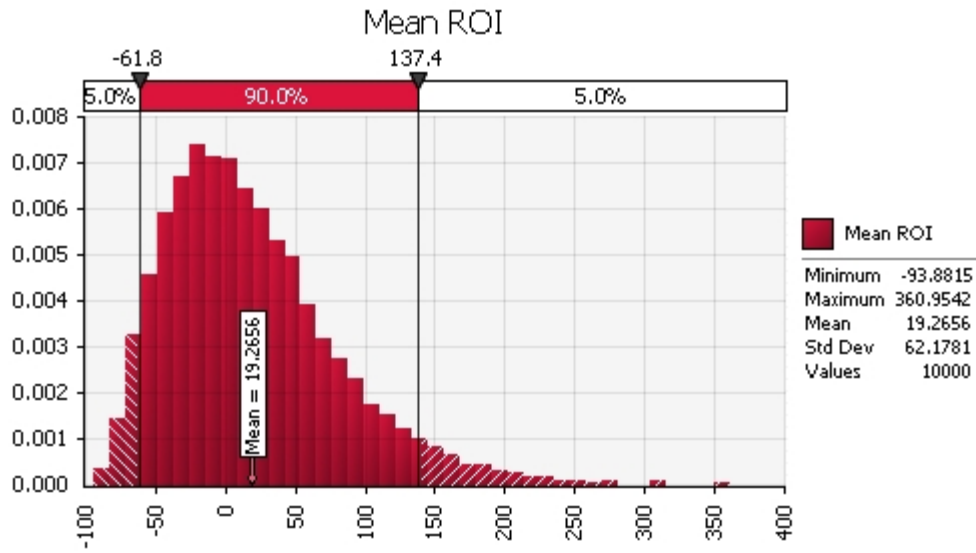
**P2**





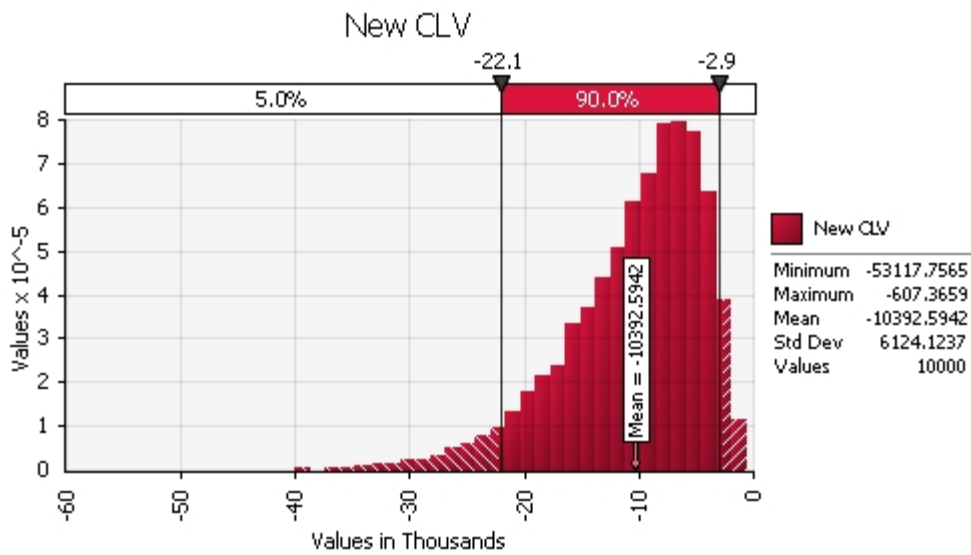
R2

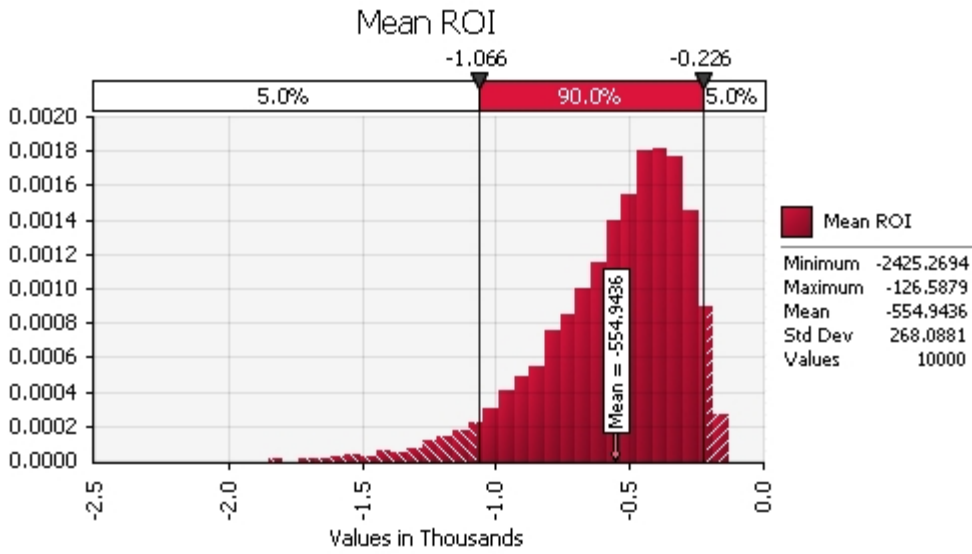
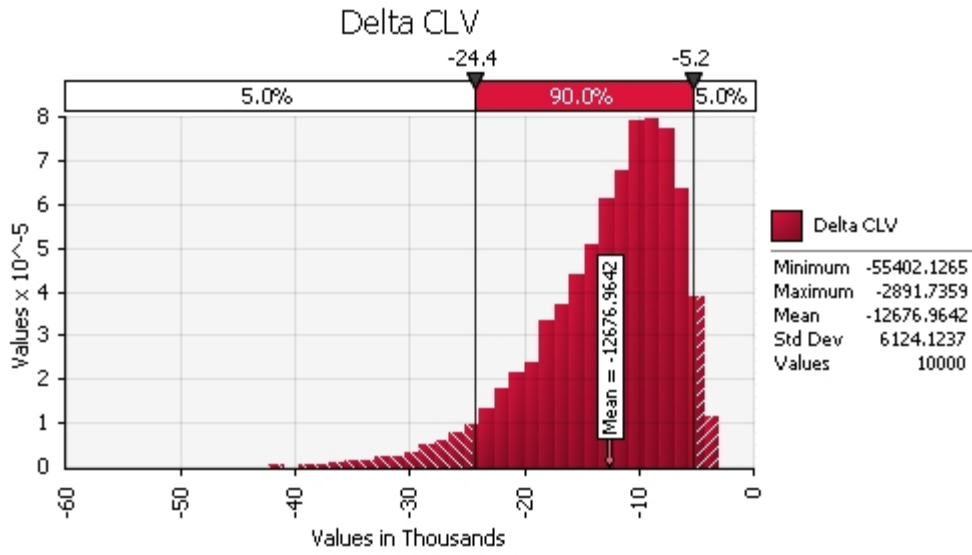




**1.1.2. Business funds source**  
**1.1.2.1. Budget Hotel**

**B2**

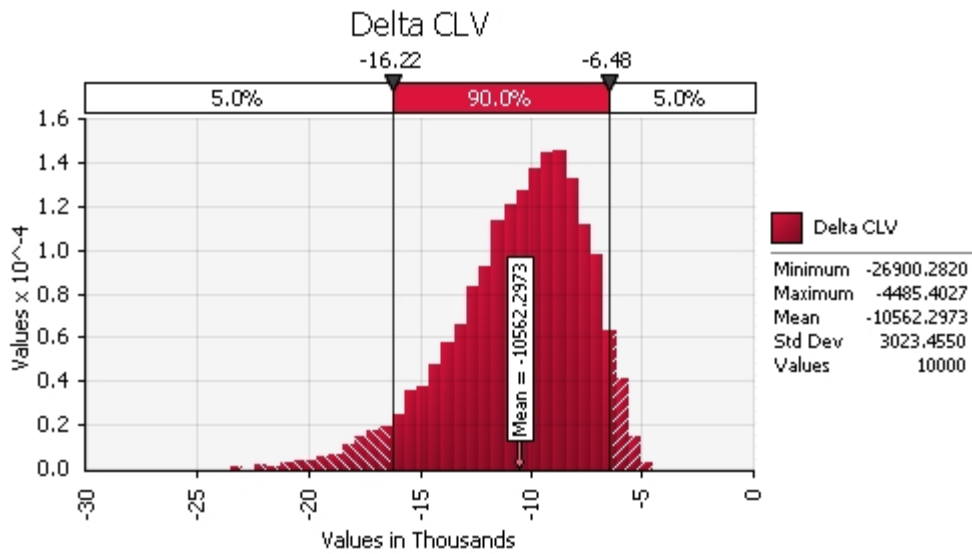
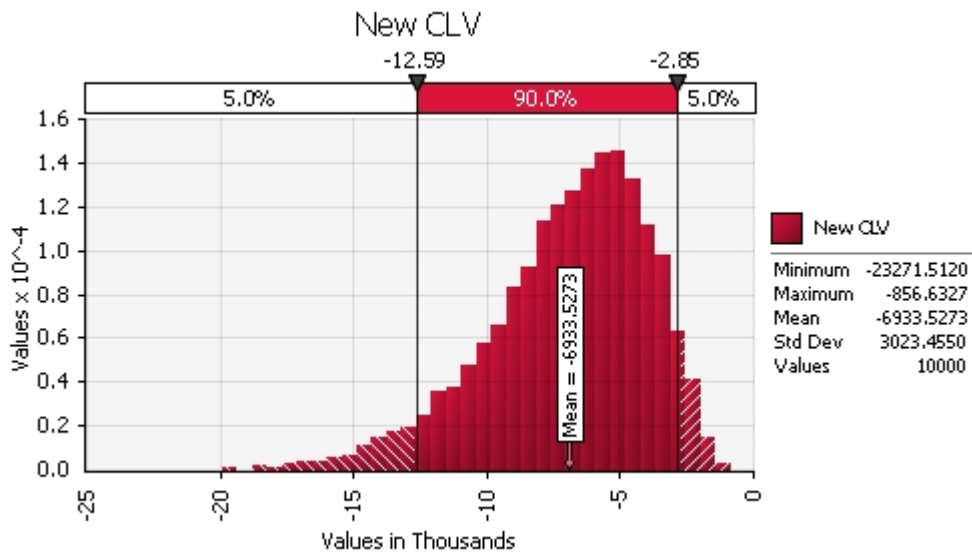


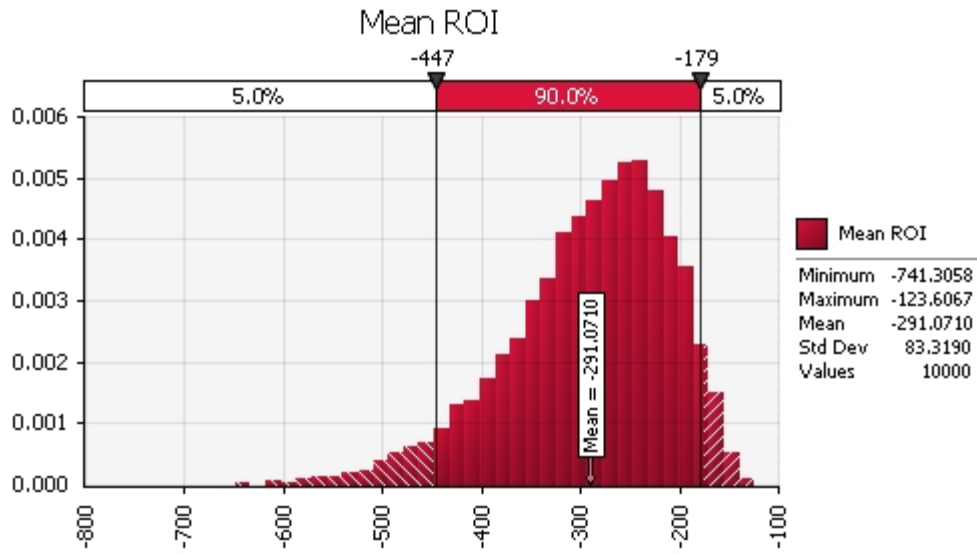




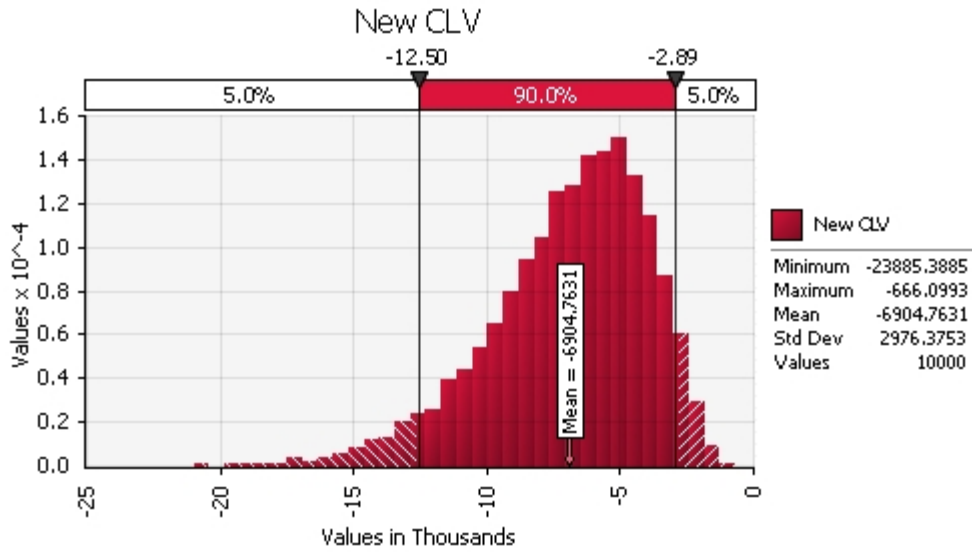
### 1.1.2.2.High-end Hotel

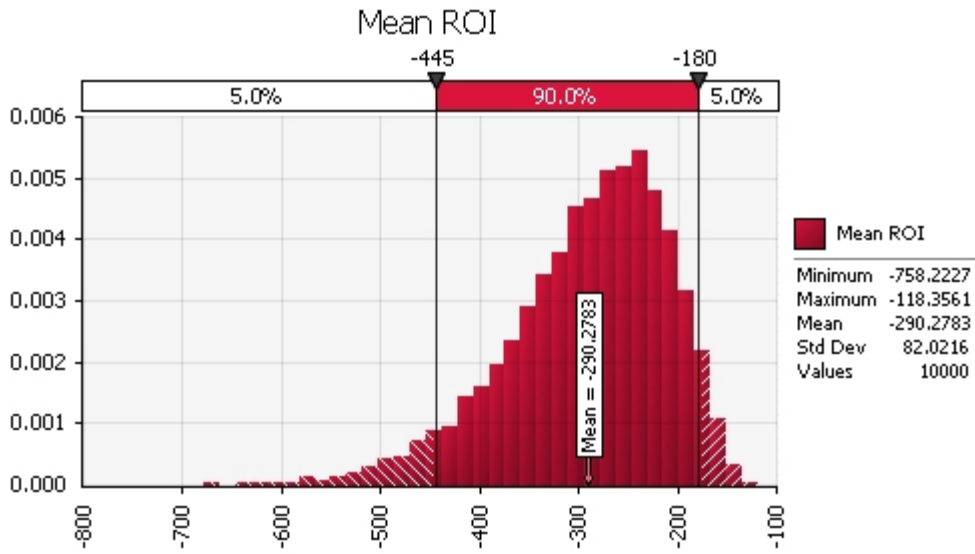
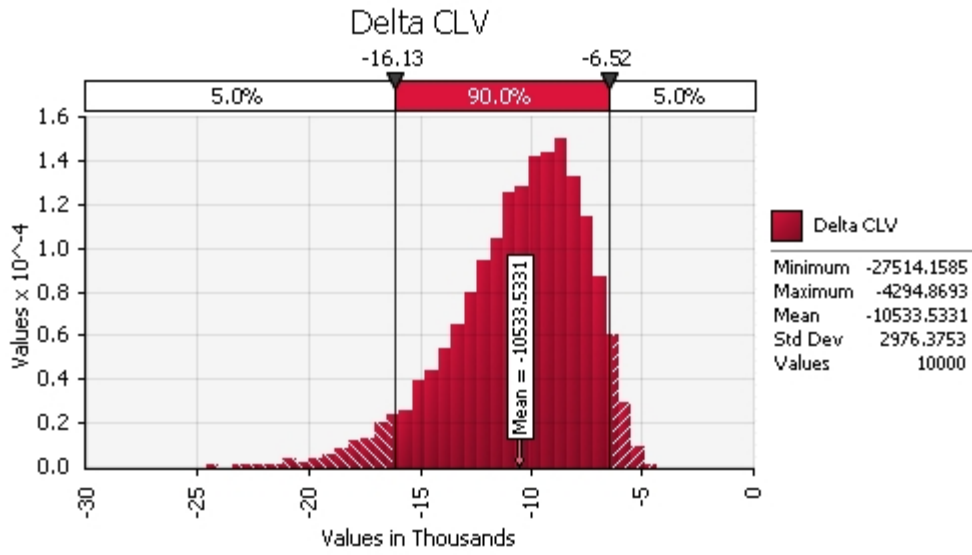
C1





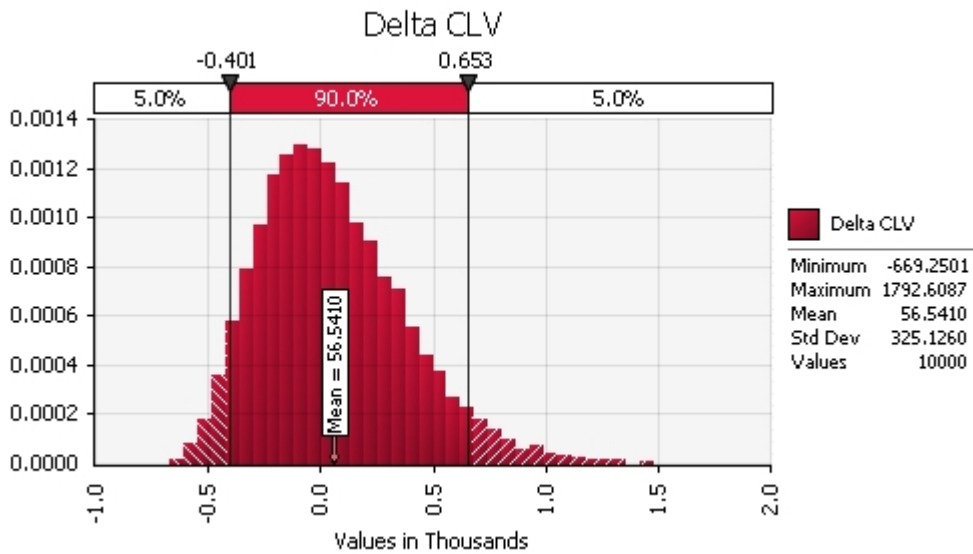
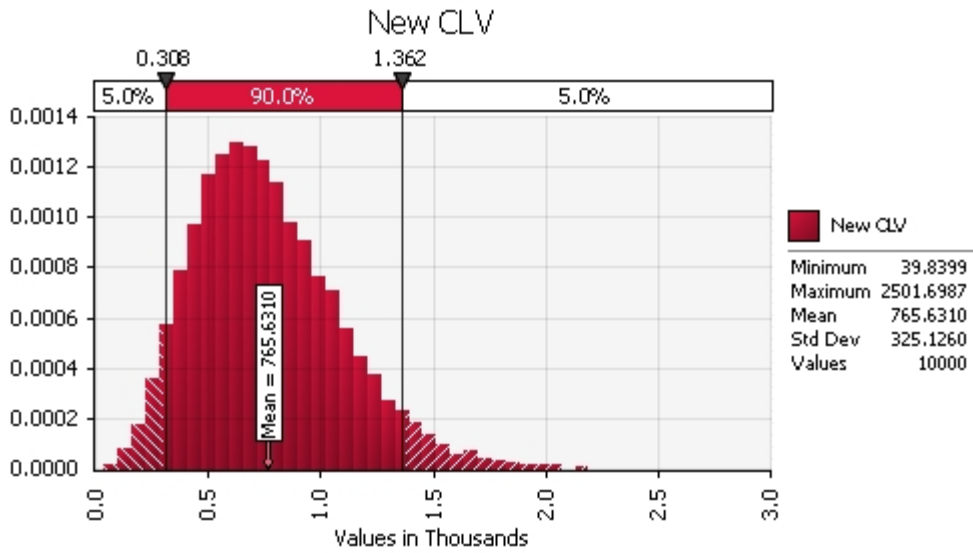
C2

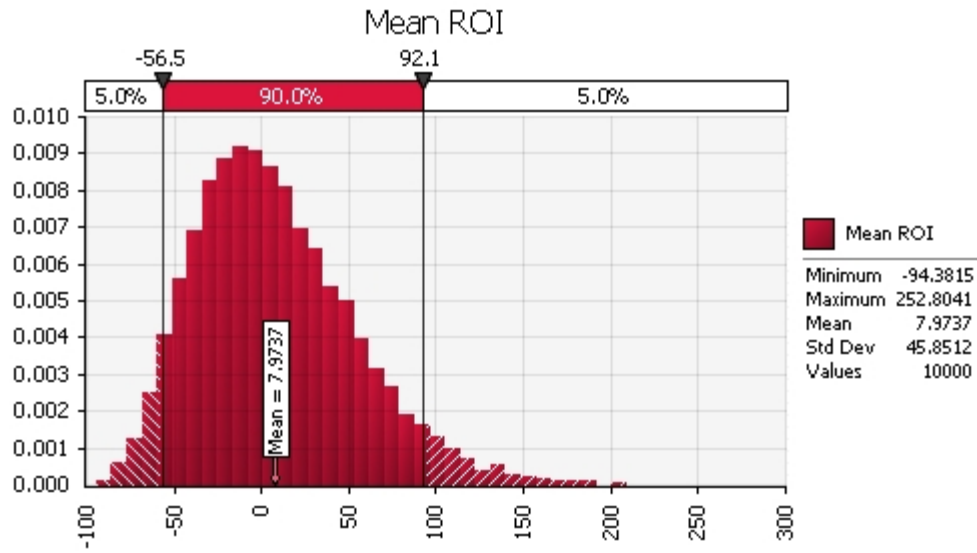




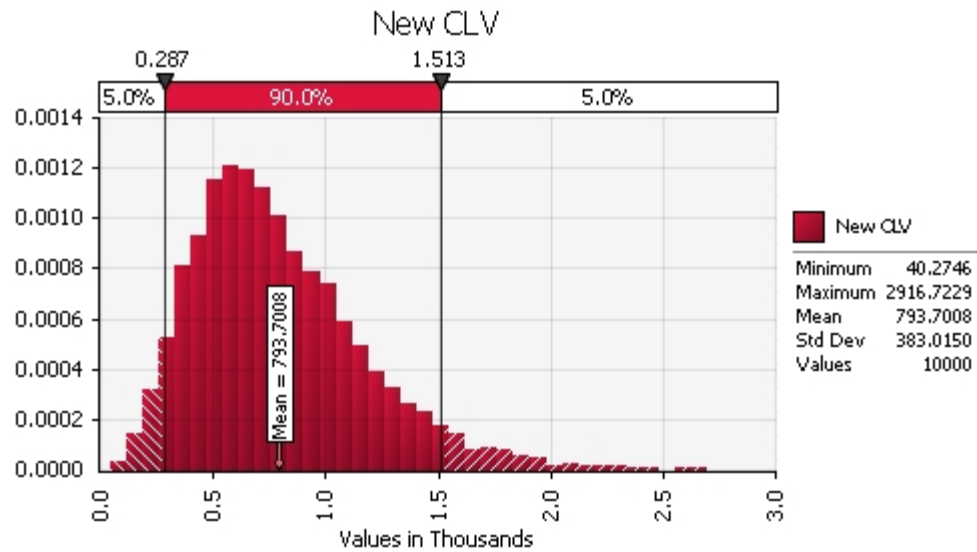
**1.2. Cluster 2 by Hotel Type**  
**1.2.1. Personal funds source**  
**1.2.1.1. Budget Hotel**

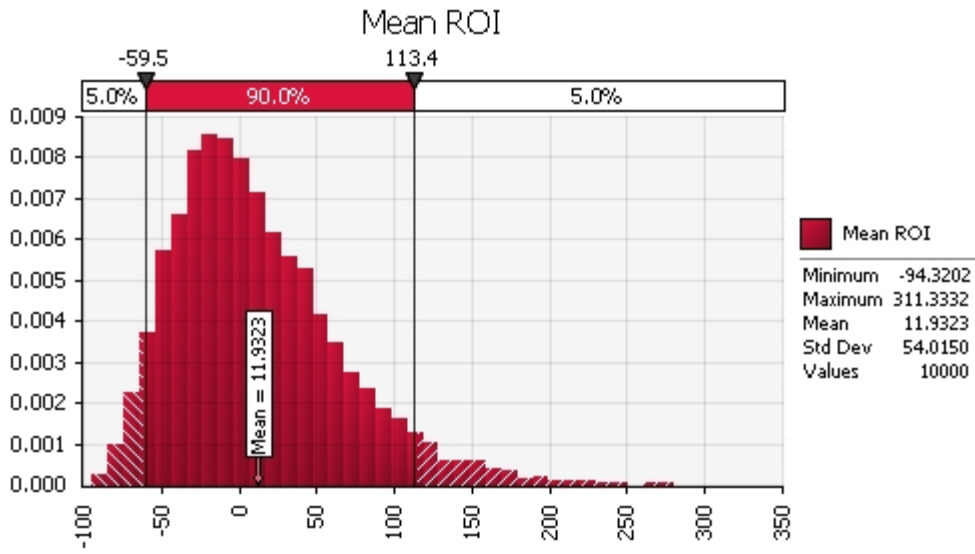
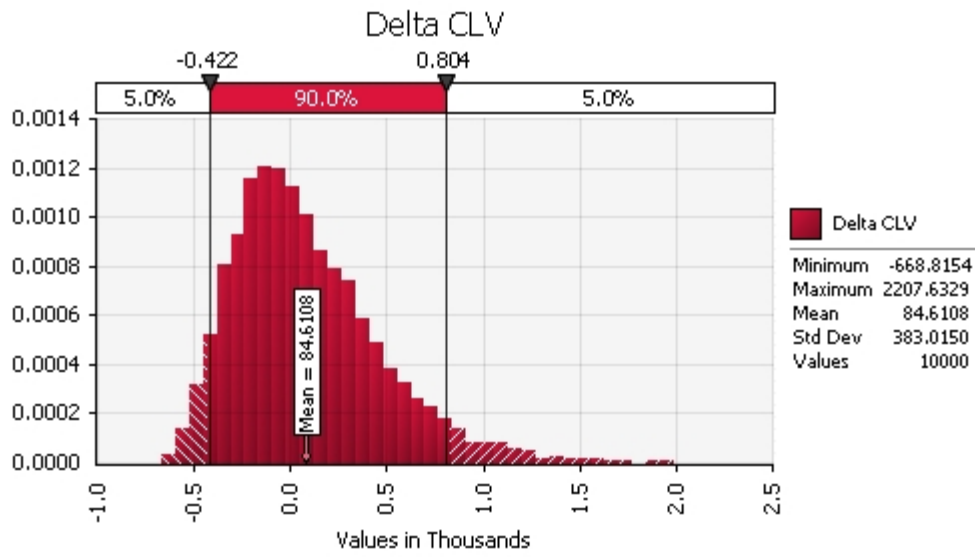
Q1





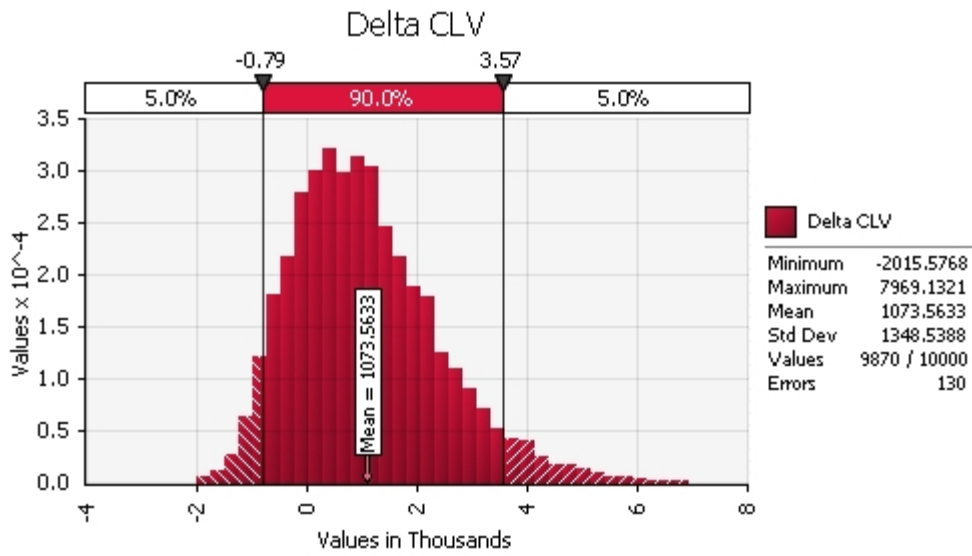
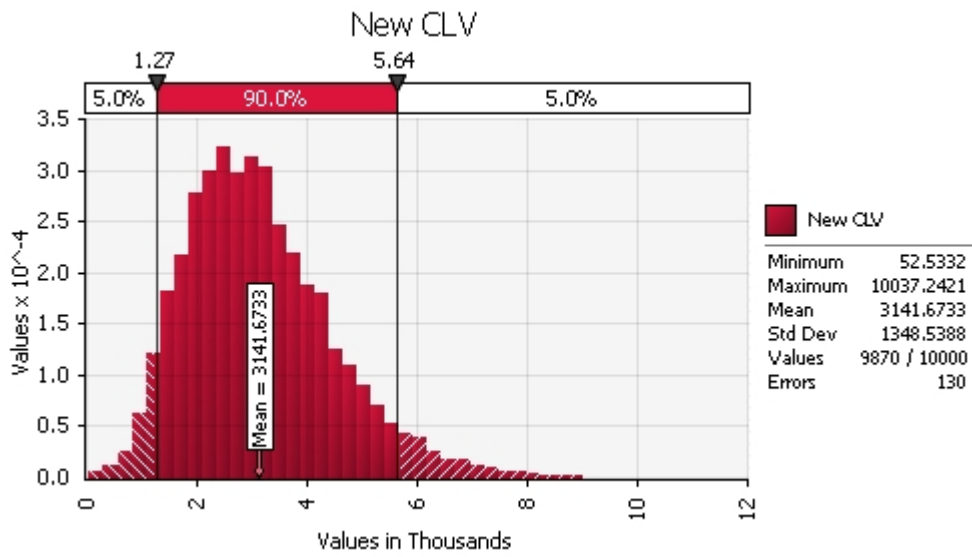
**R2**

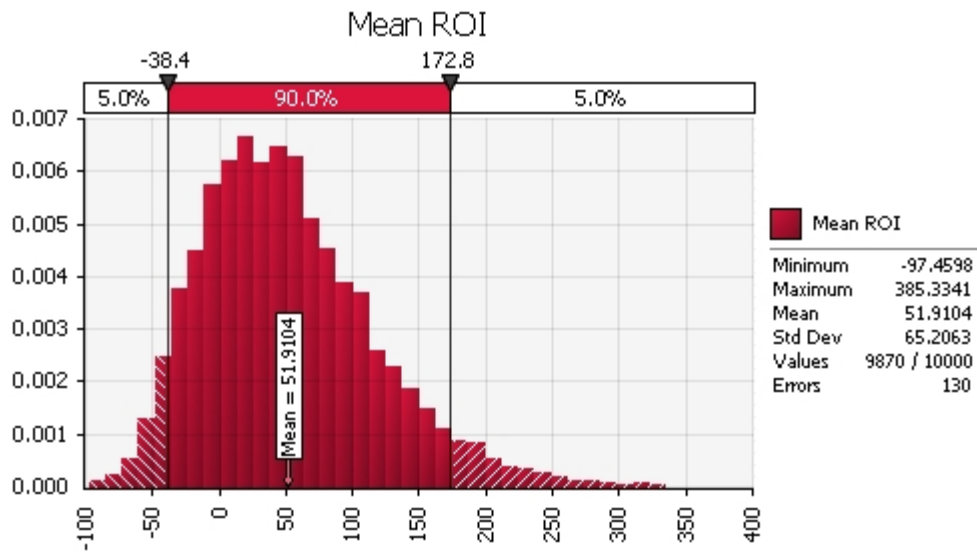




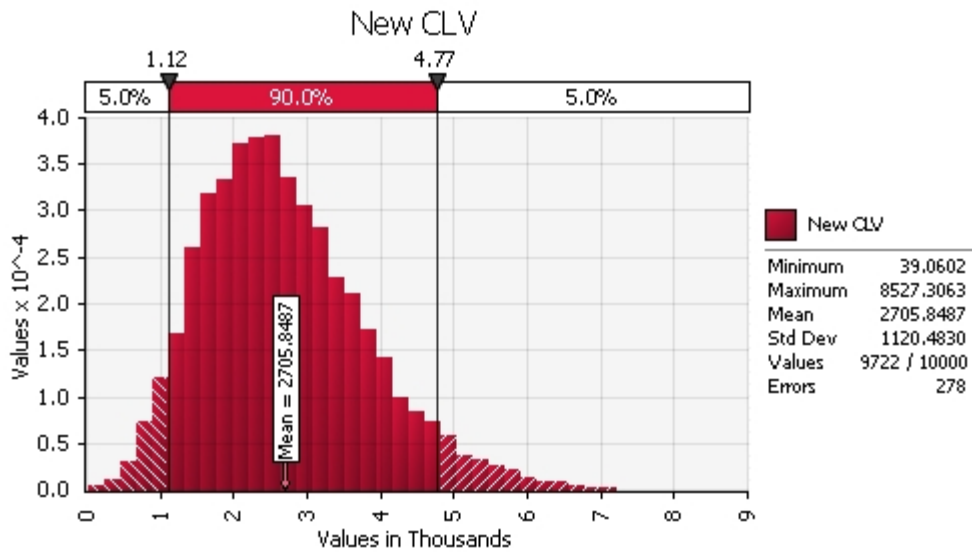
### 1.2.1.2.High-end Hotel

C2

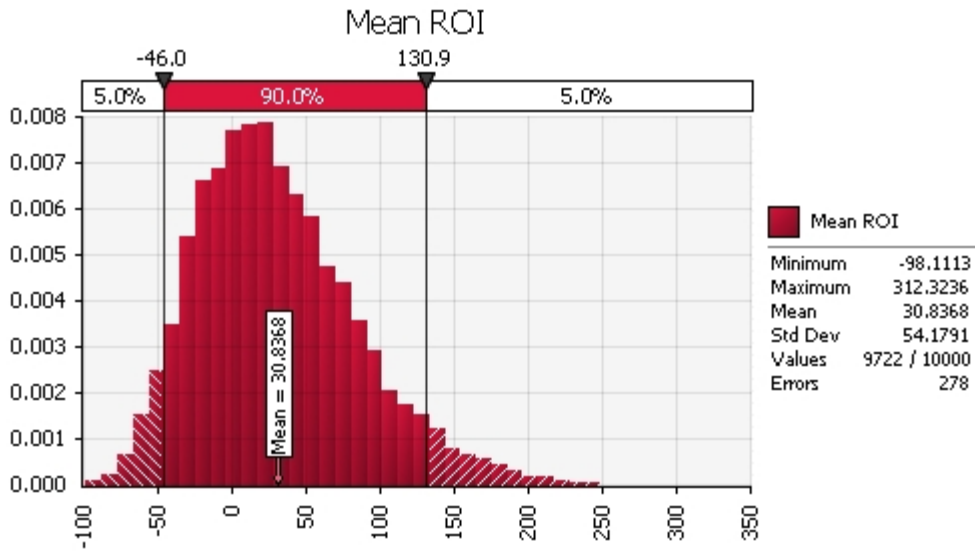
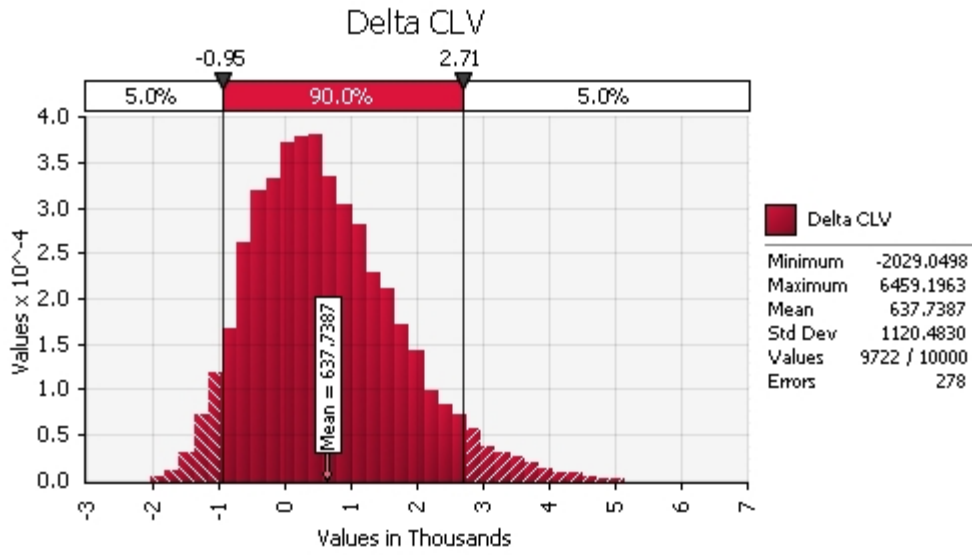




**P1**

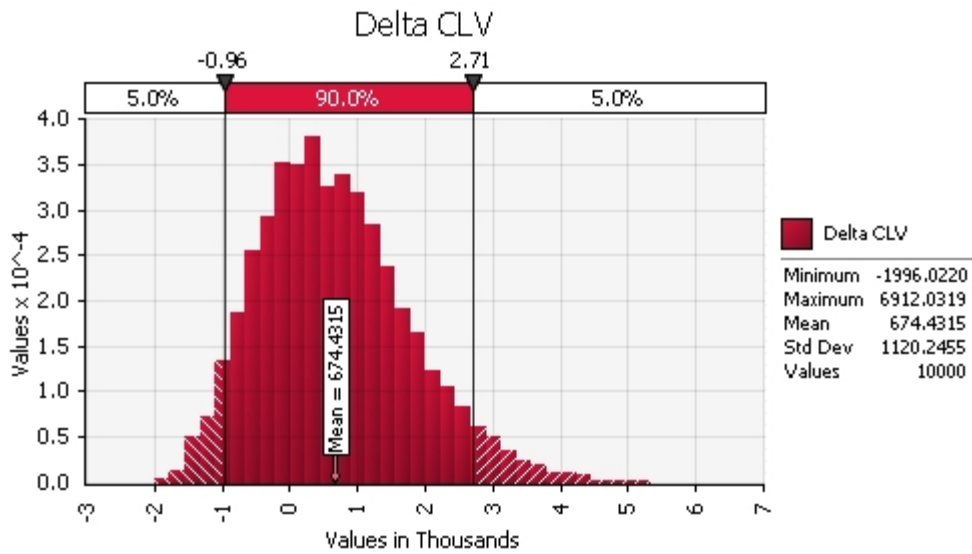
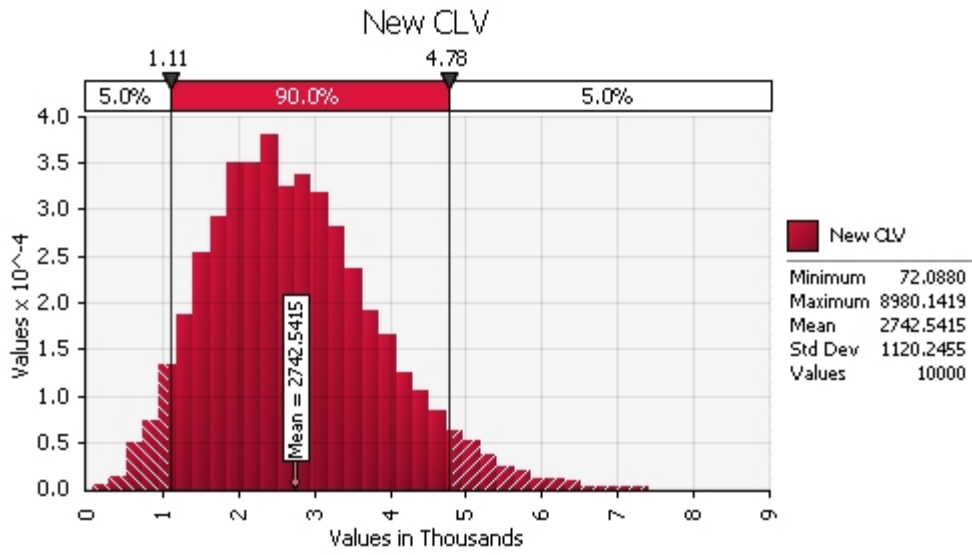


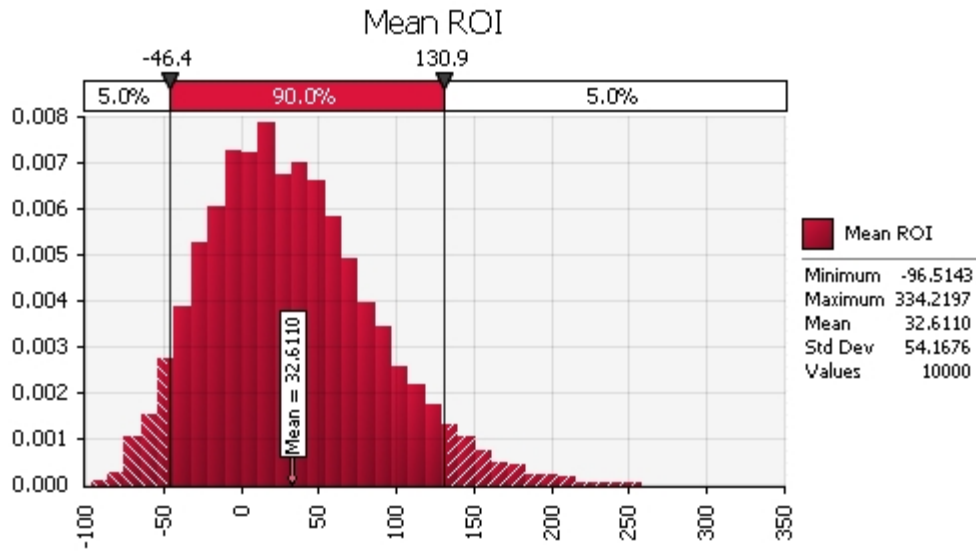




**1.2.2. Business funds source**  
**1.2.2.1.High-end Hotel**

**P1**



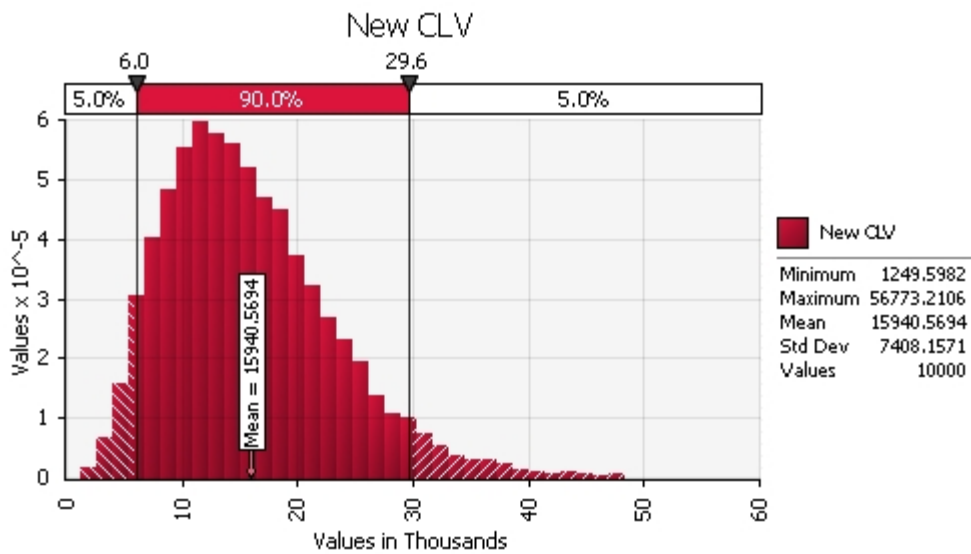


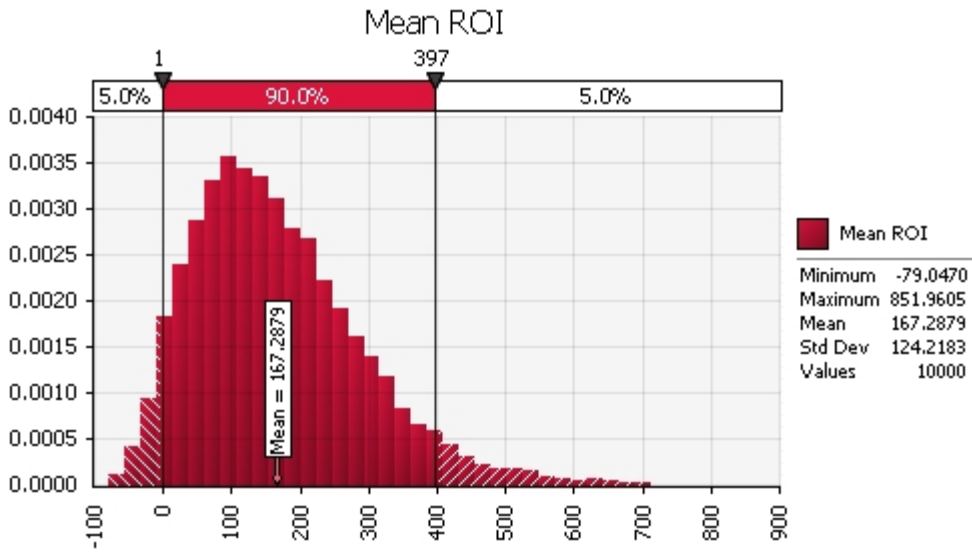
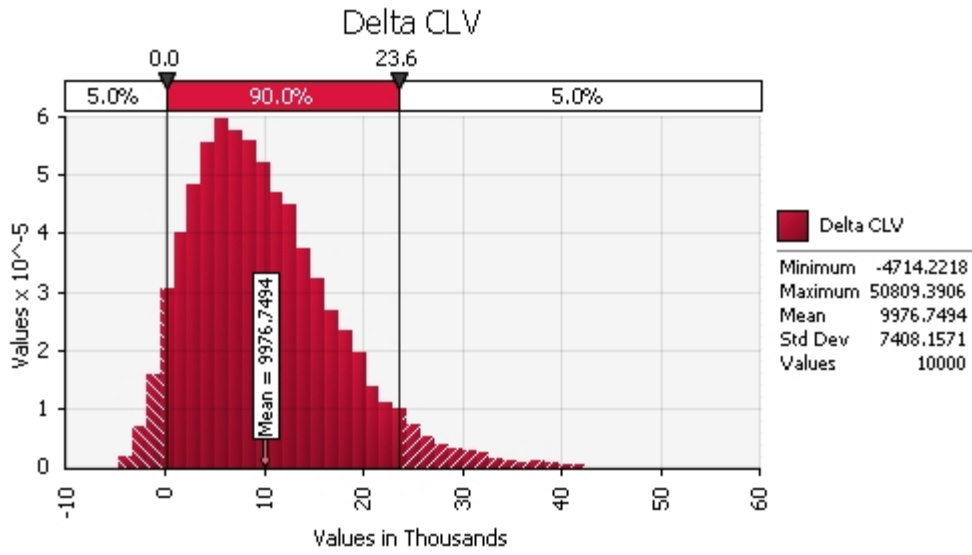
### 1.3. Cluster 3 by Hotel Type

#### 1.3.1. Personal funds source

##### 1.3.1.1. High-end Hotel

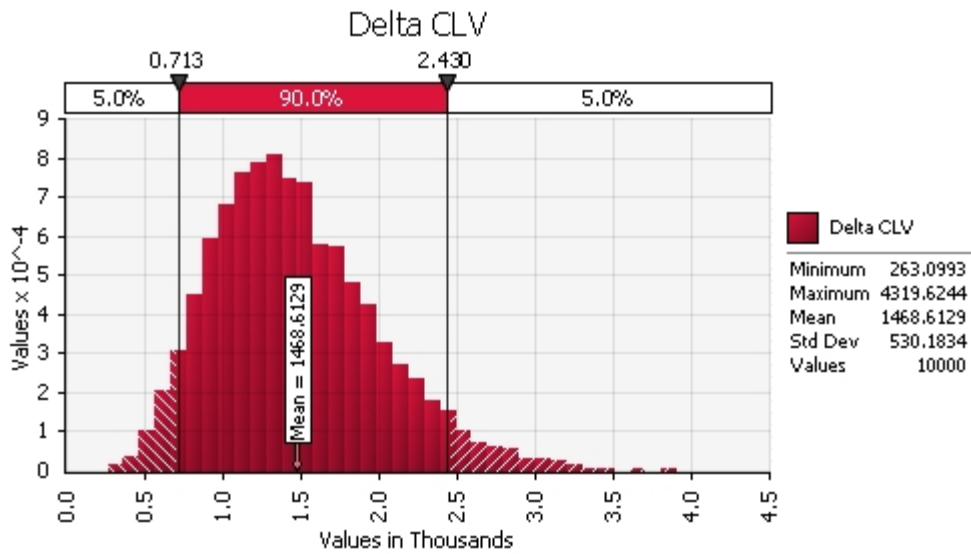
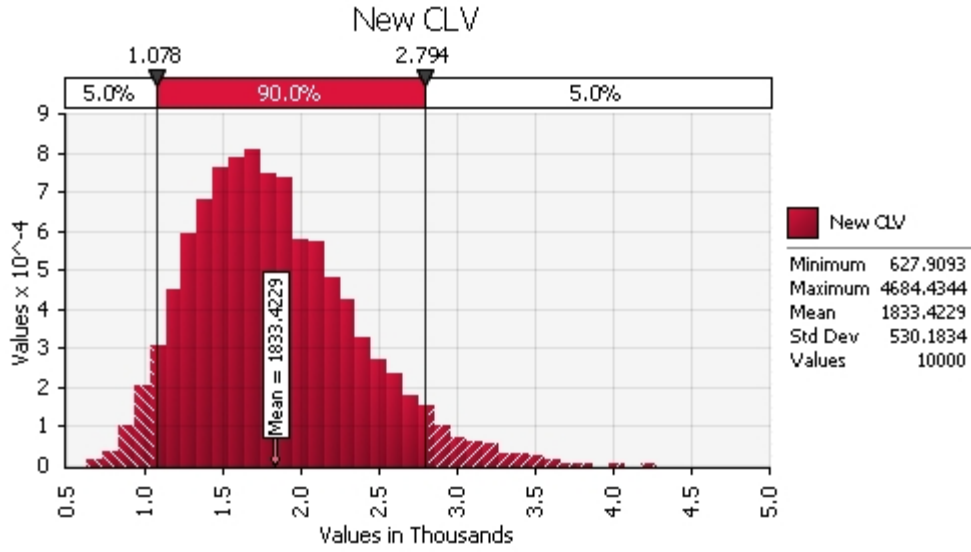
P2

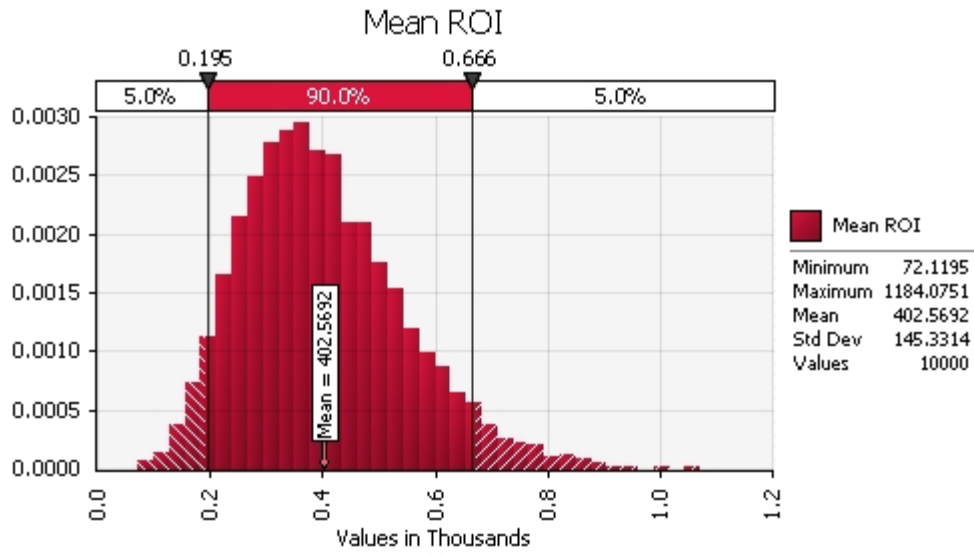




**1.3.2. Business funds source**  
**1.3.2.1. Budget Hotel**

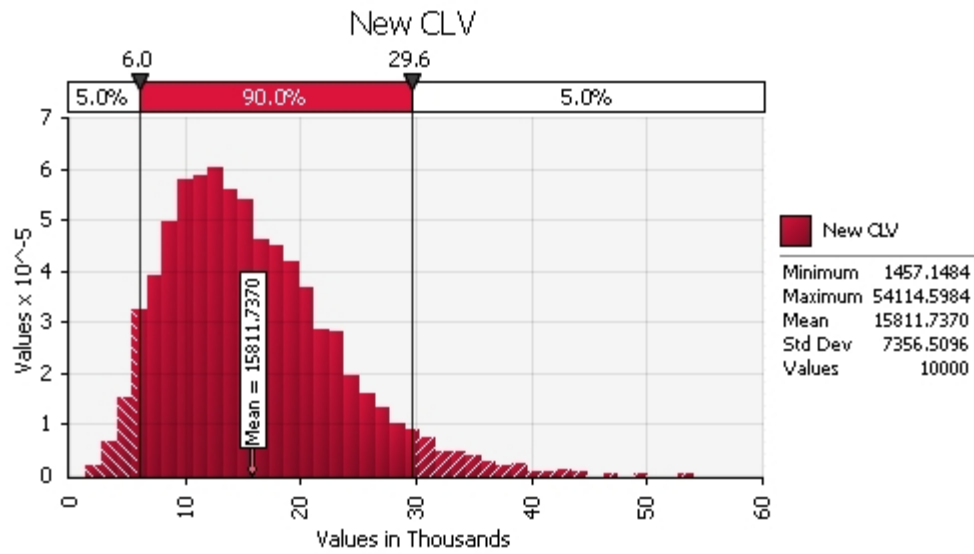
**P2**

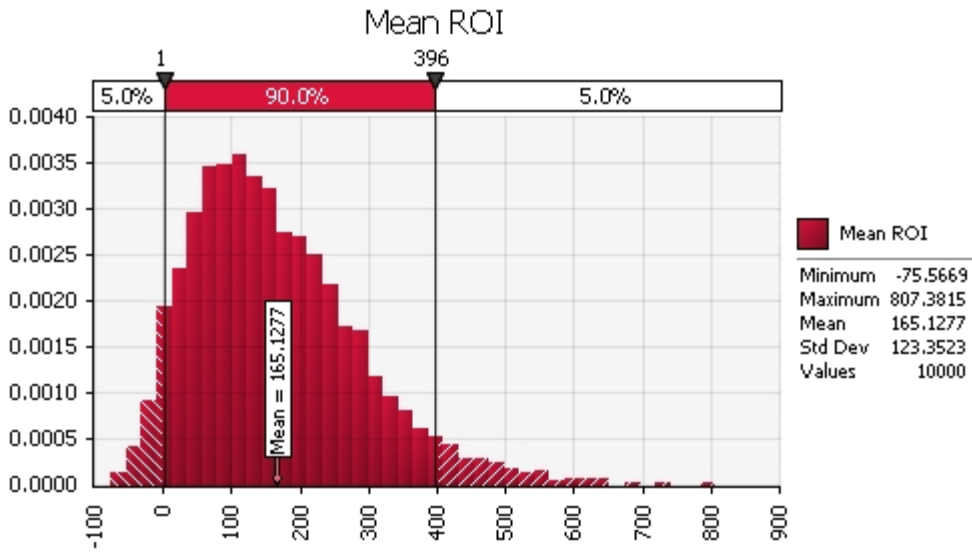
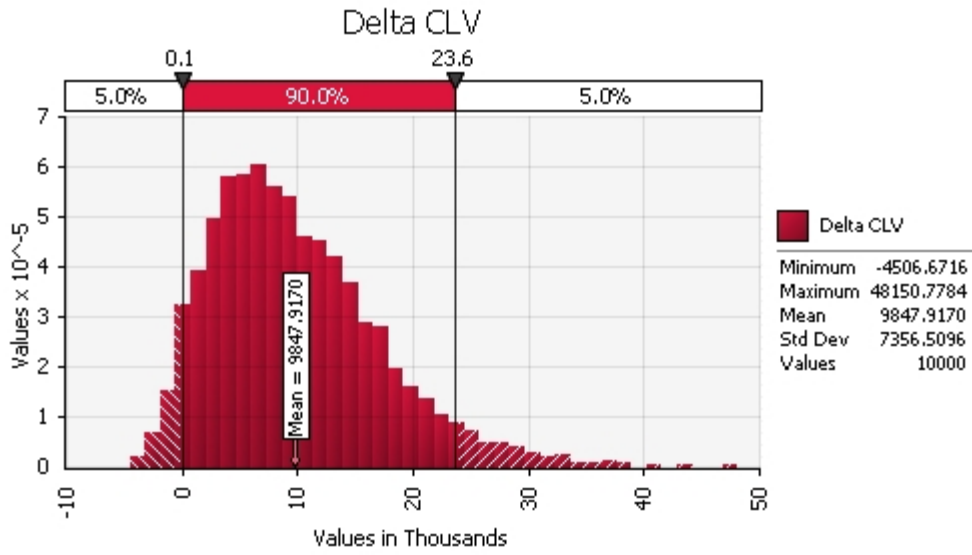




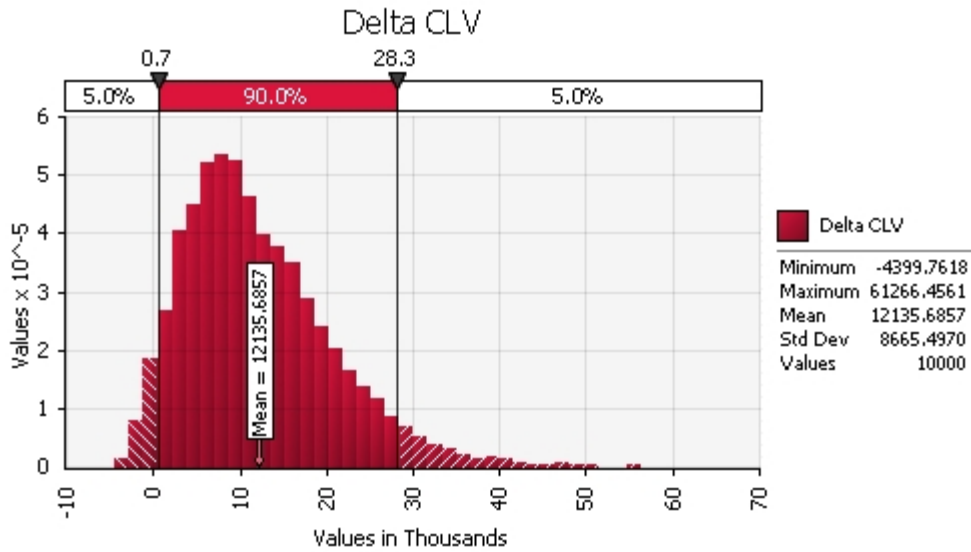
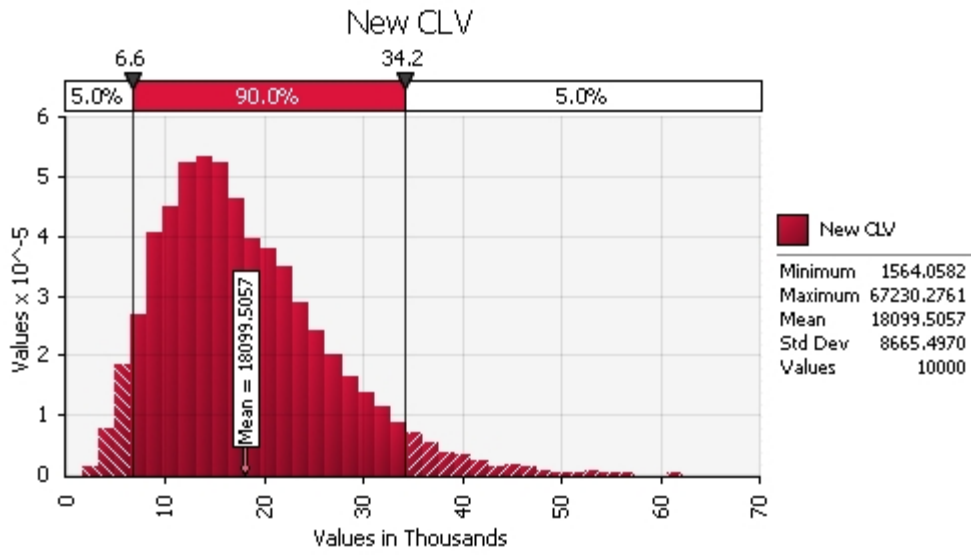
### 1.3.2.2. High-end Hotel

**B2**

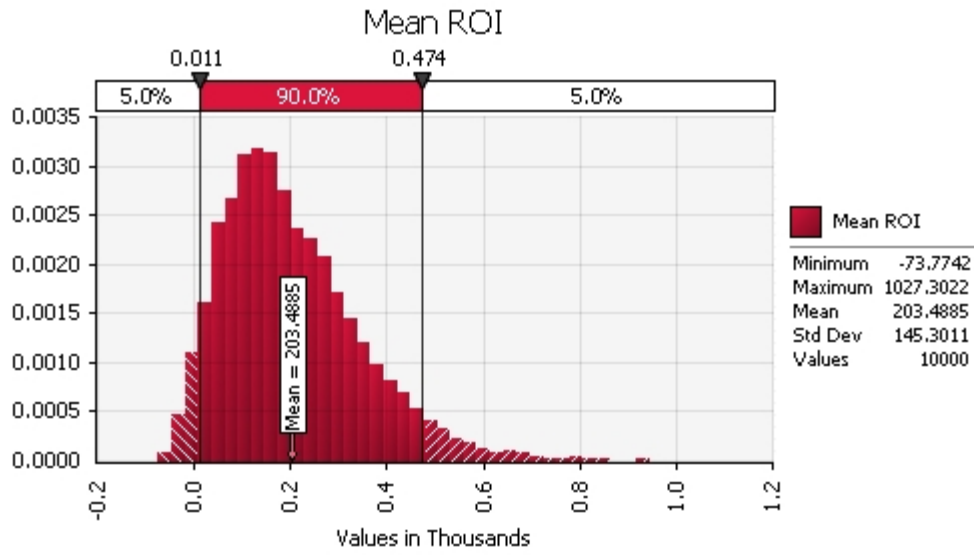




**R2**





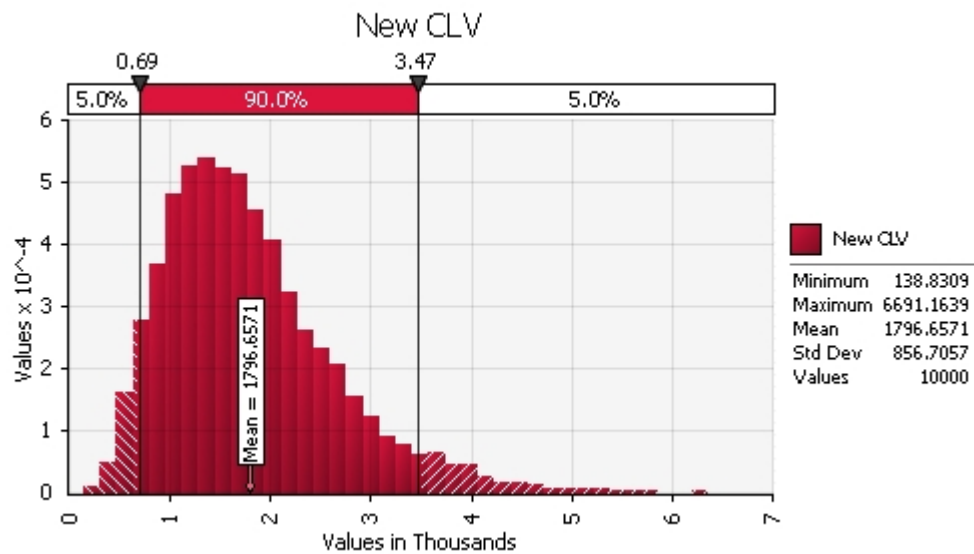


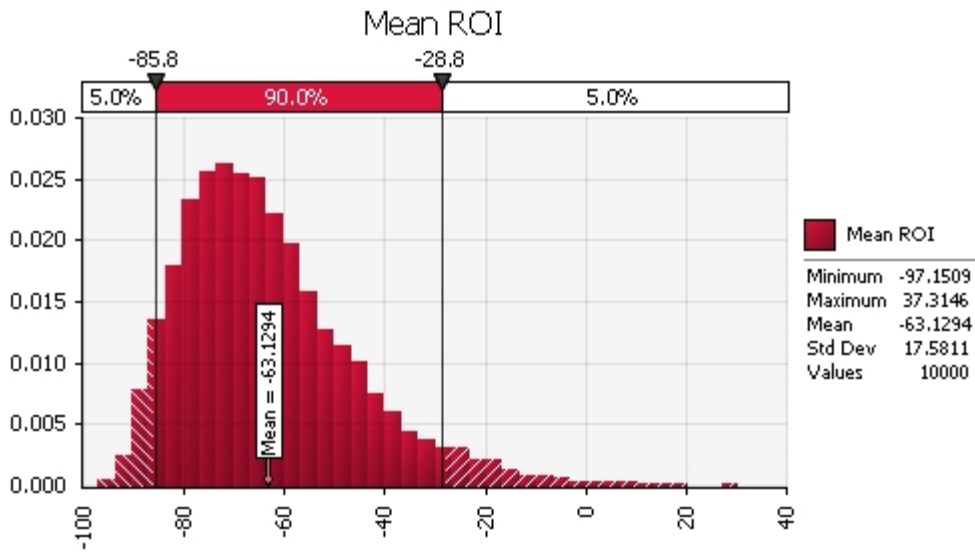
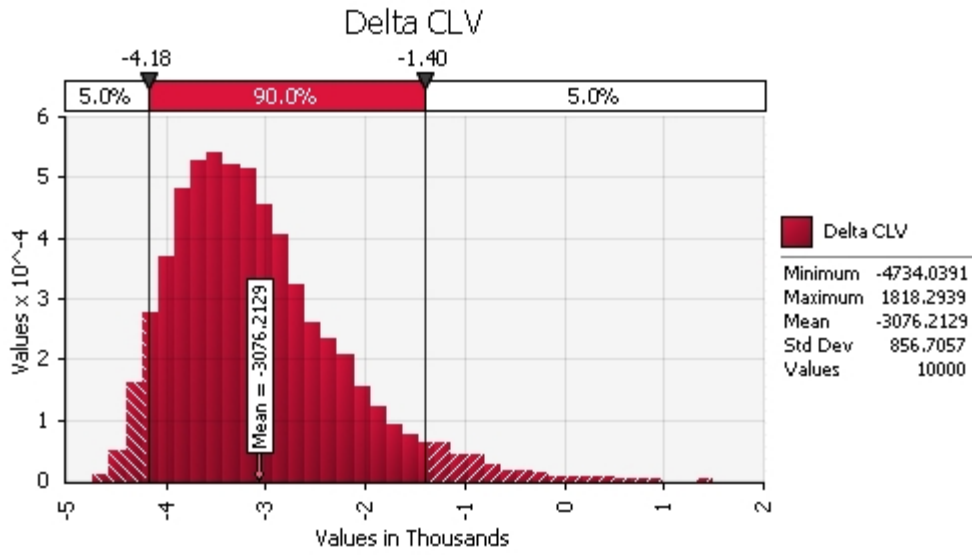
#### 1.4. Cluster 4 by Hotel Type

##### 1.4.1. Personal funds source

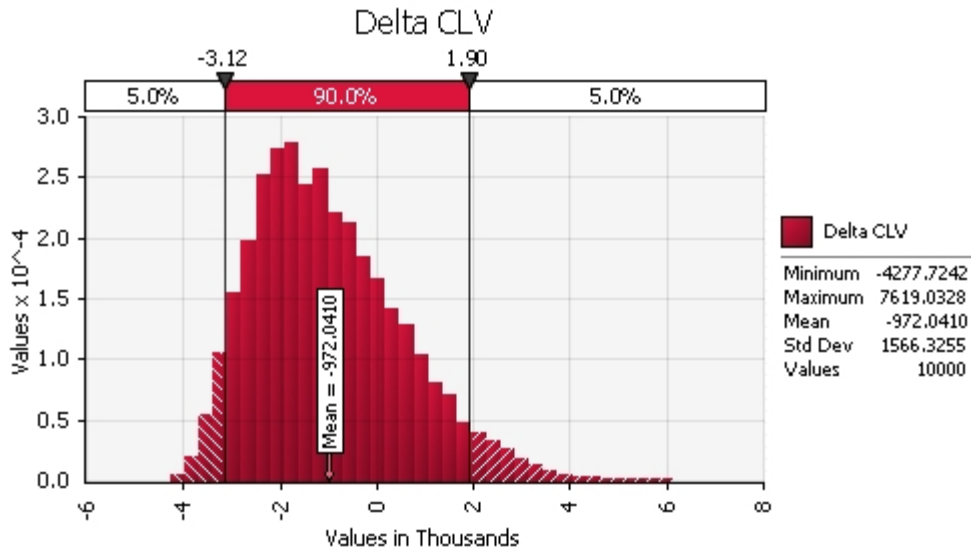
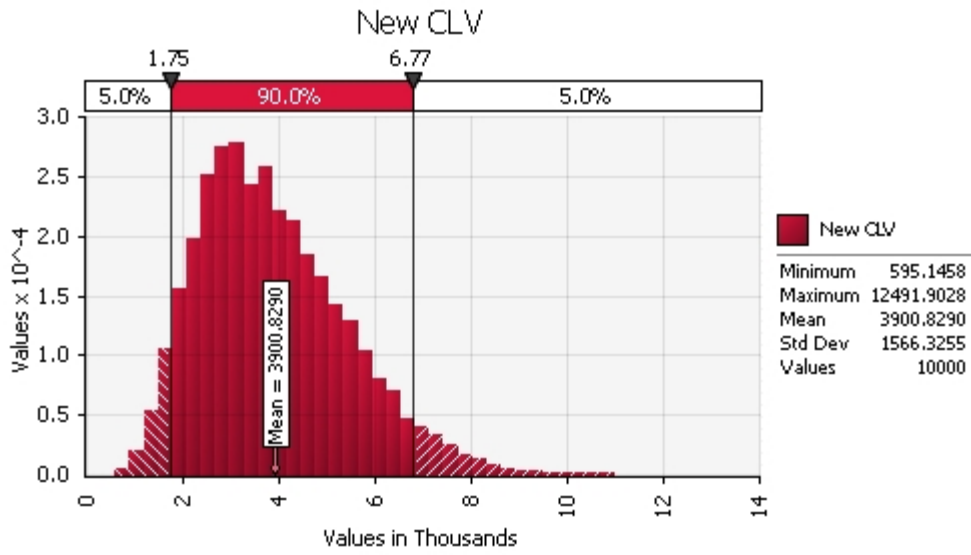
##### 1.4.1.1. Budget Hotel

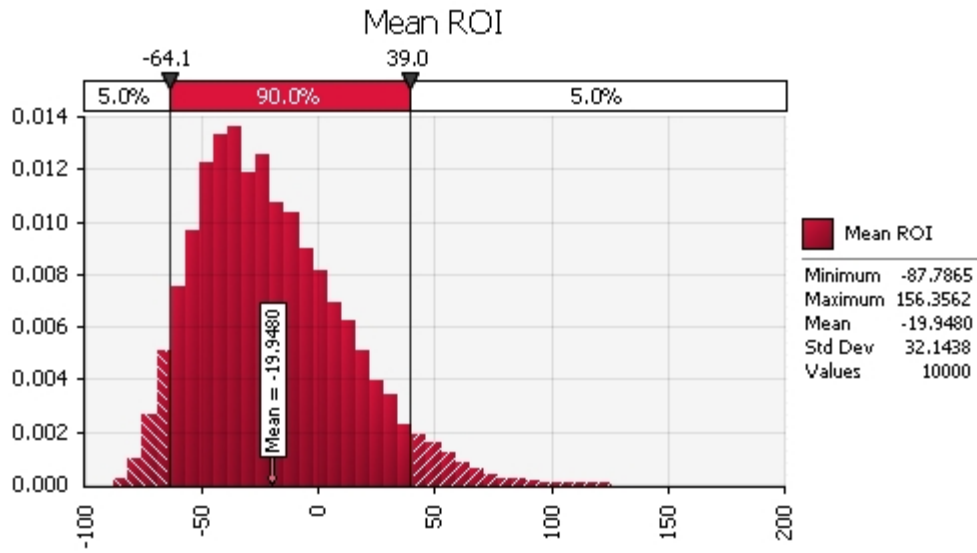
C1





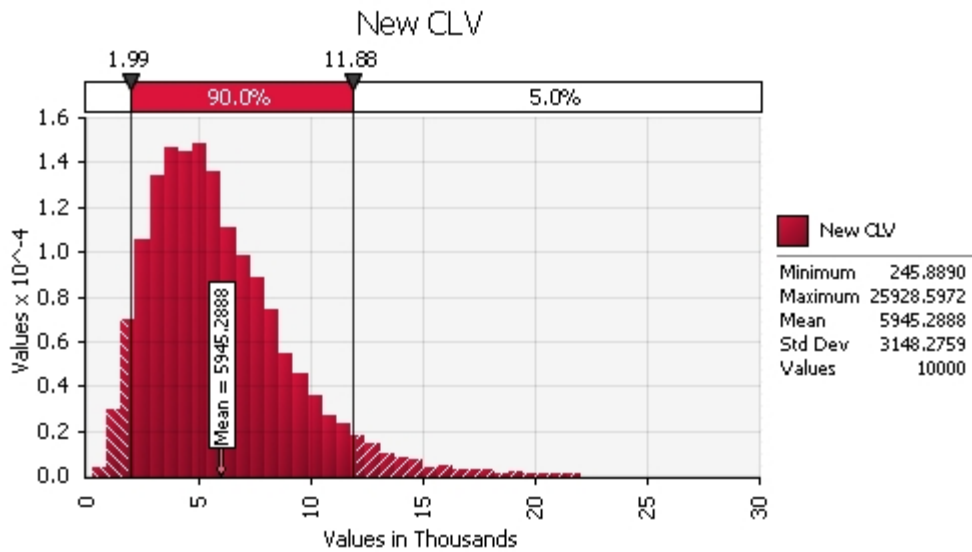
C2

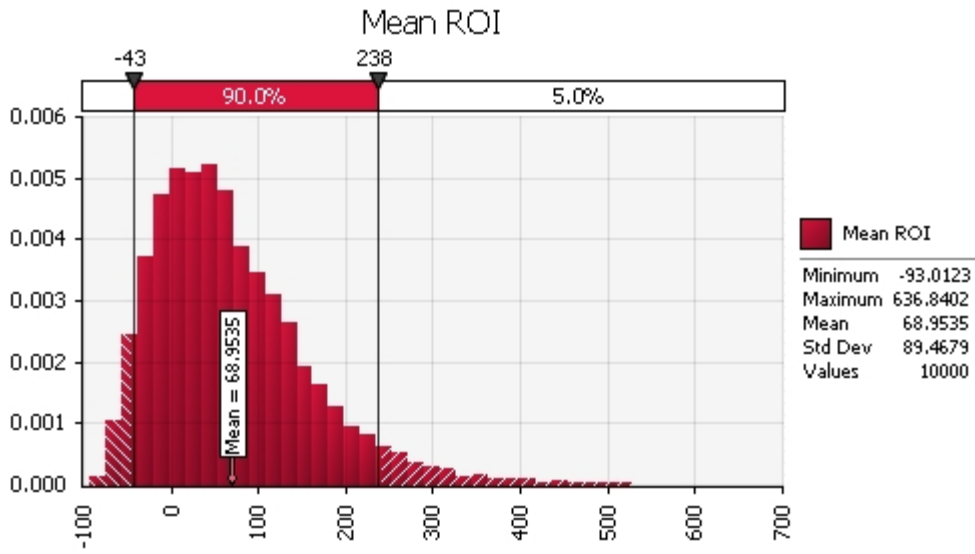
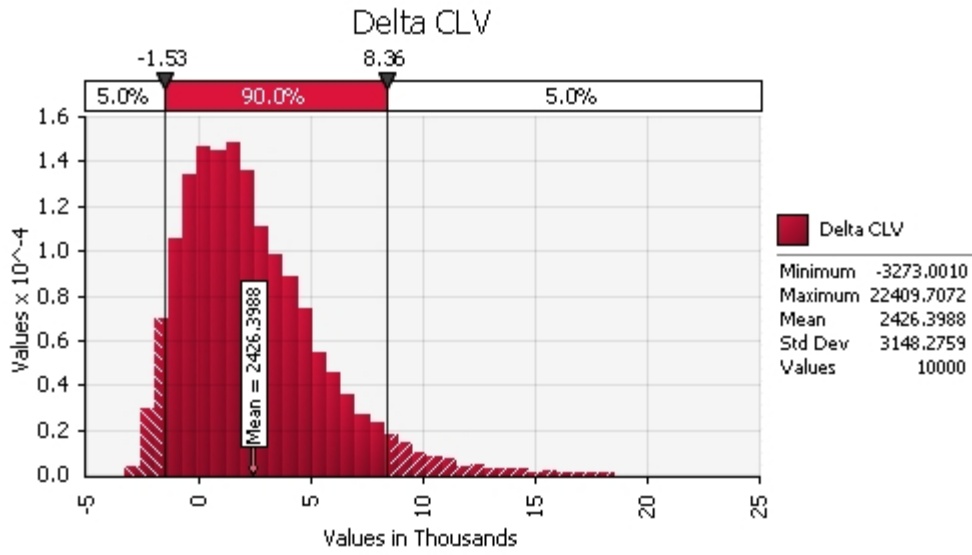




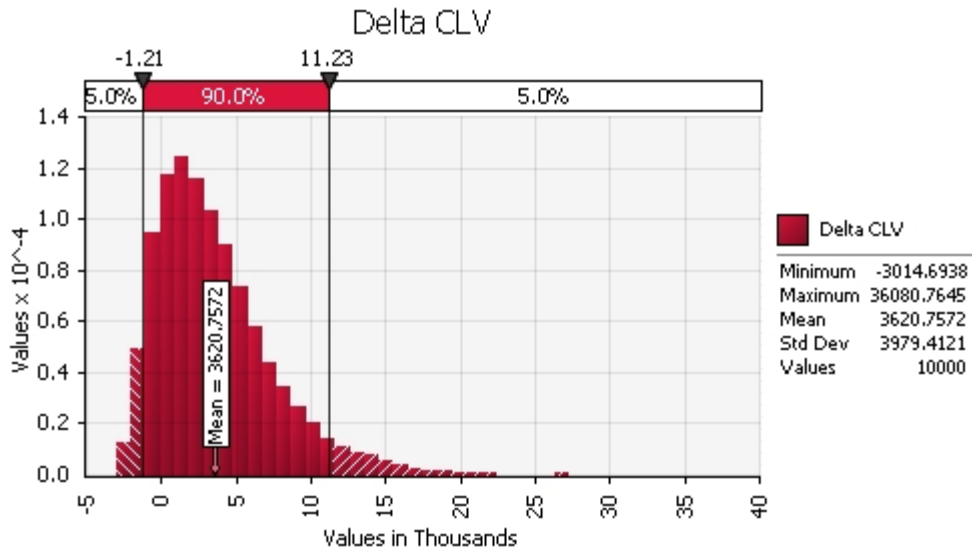
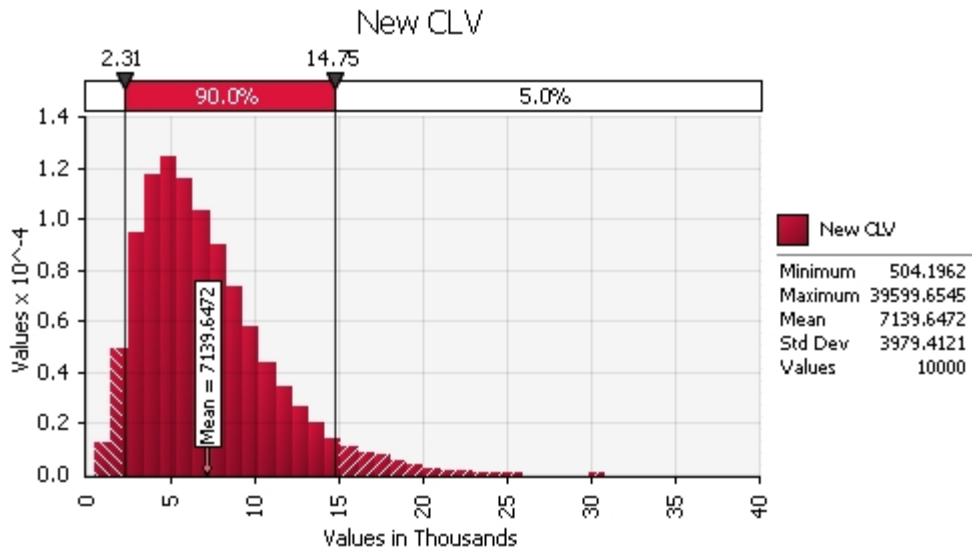
### 1.4.1.2. Mid-price Hotel

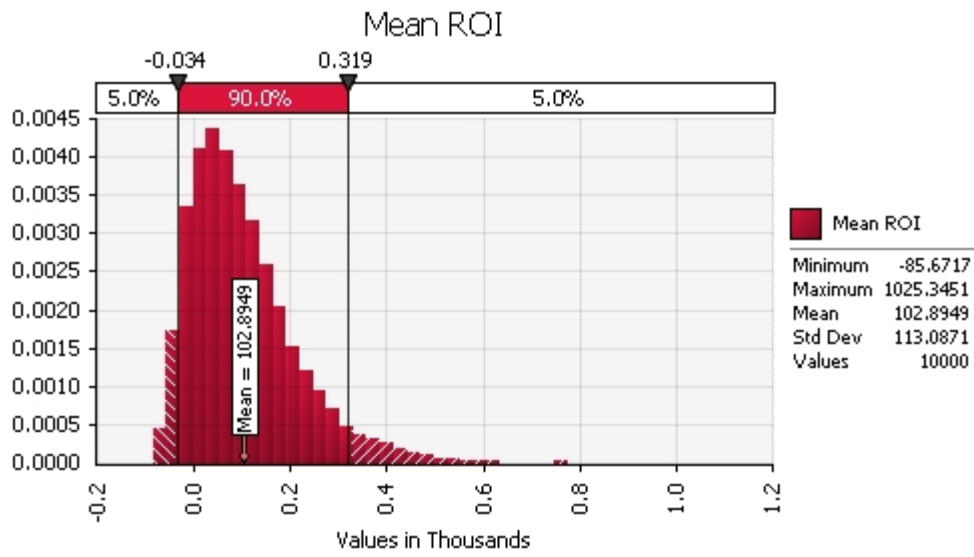
**B2**





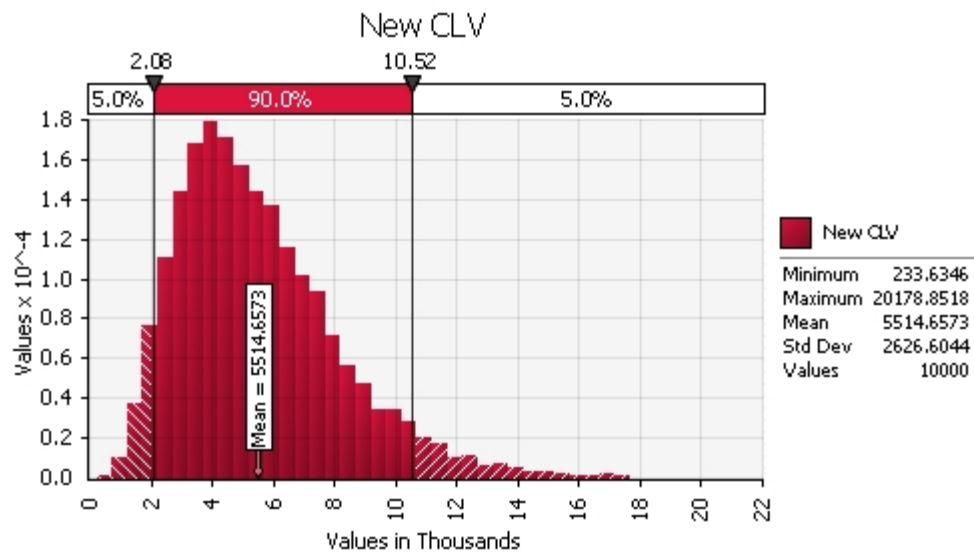
**P1**

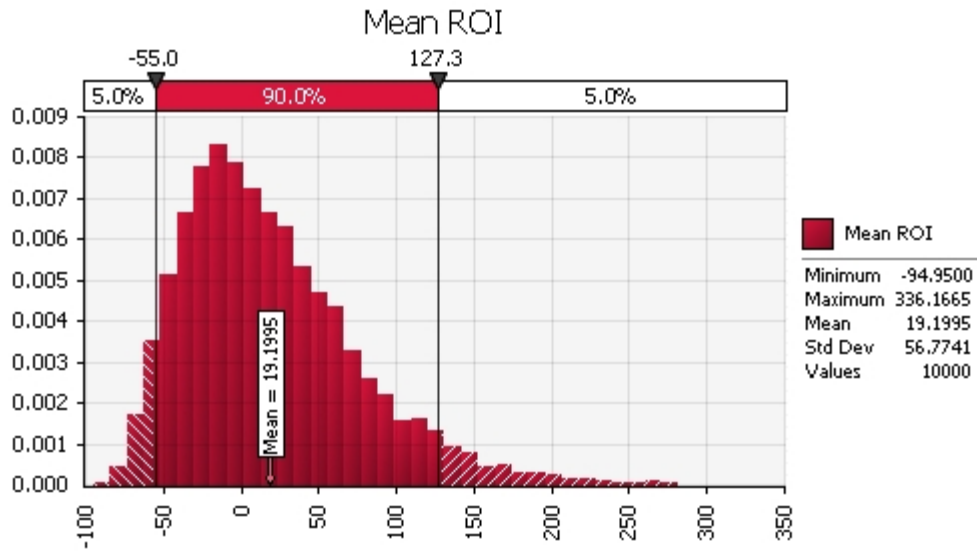
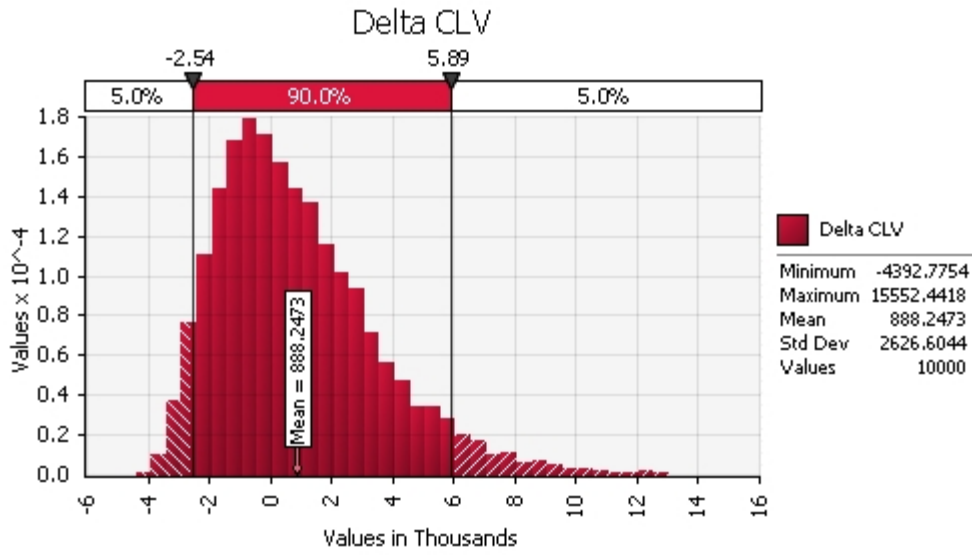




### 1.4.1.3. High-end Hotel

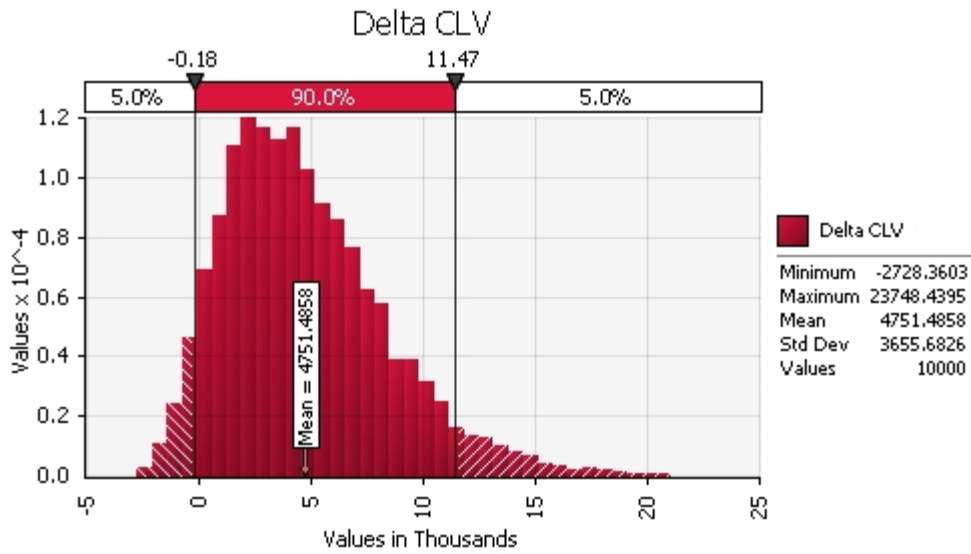
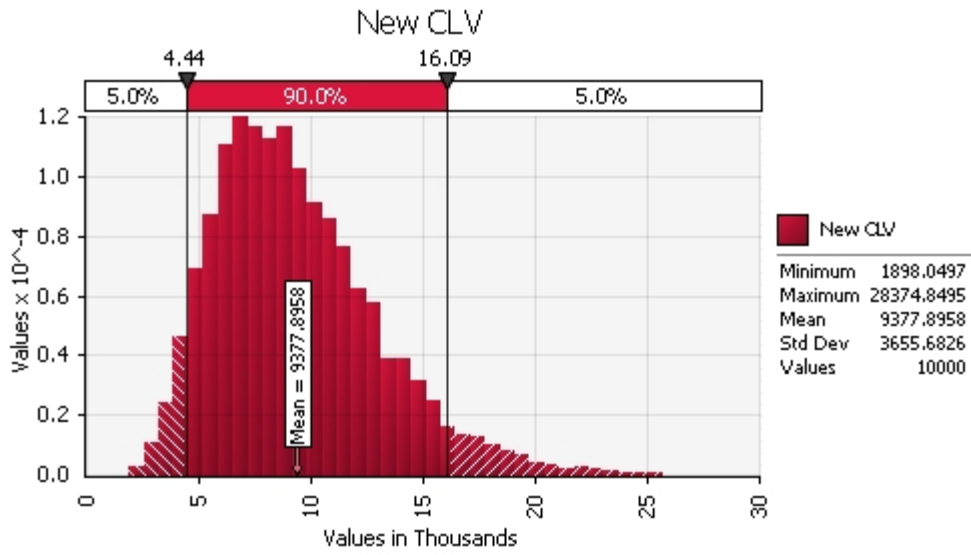
**B2**

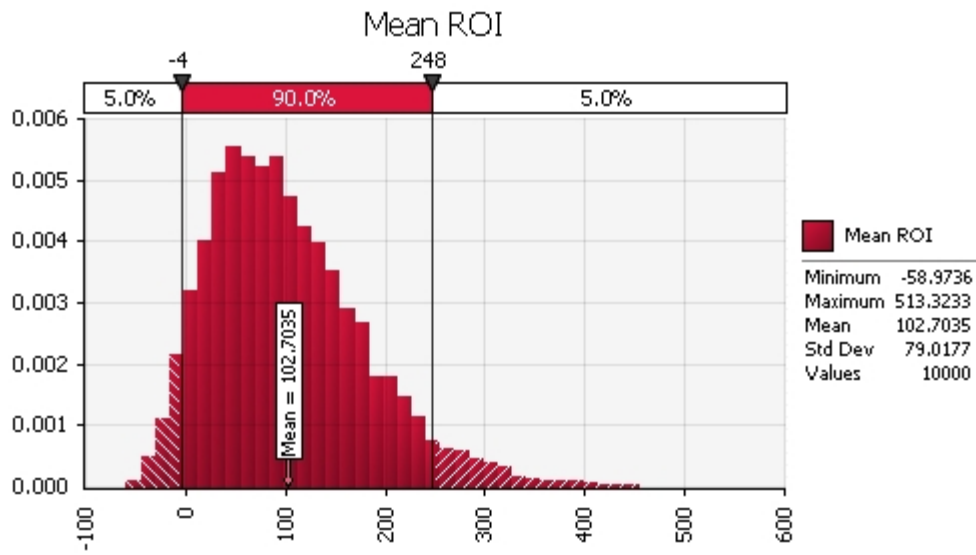




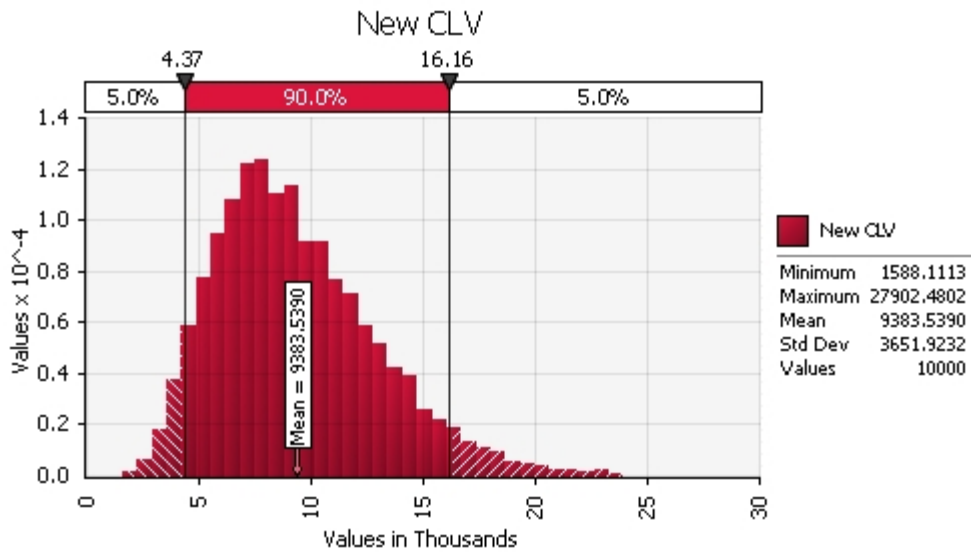
**P2**

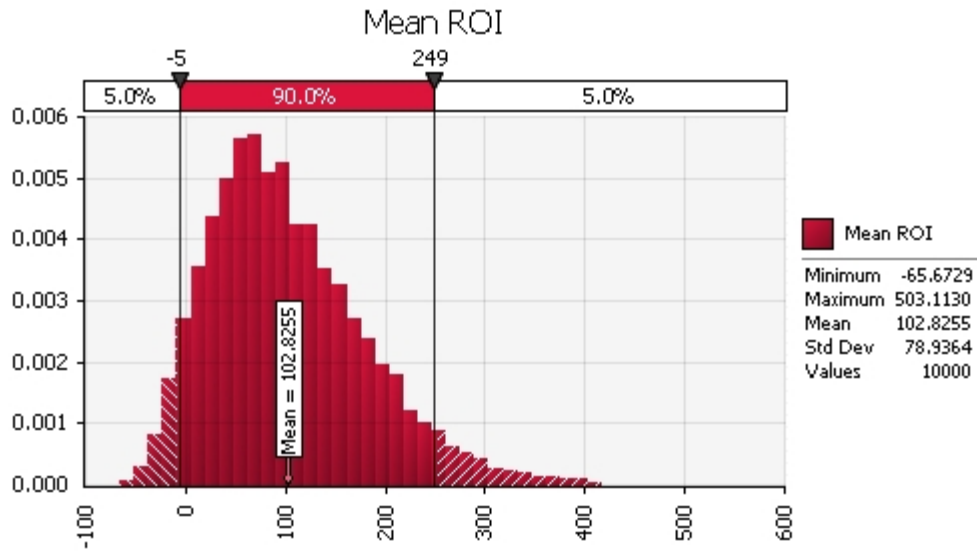
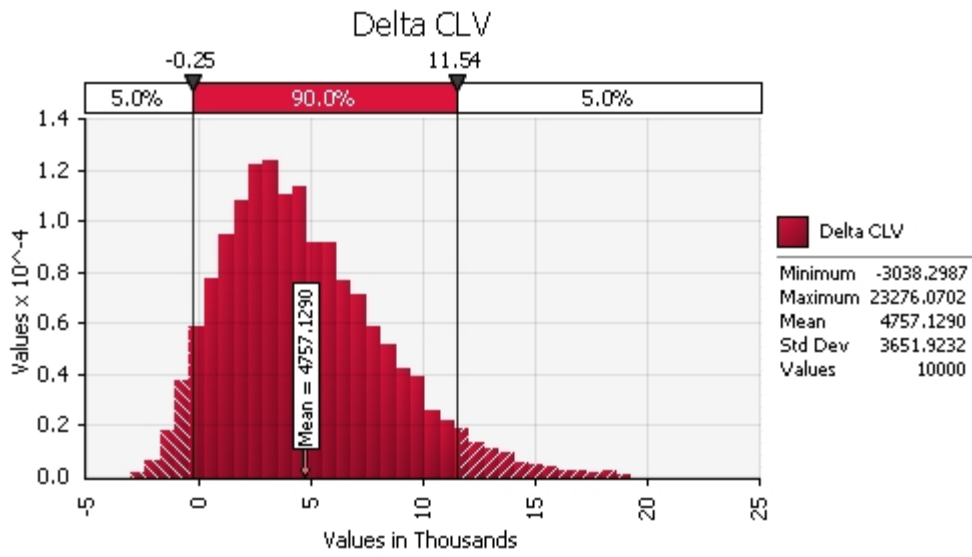






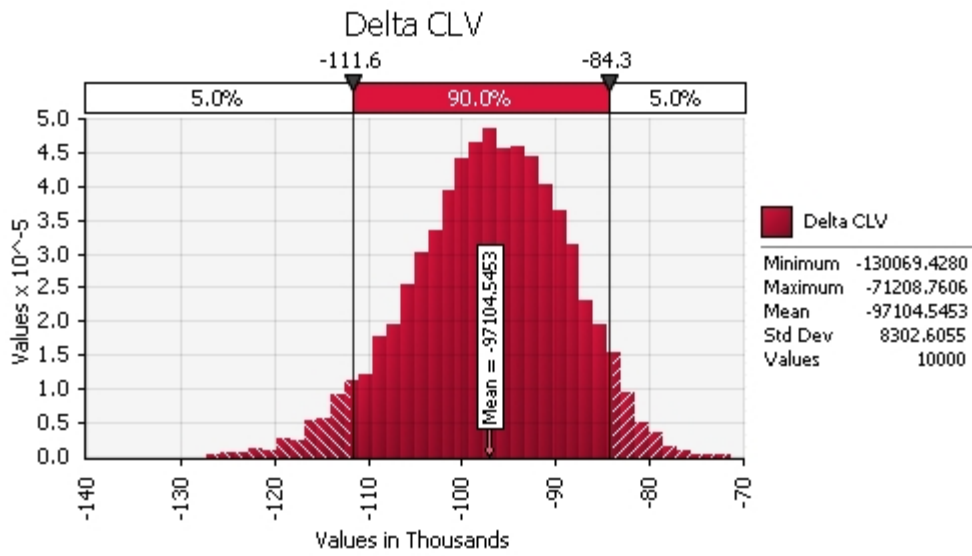
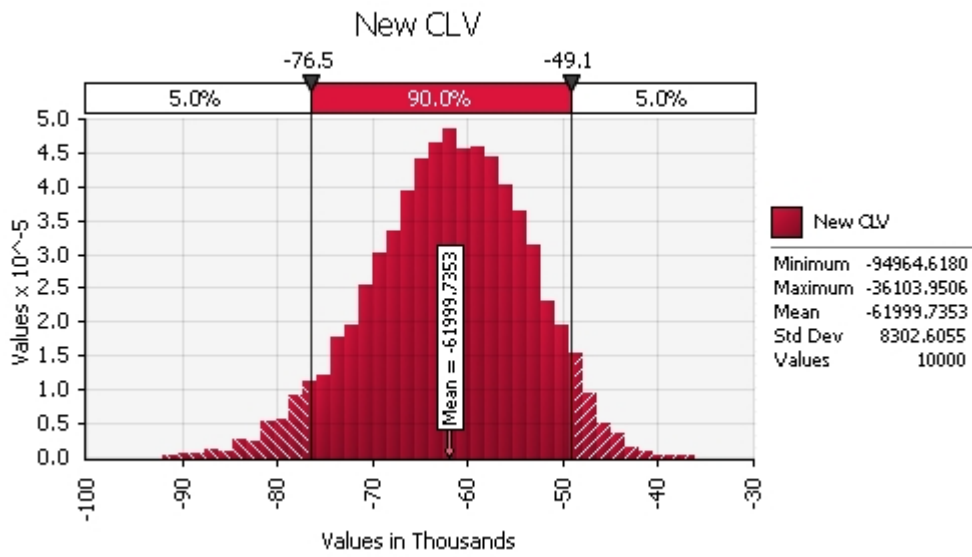
Q2

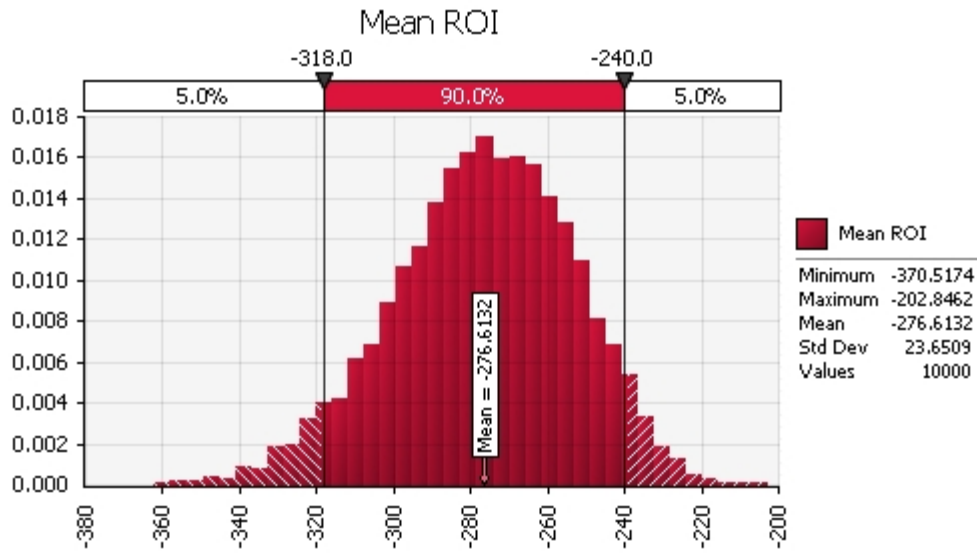




### 1.4.1.4. Luxury Hotel

R2

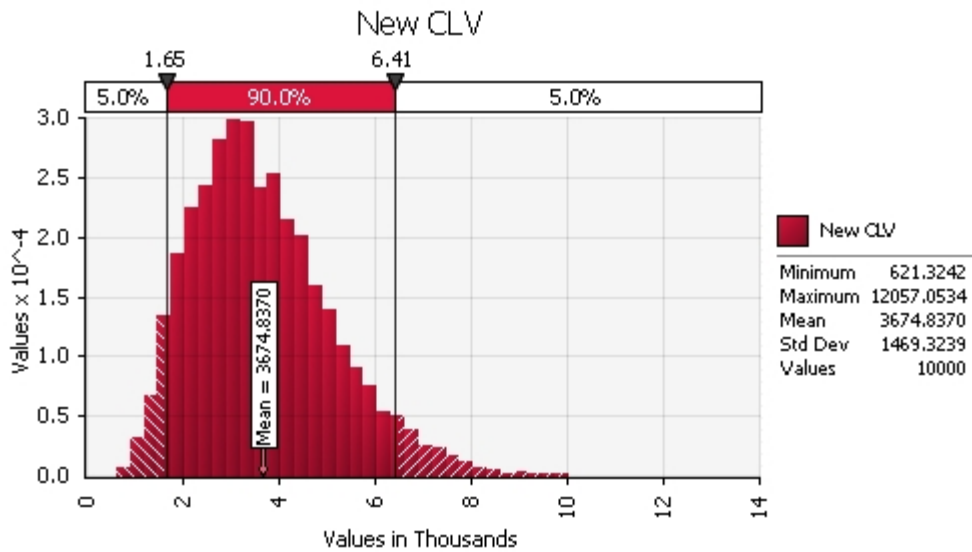


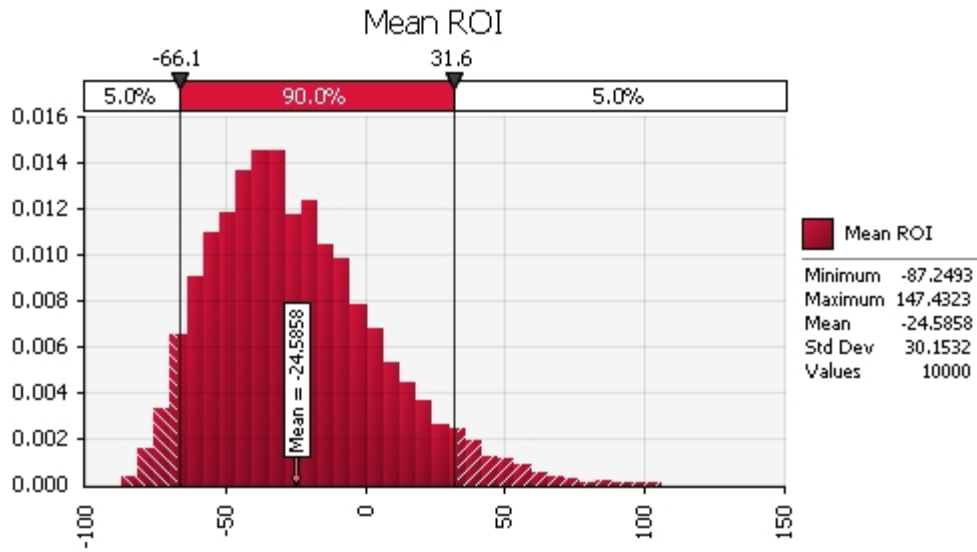
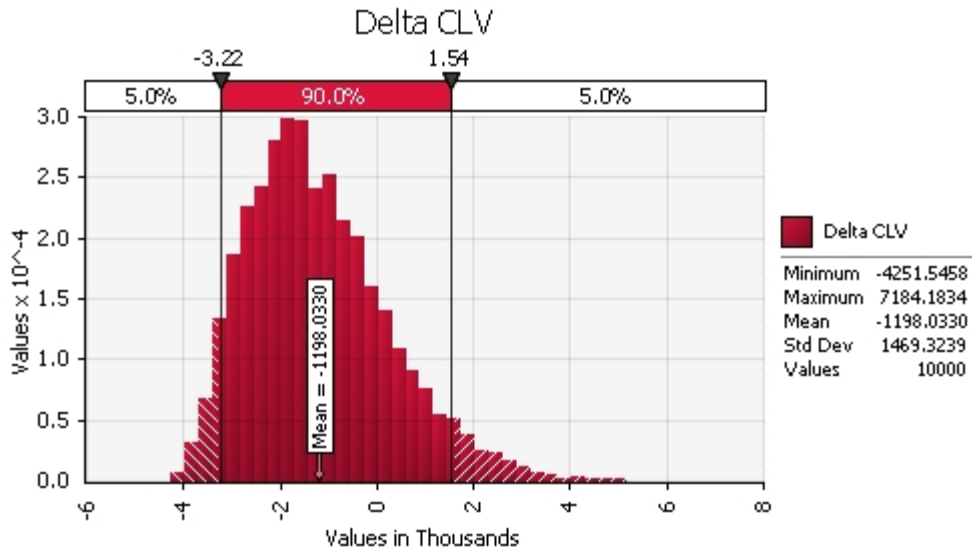


## 1.4.2. Business funds source

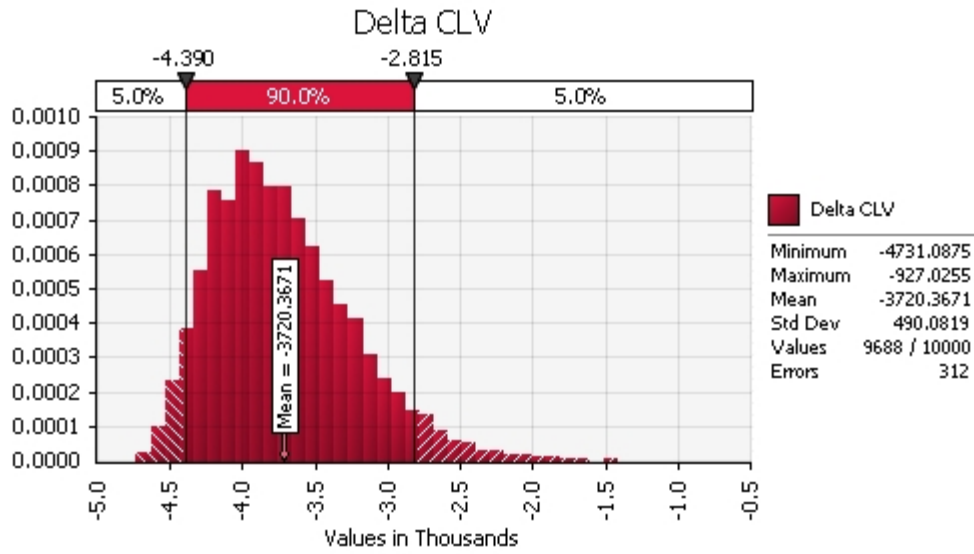
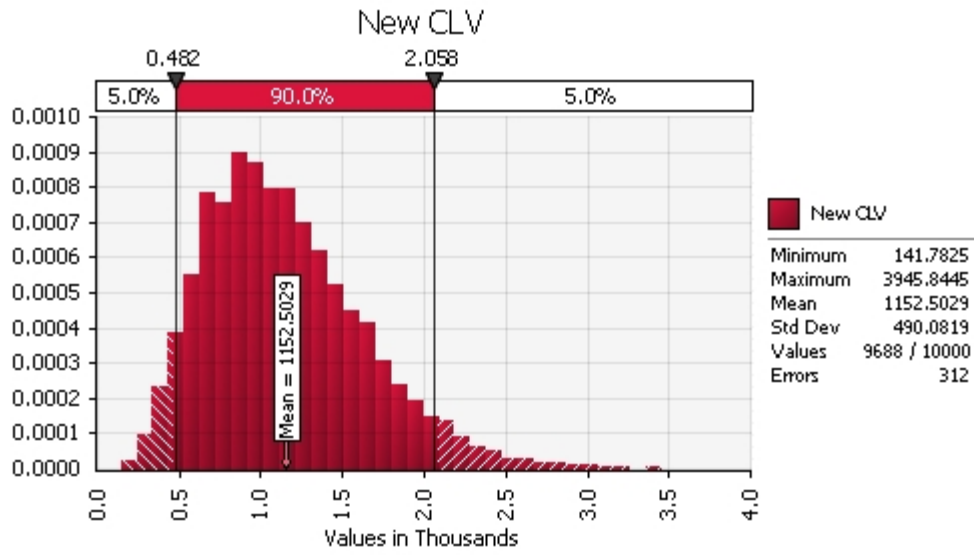
### 1.4.2.1. Budget Hotel

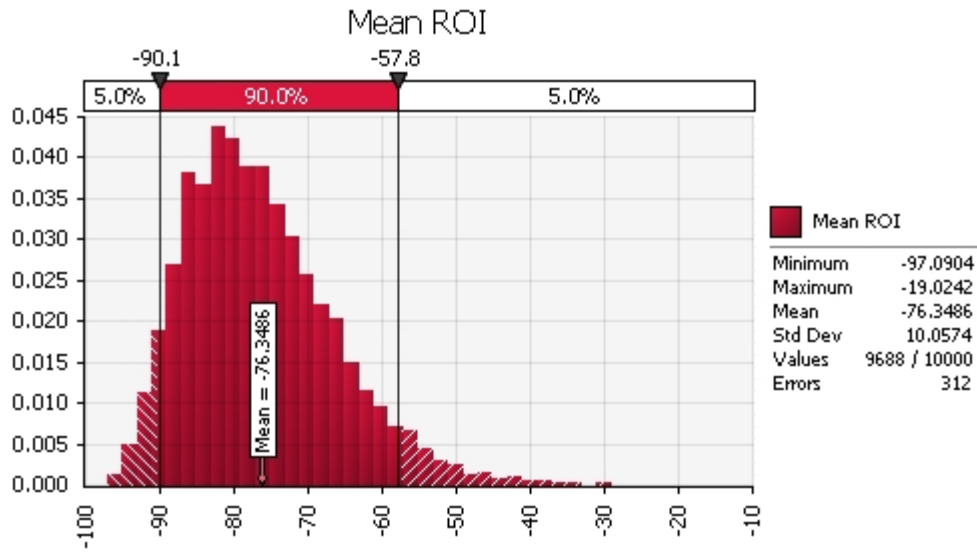
**B1**



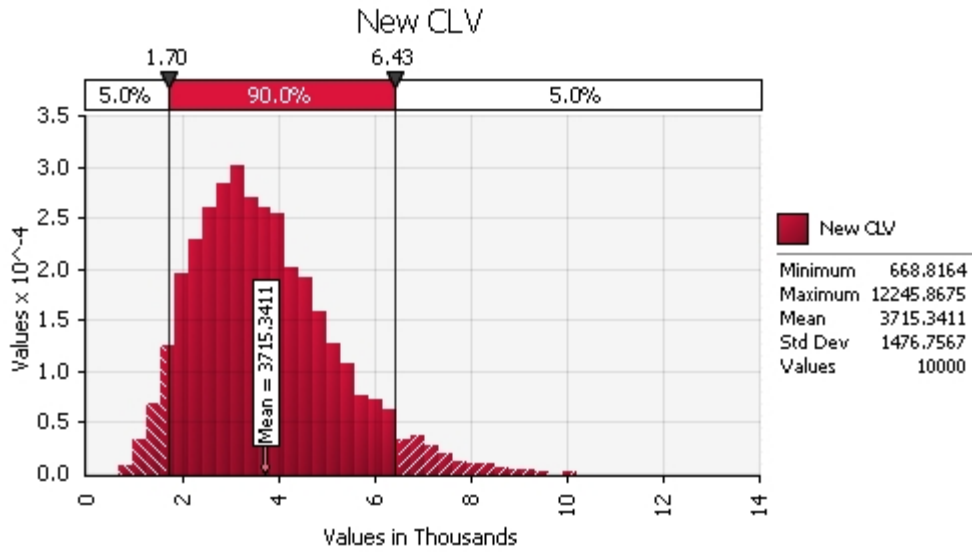


C1

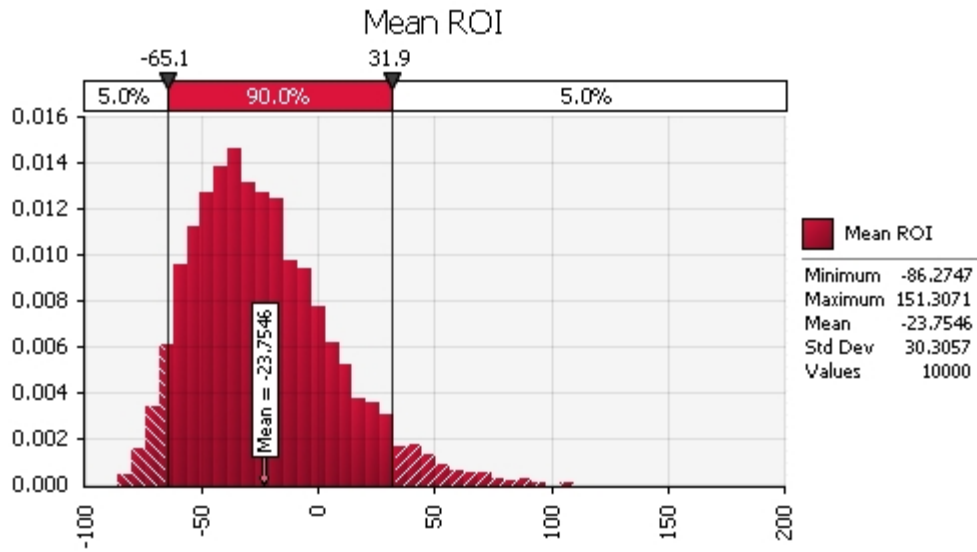
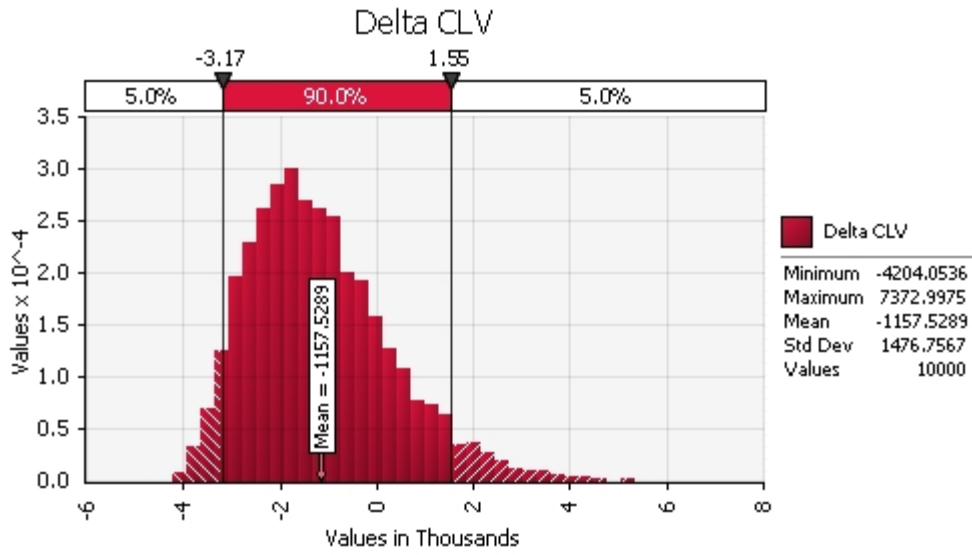




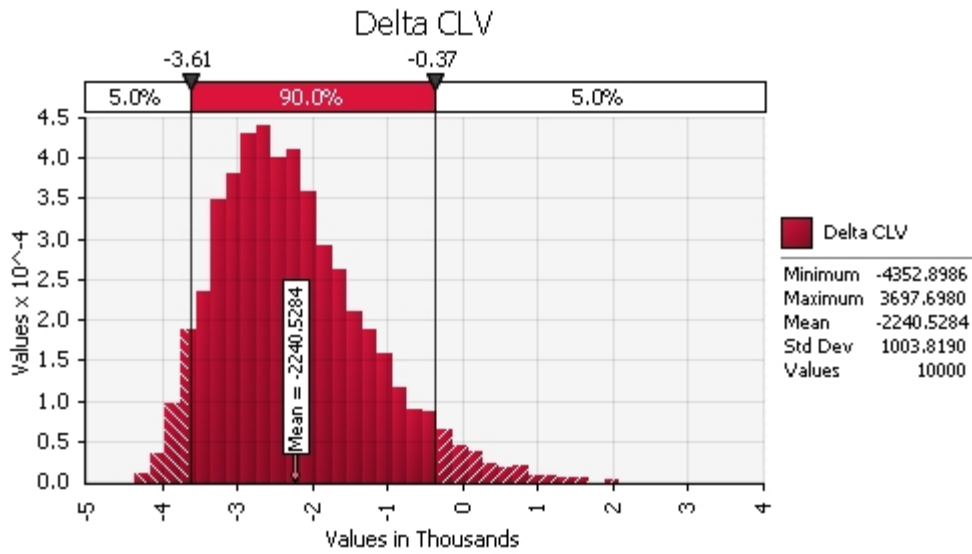
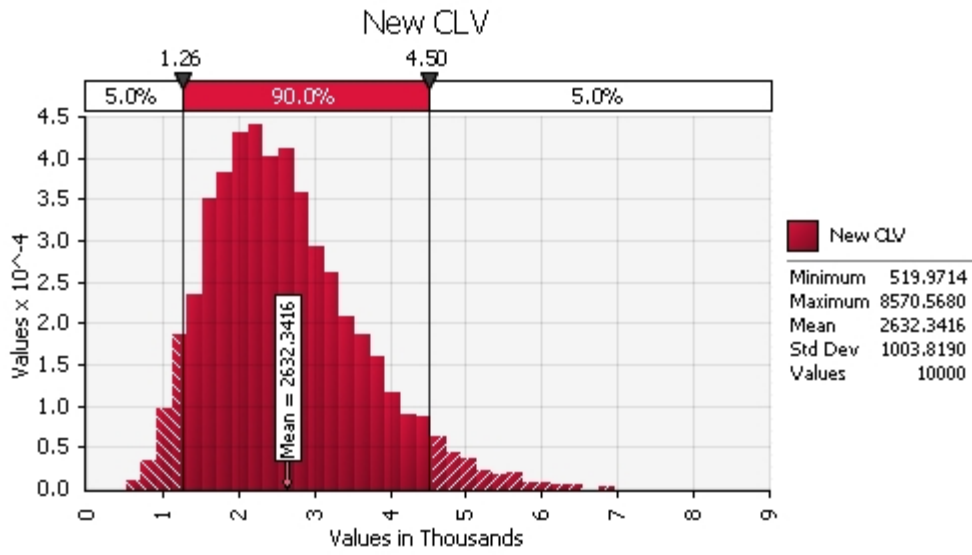
C2

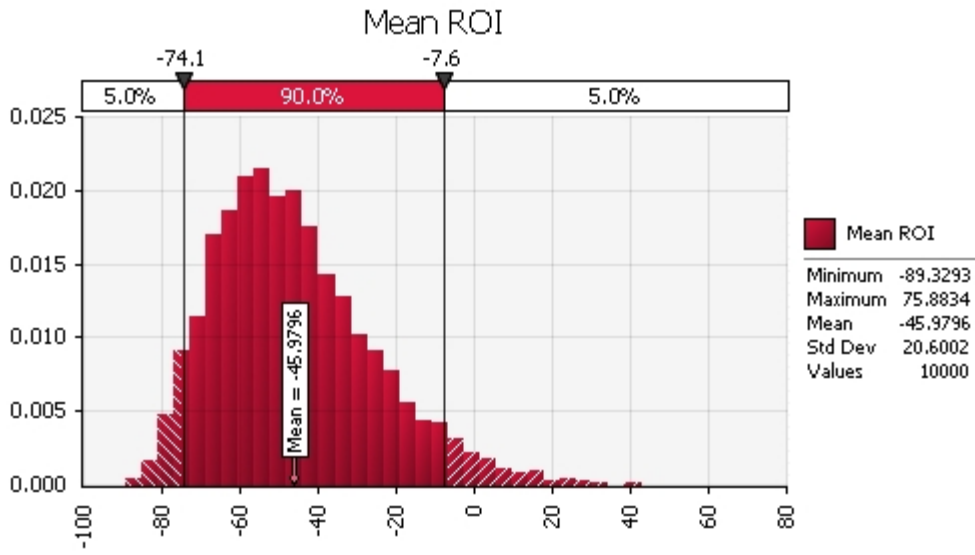




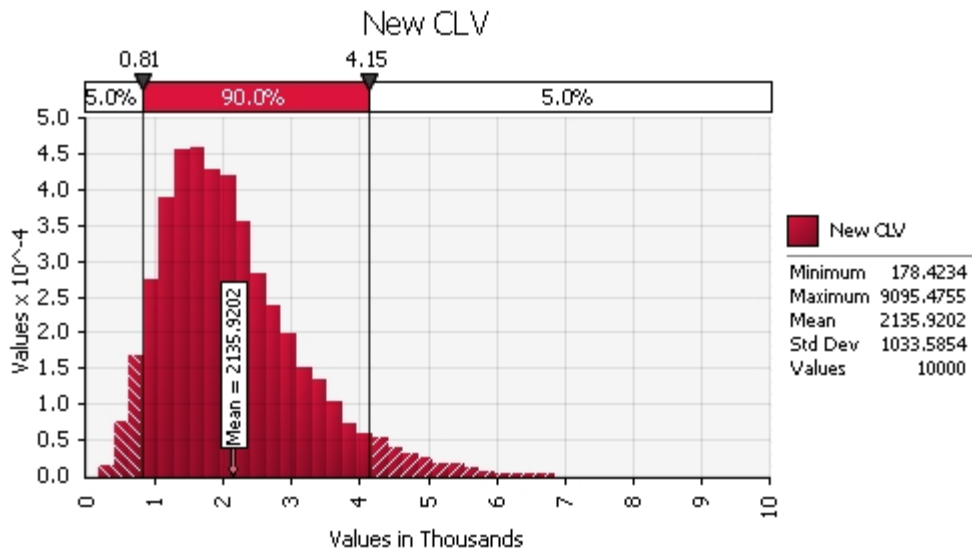


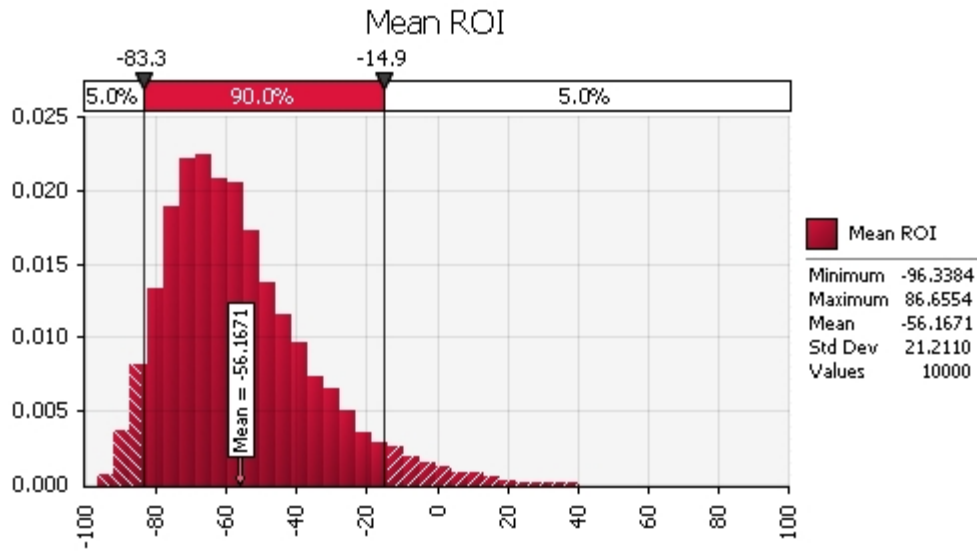
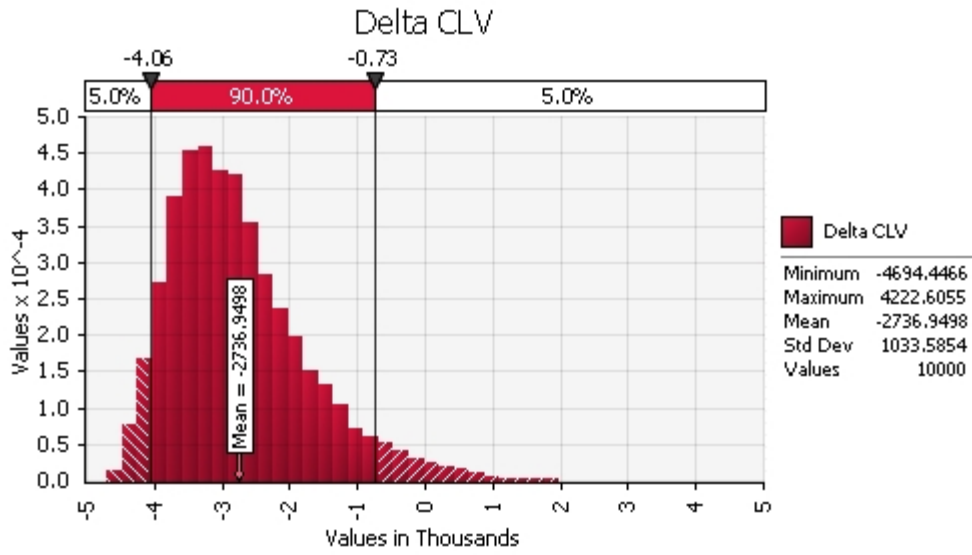
**R1**





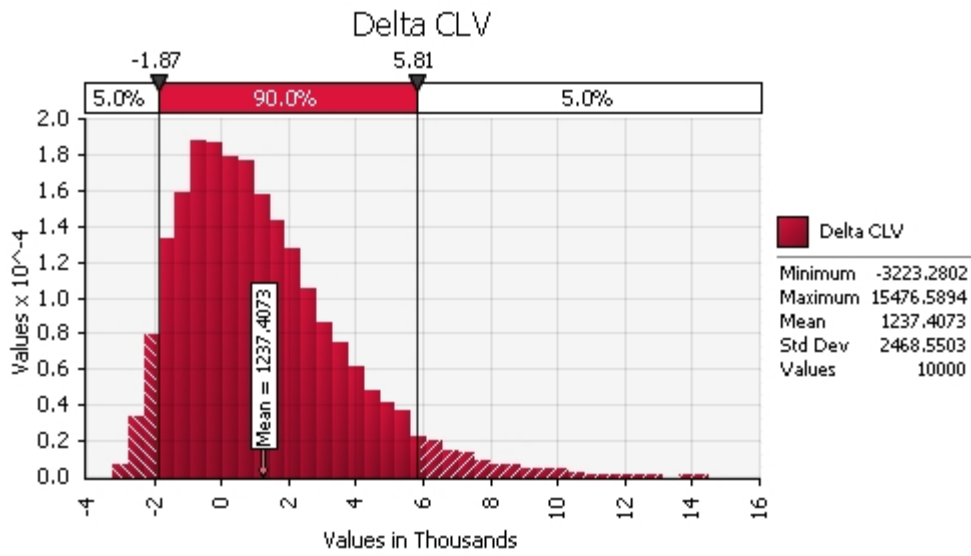
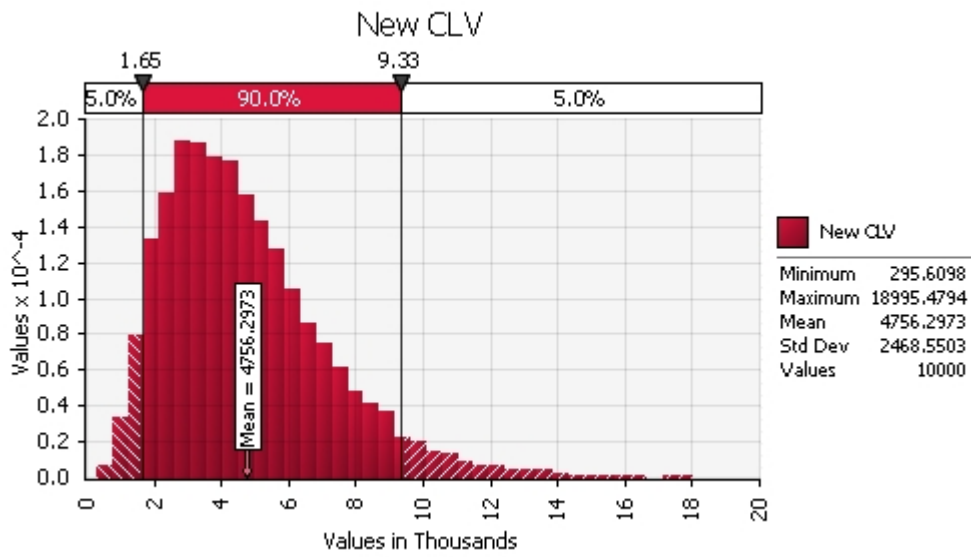
**R2**

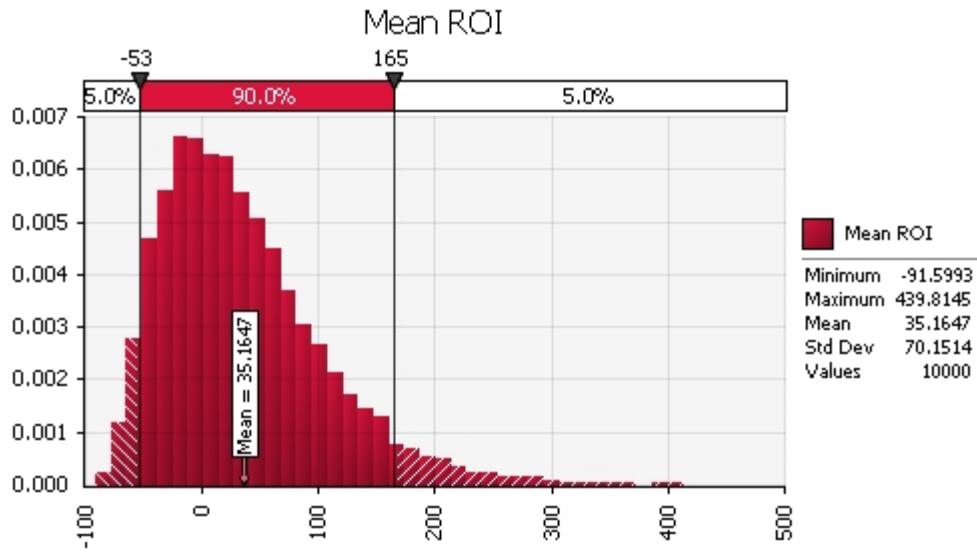




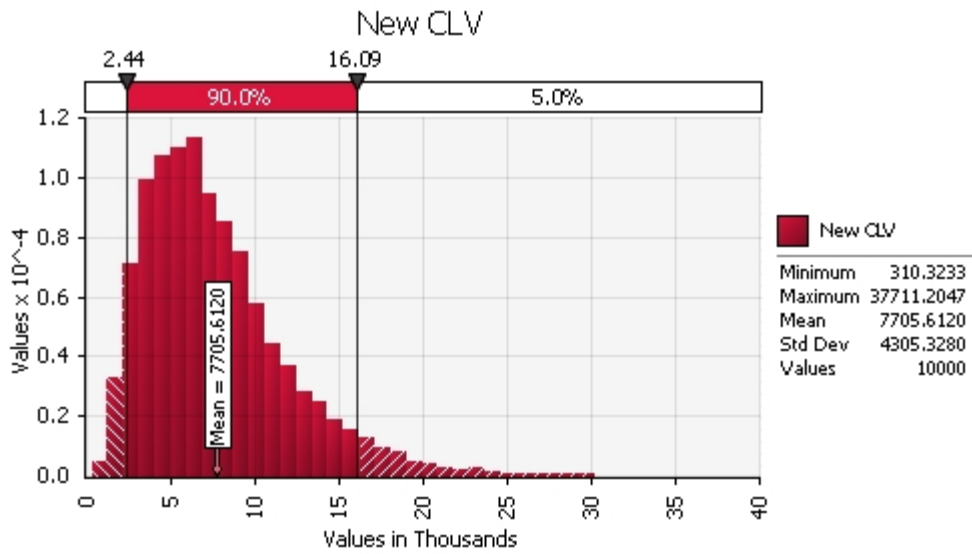
### 1.4.2.2. Mid-price Hotel

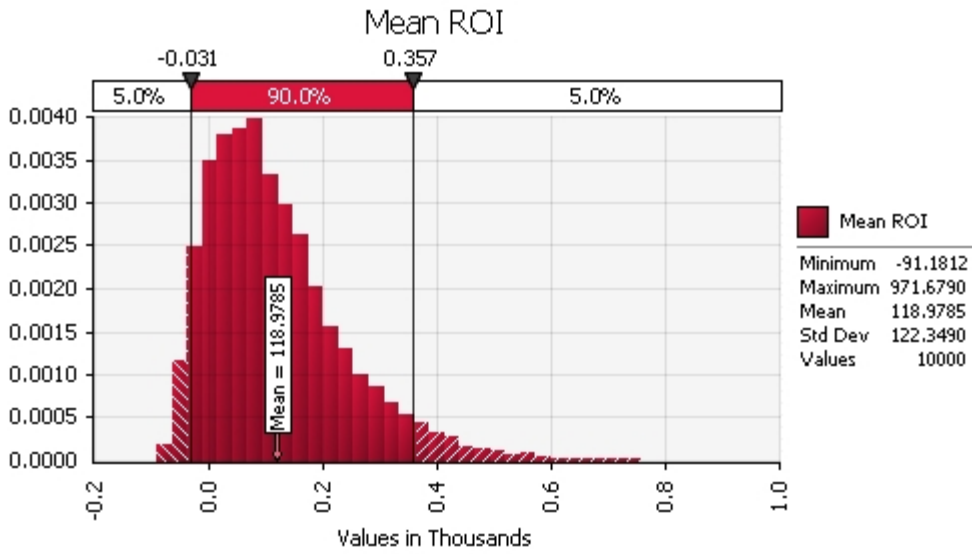
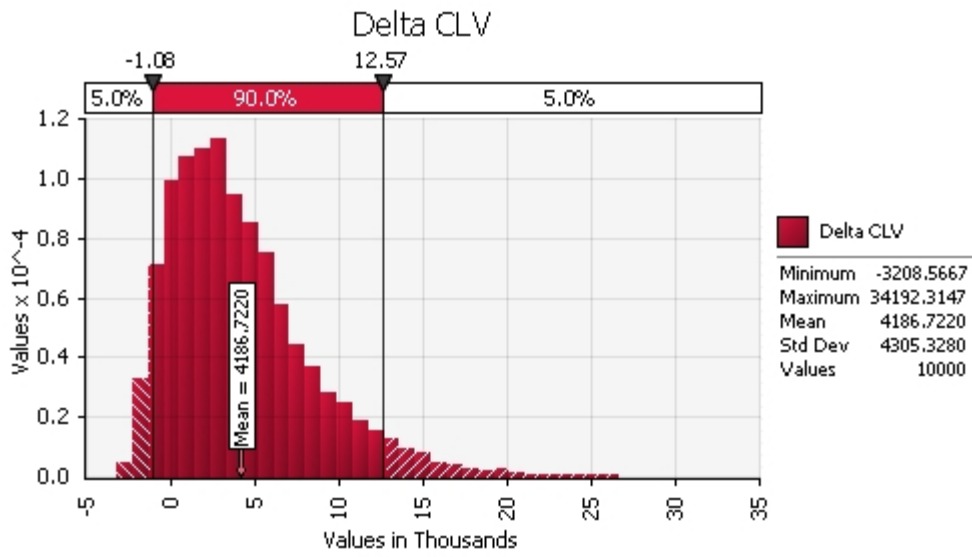
B1



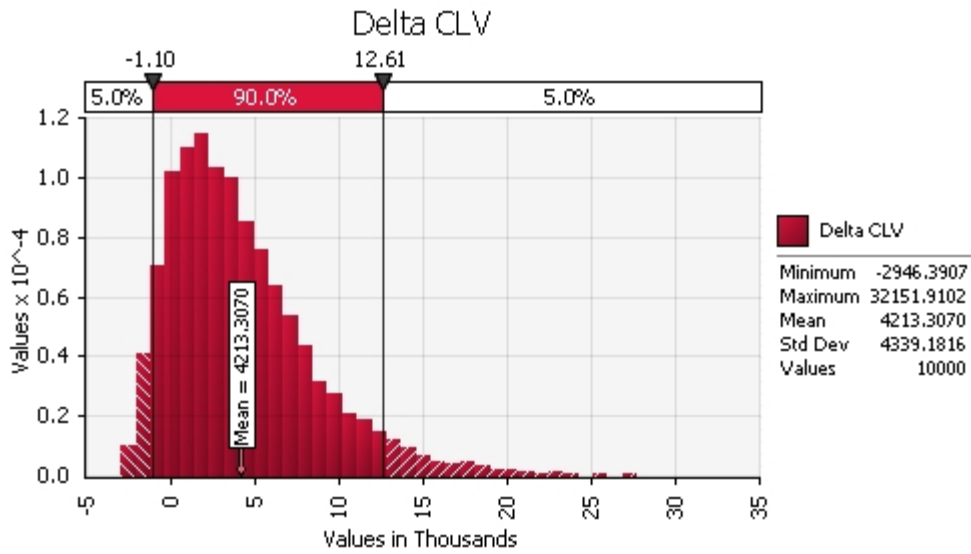
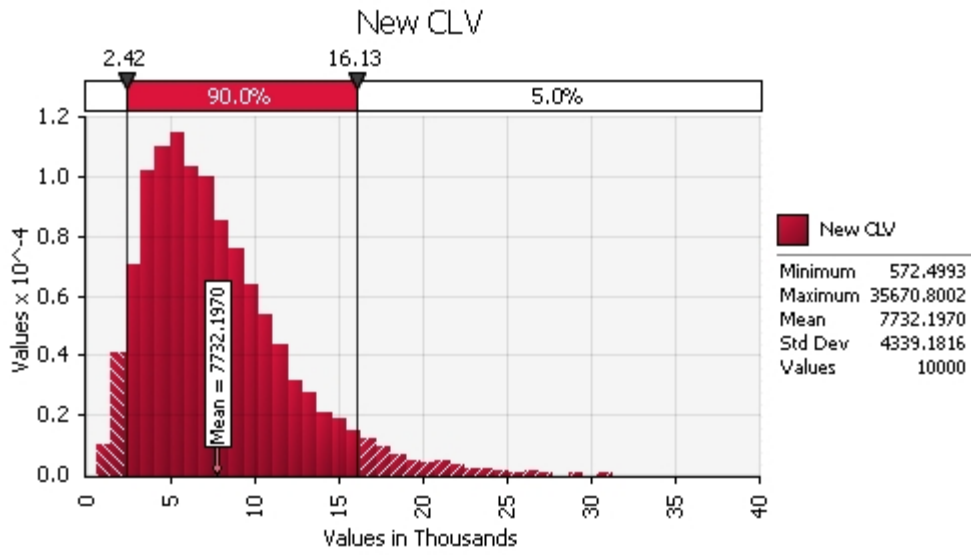


**P1**

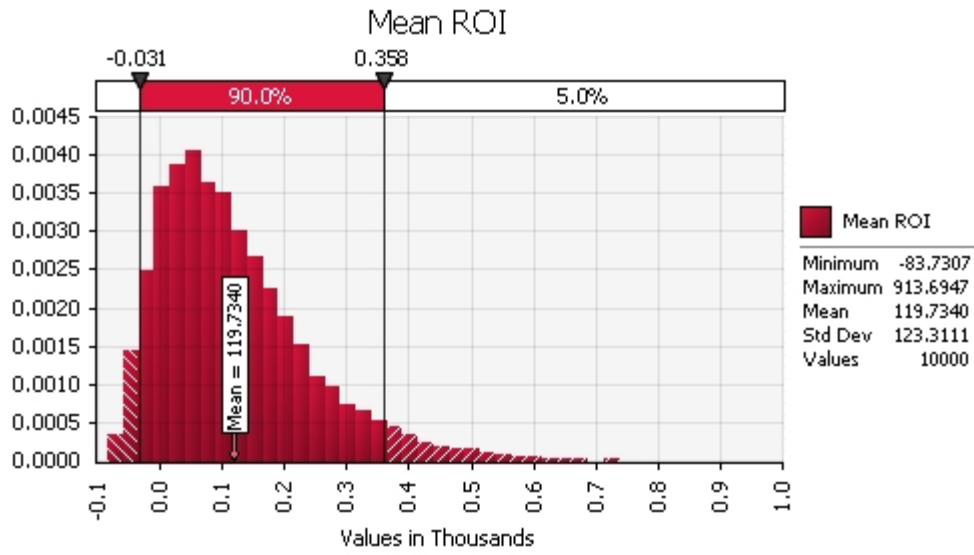




**R2**

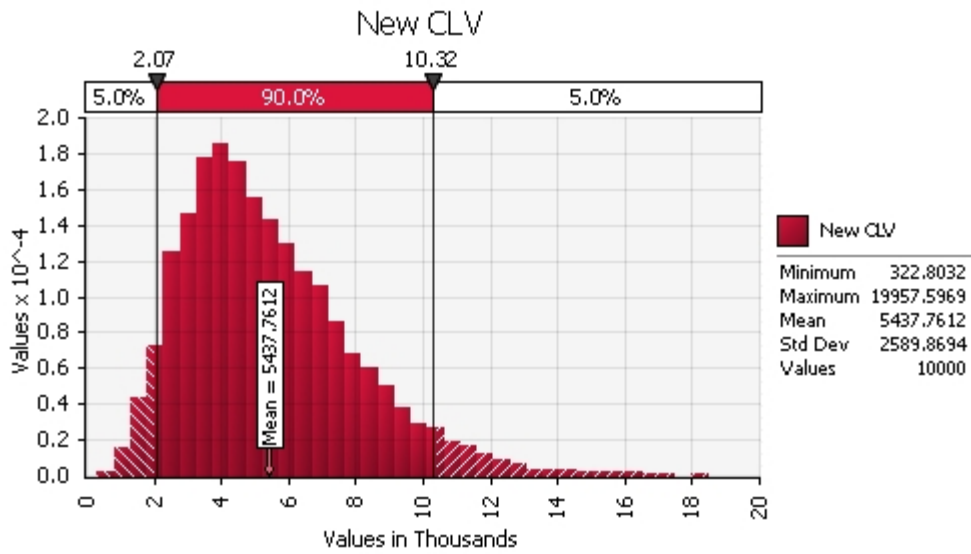


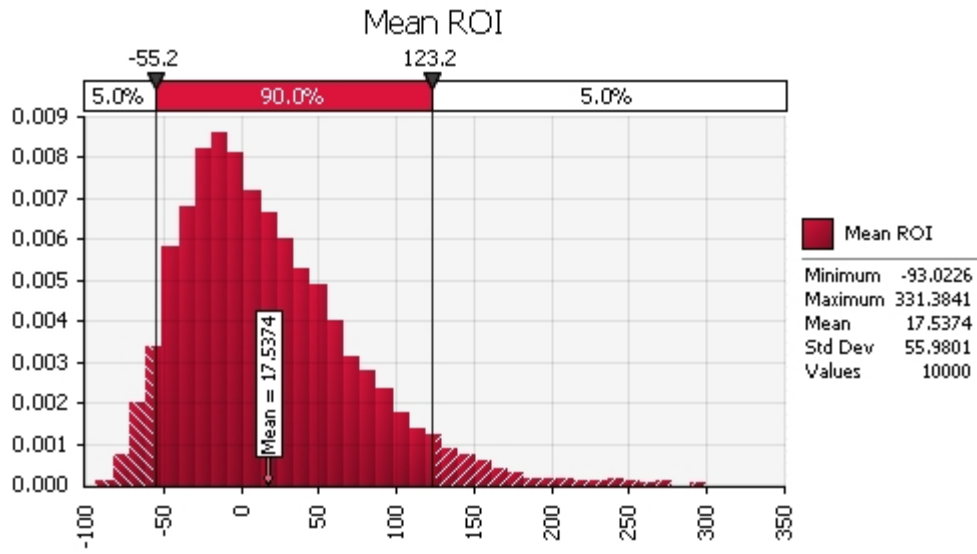
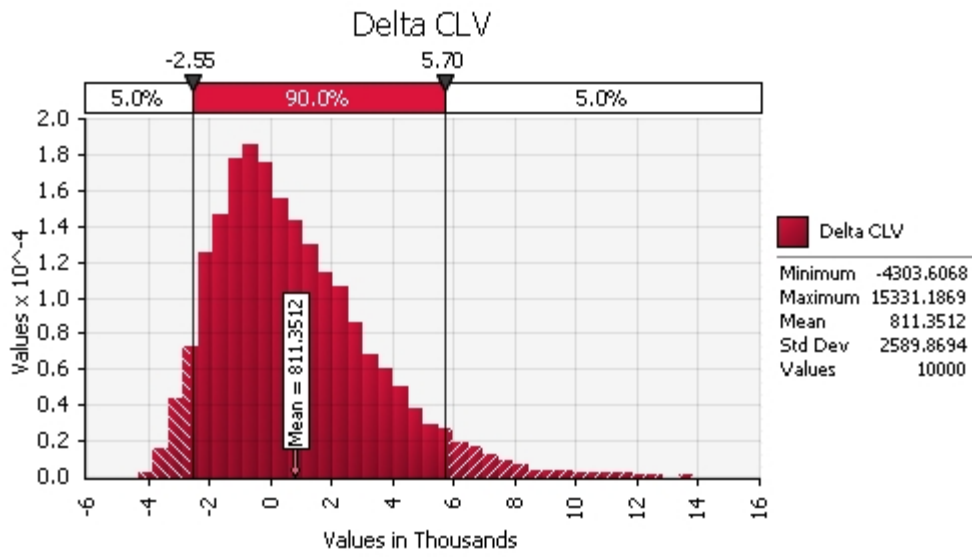




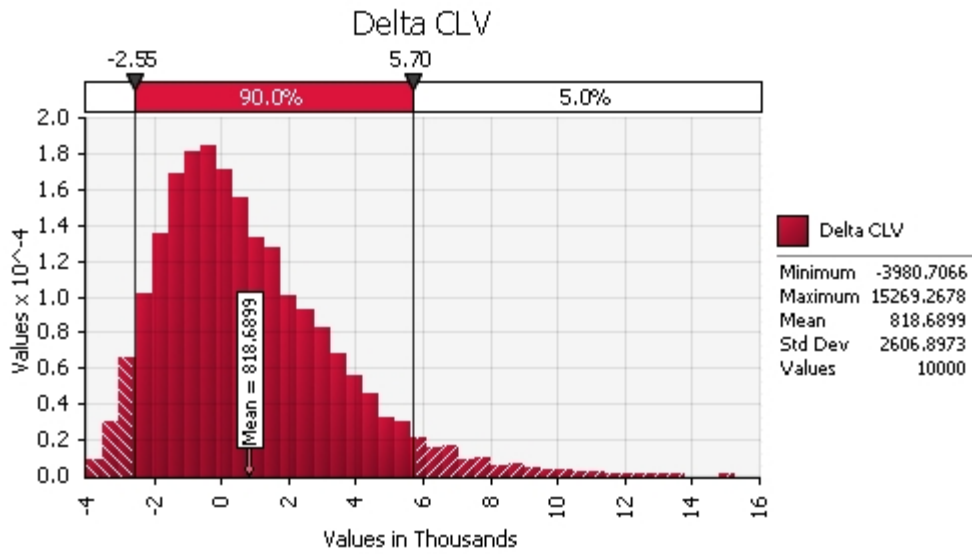
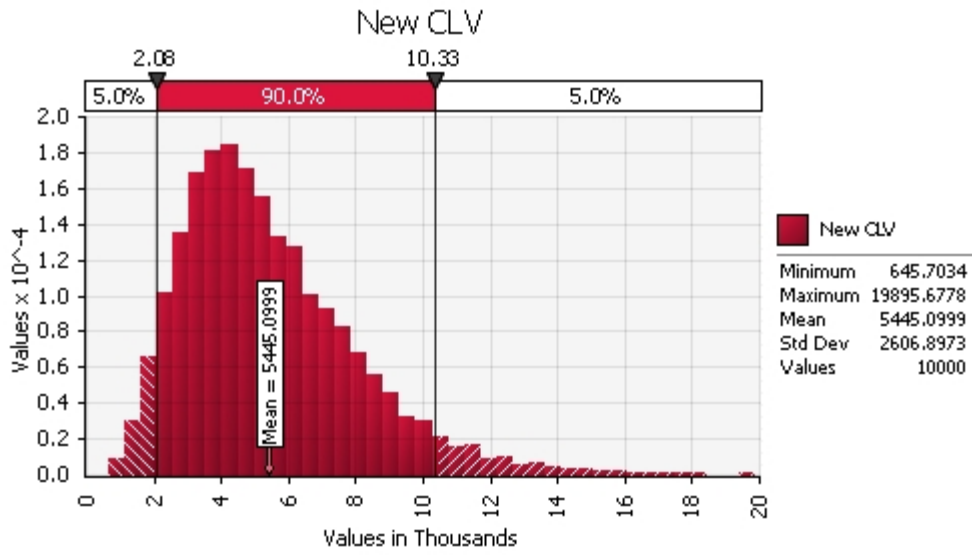
### 1.4.2.3. High-end Hotel

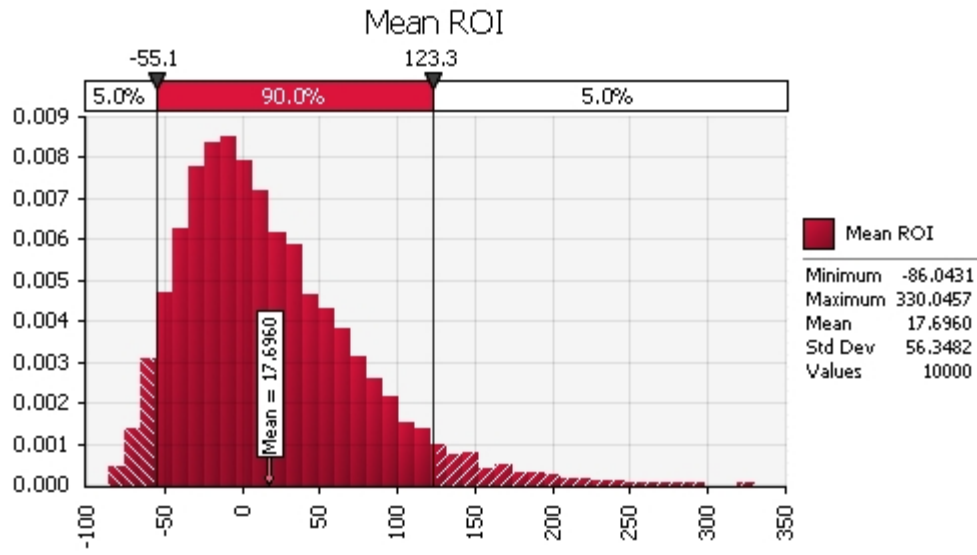
B2



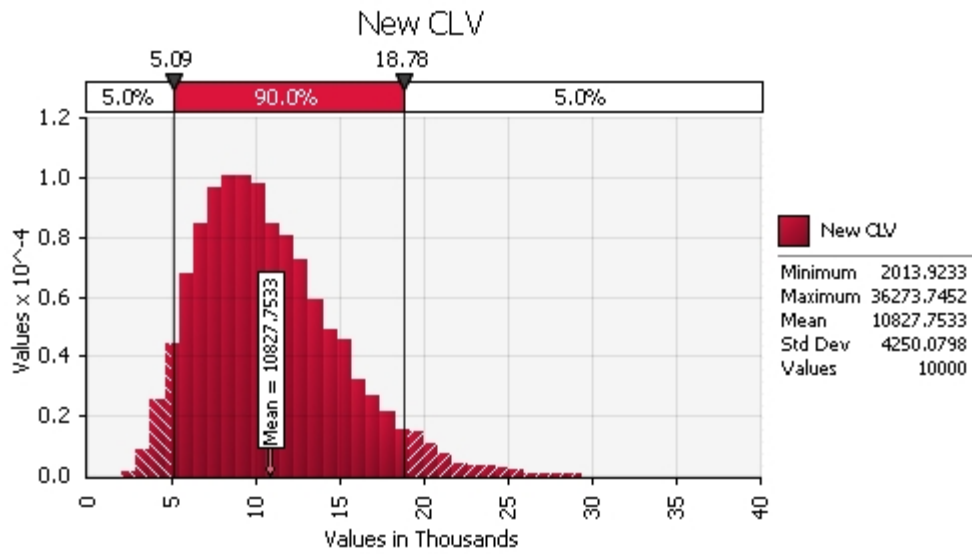


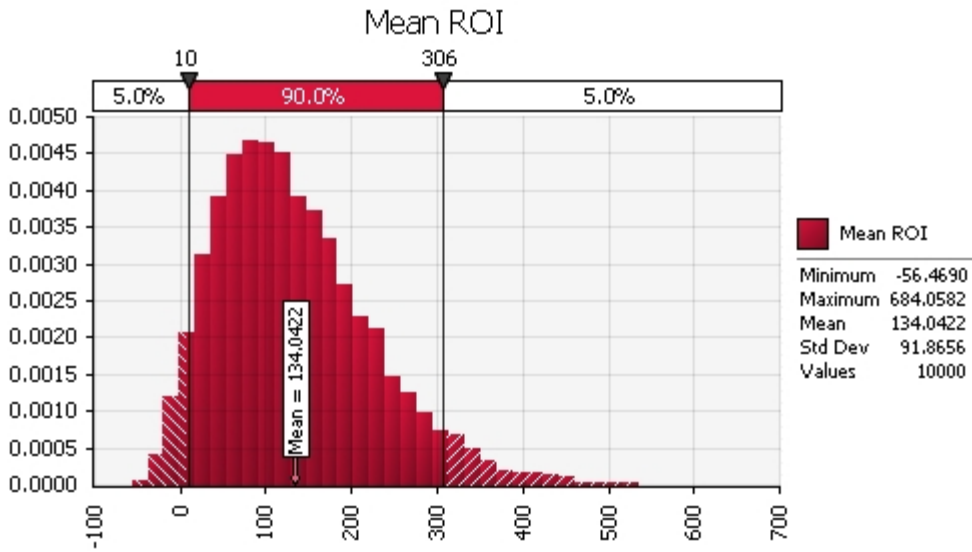
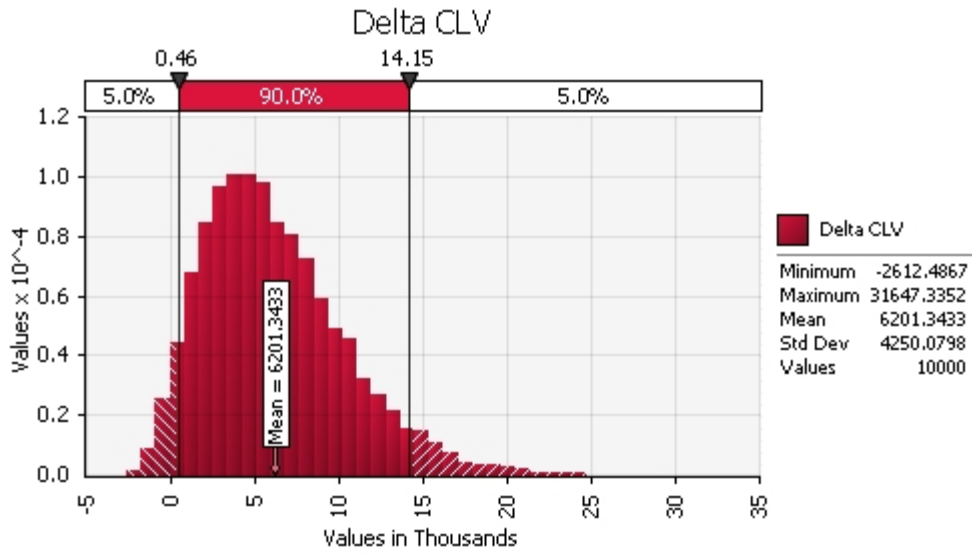
C1



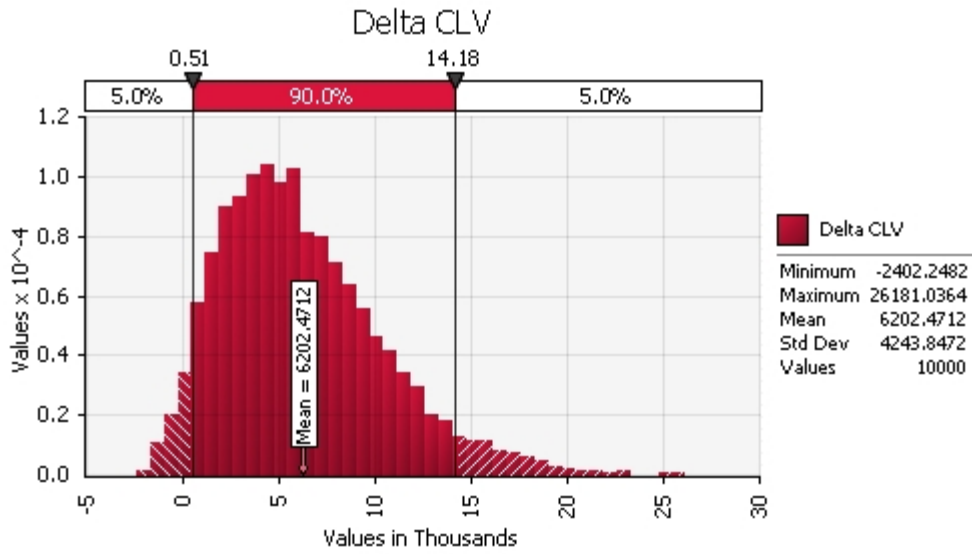
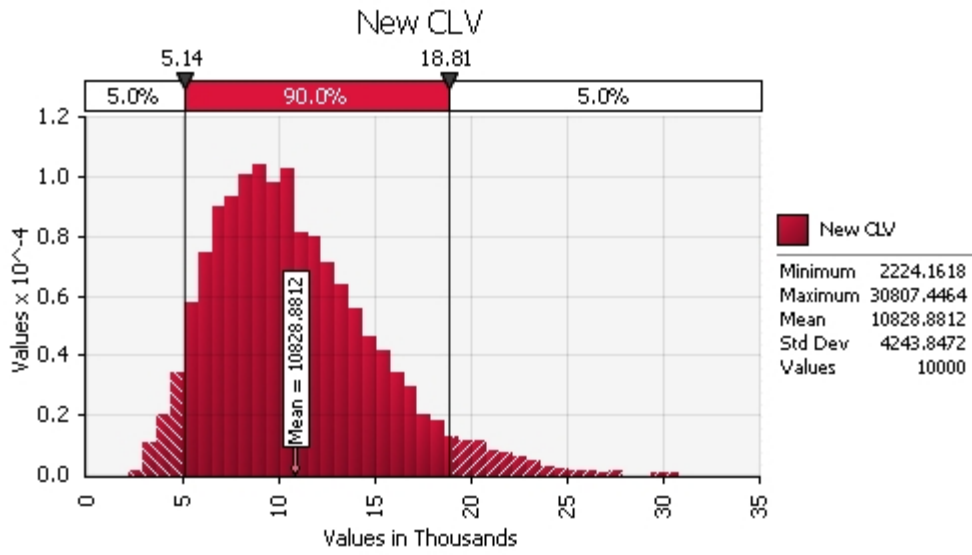


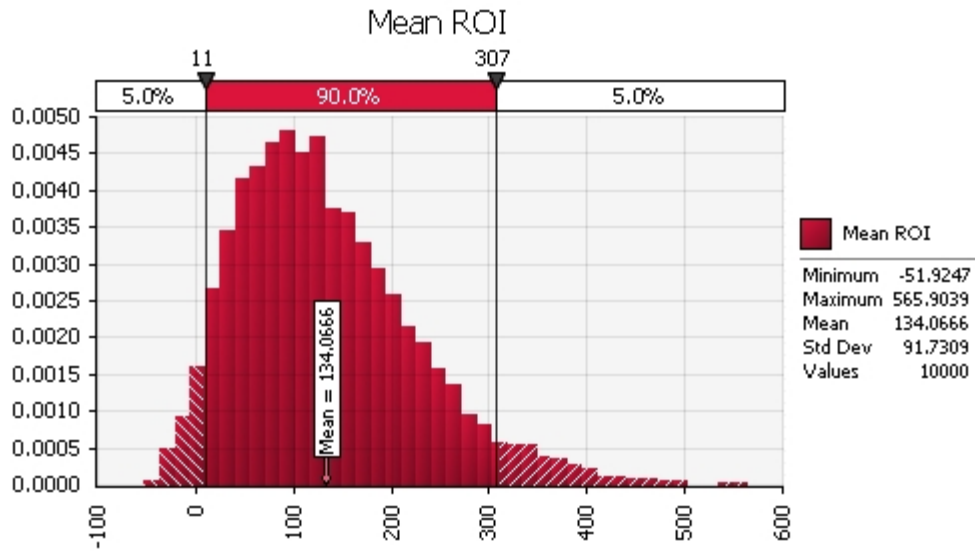
**P2**





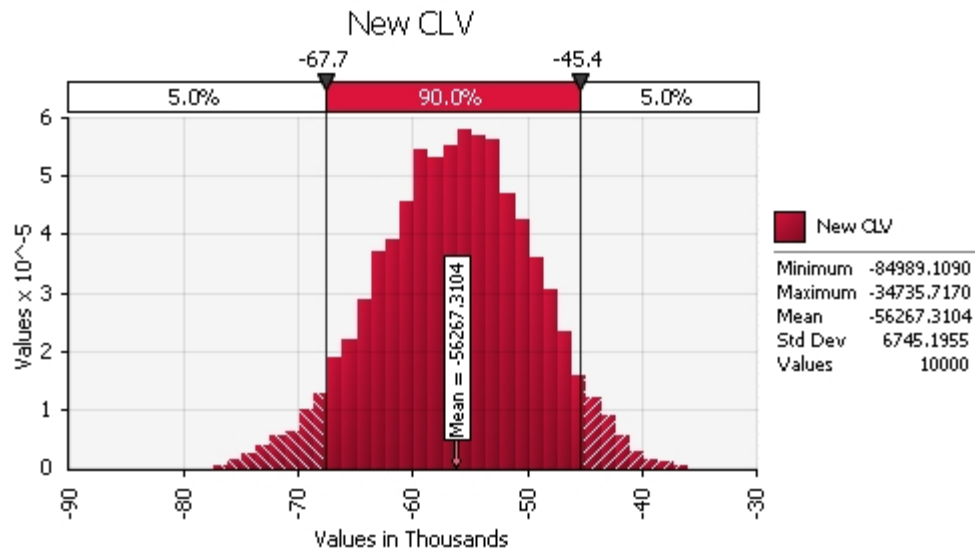
Q2

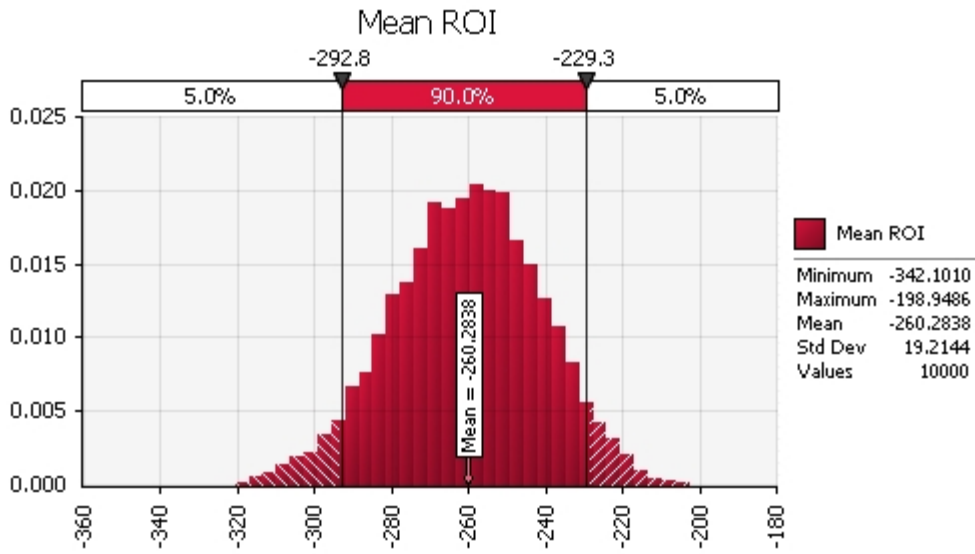
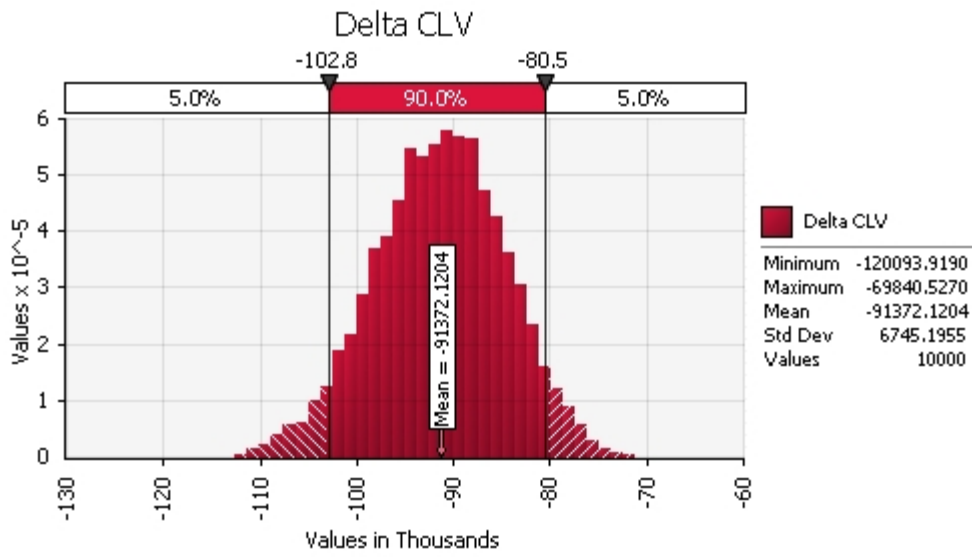




#### 1.4.2.4. Luxury Hotel

C2

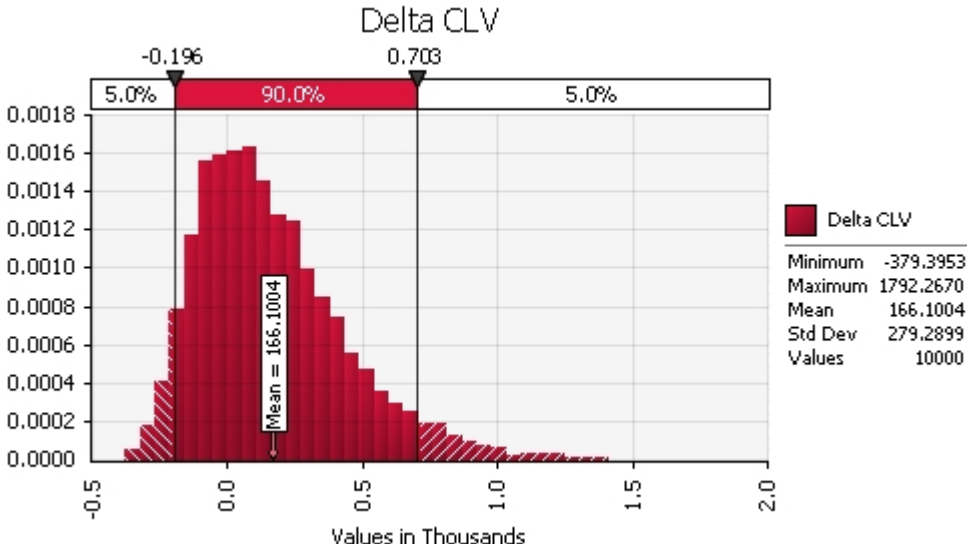
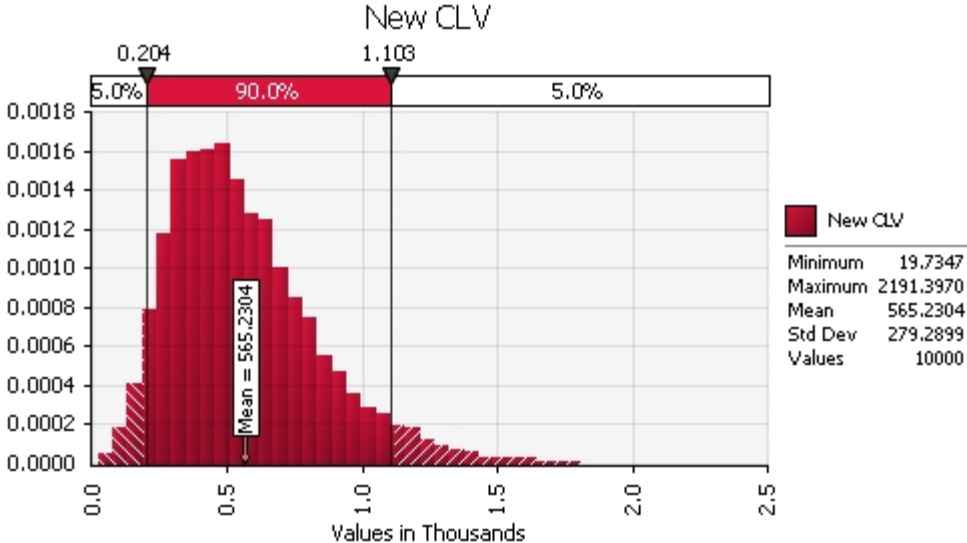


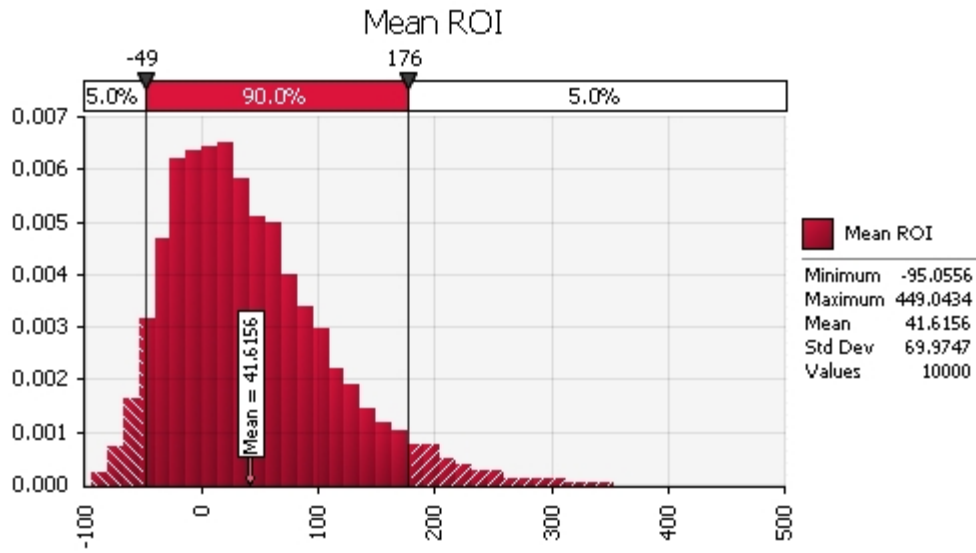




**1.5. Cluster 5 by Hotel Type**  
**1.5.1. Personal funds source**  
**1.5.1.1. Budget Hotel**

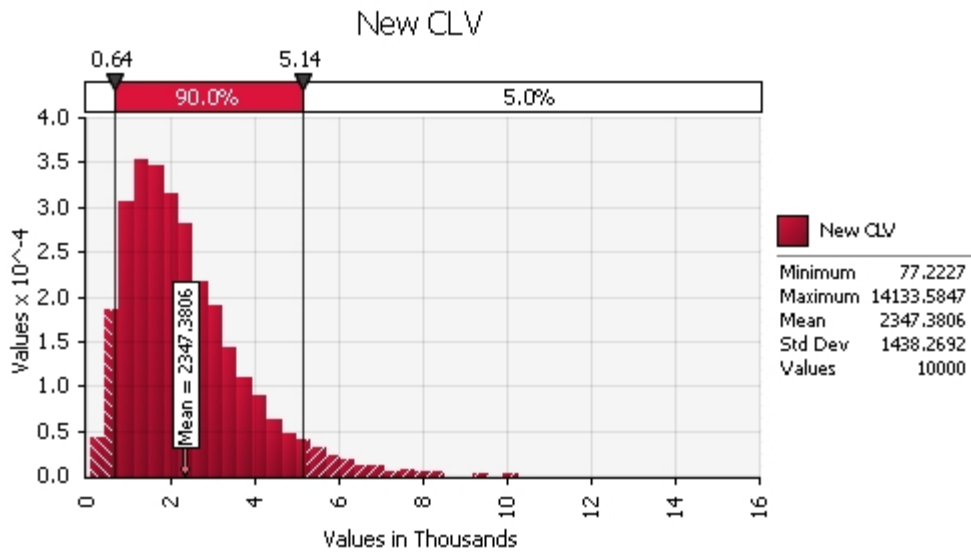
Q1

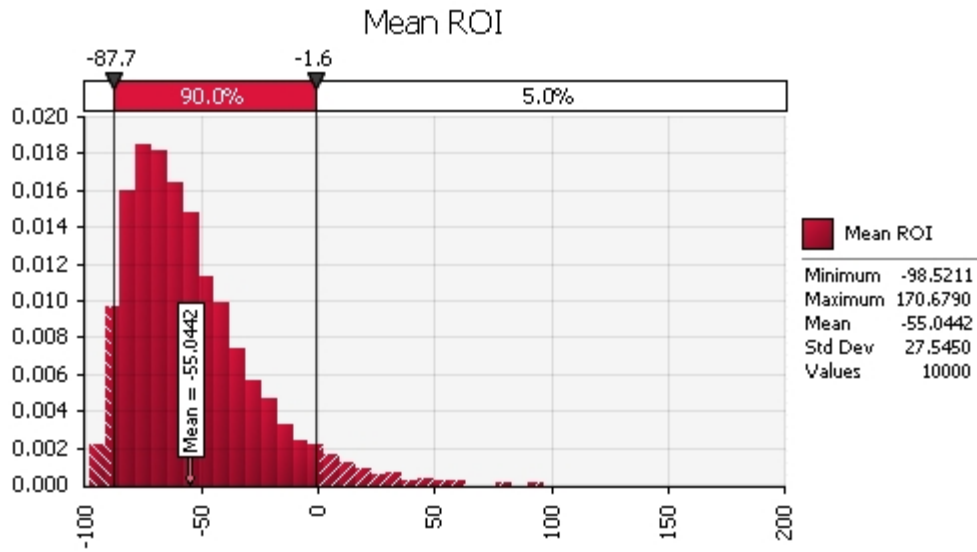
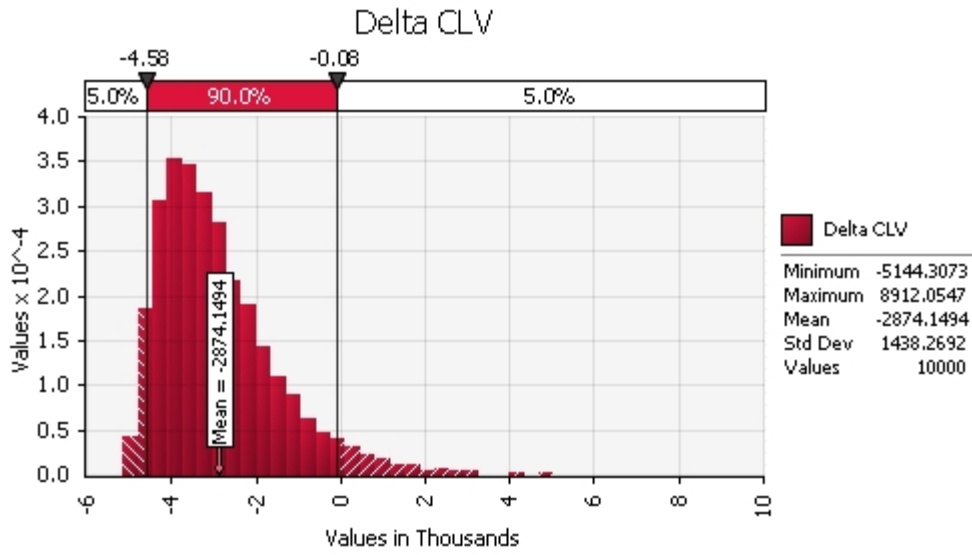




### 1.5.1.2. Mid-price Hotel

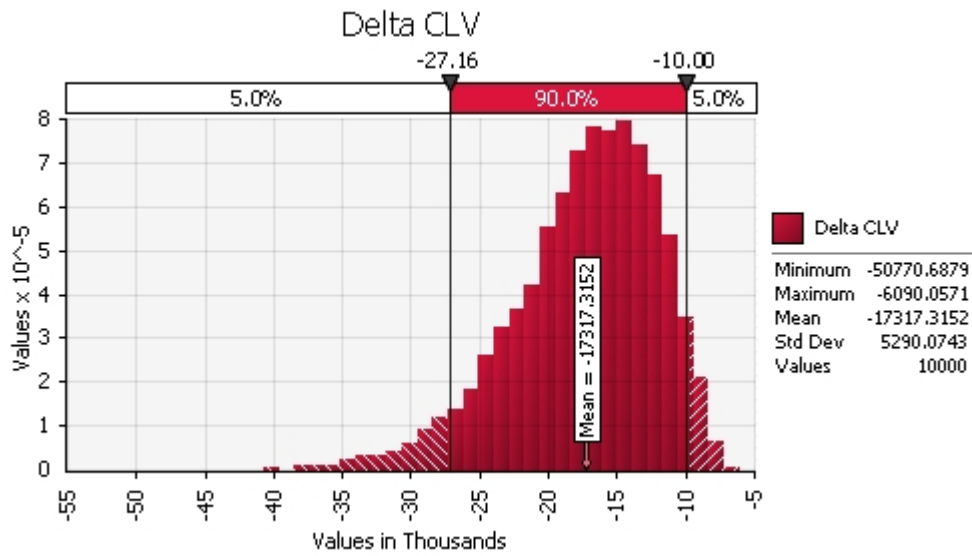
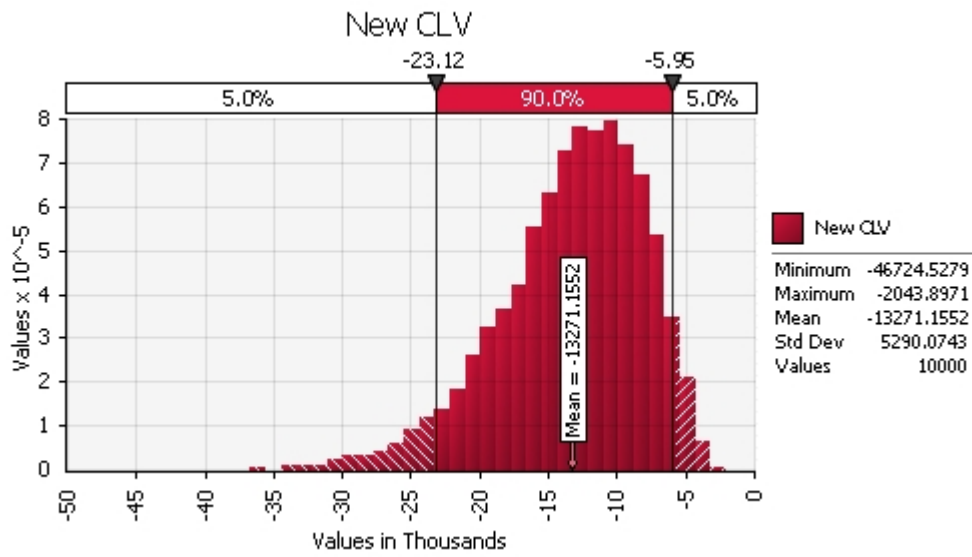
P2

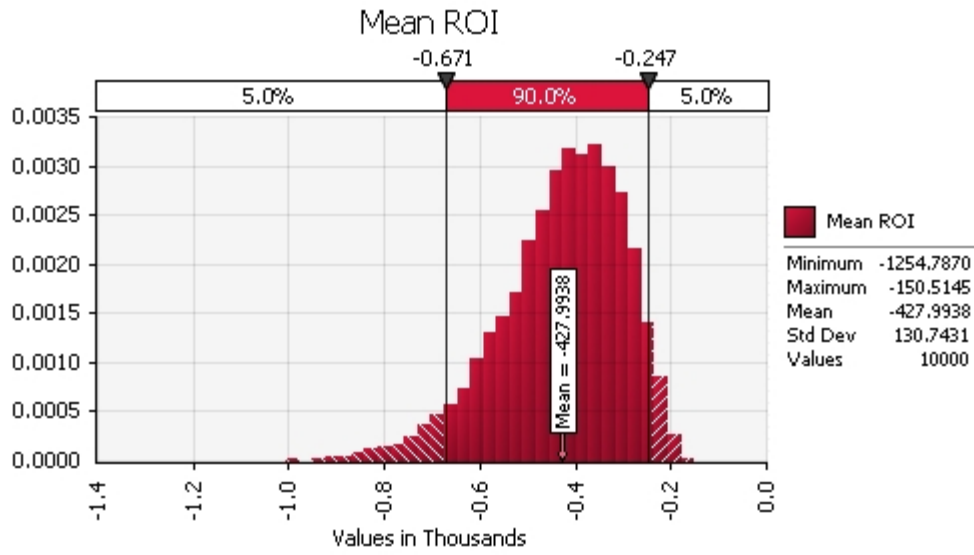




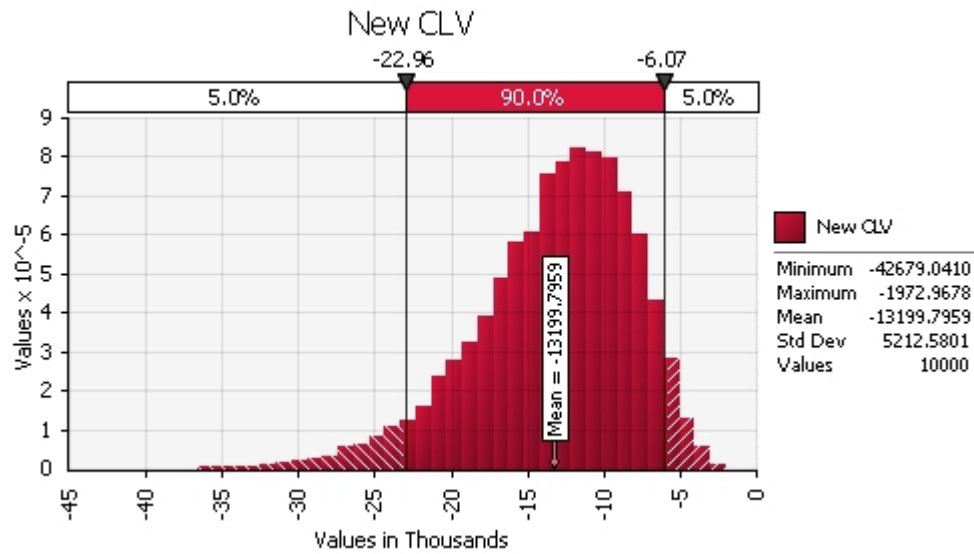
### 1.5.1.3. High-end Hotel

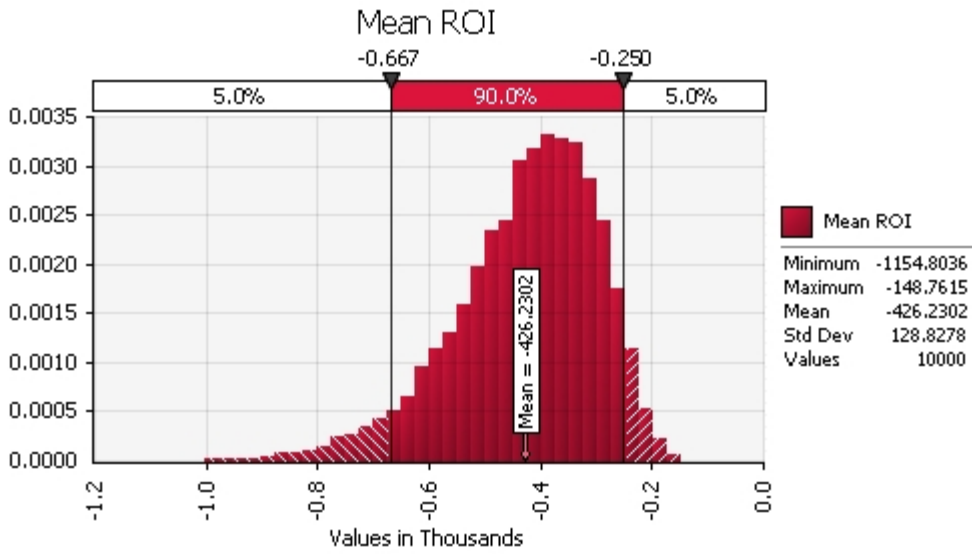
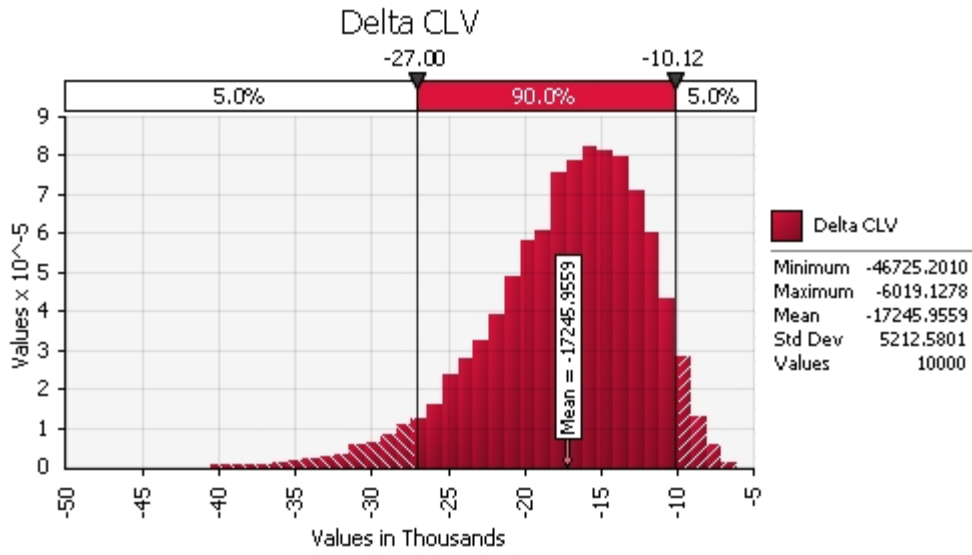
C1





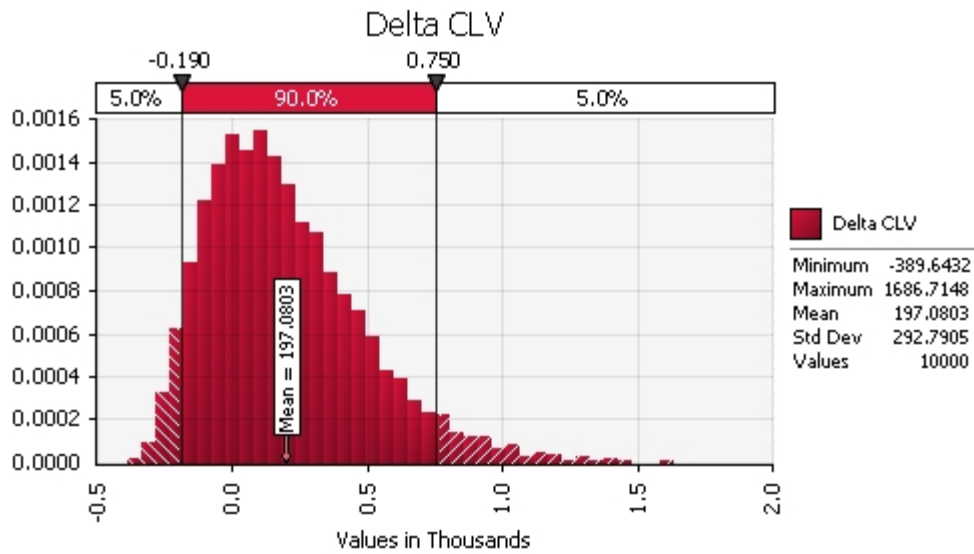
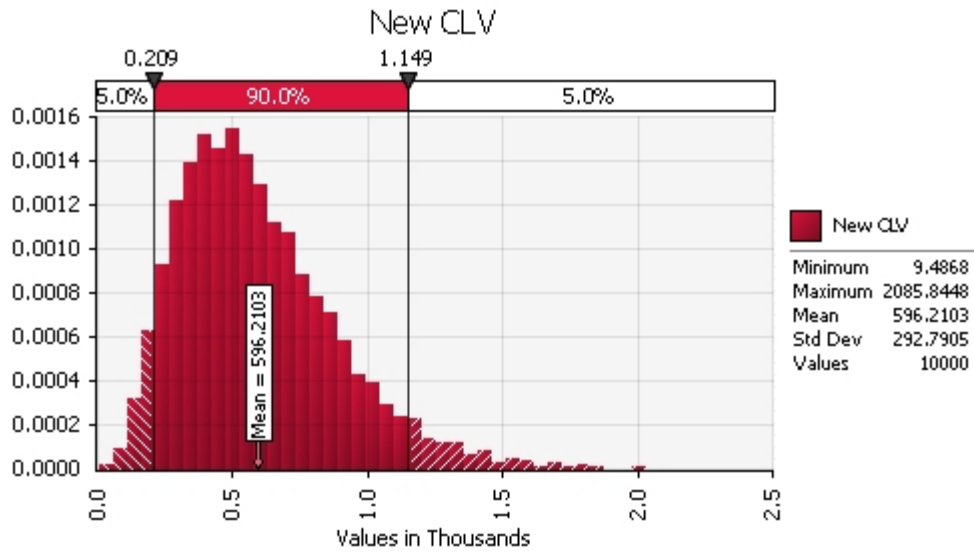
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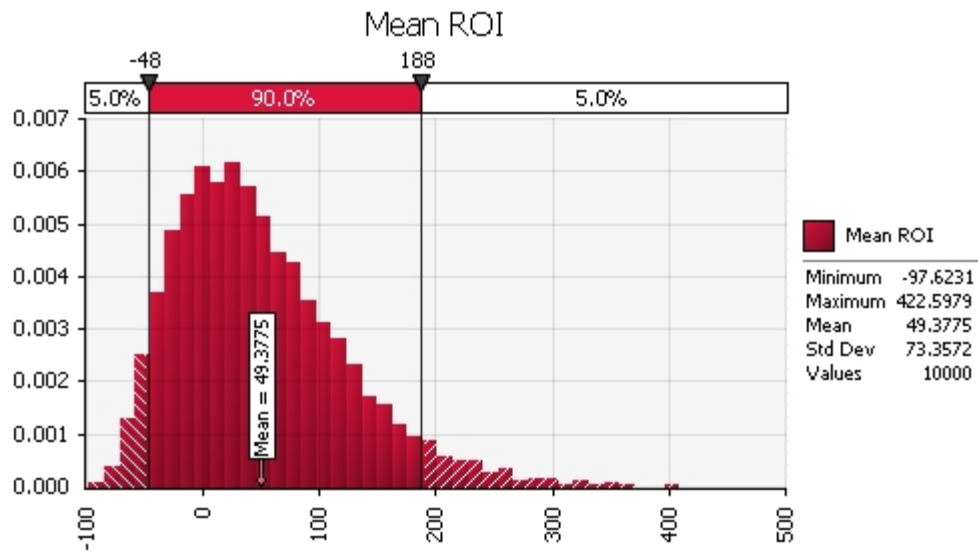




1.5.2. Business funds source  
 1.5.2.1. Budget Hotel

Q1







**Appendix G**

**IRB Approval Letter for Phase I**

## Oklahoma State University Institutional Review Board

Date: Wednesday, September 24, 2008  
IRB Application No HE0860  
Proposal Title: A Comparative Study of Market Segmentation Management in the Hotel Industry: A Customer Equity Approach

Reviewed and Exempt  
Processed as:

**Status Recommended by Reviewer(s): Approved Protocol Expires: 9/23/2009**

Principal Investigator(s):

|                      |                      |
|----------------------|----------------------|
| Yumi Park            | Radesh Palakurthi    |
| 210 HES              | 210 HES              |
| Stillwater, OK 74078 | Stillwater, OK 74078 |

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The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,



Shelia Kennison, Chair  
Institutional Review Board

## Informed Consent Form

Thank you for agreeing to participate in this research project. This form outlines the purpose of the study and provides a description of your involvement and rights.

1. **Project Title:**

A Comparative Study of Market Segmentation in the Hotel Industry: A Customer Equity Approach

2. **Investigators:**

Yumi Park, Ph.D student

210 HESW  
Oklahoma State University  
Stillwater, OK 74078  
(443) 928-4358 (Voice)  
(405) 744-6299 (fax)  
[yumi.park@okstate.edu](mailto:yumi.park@okstate.edu)

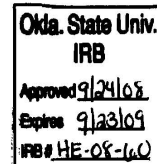
3. **Purpose of the Study:**

The focus of the current study is to evaluate if two different segmentation approaches; traditional versus customer equity (CE) based segmentations have a differential effect on customer equity in the hotel industry. The specific objectives of the research are; 1) To determine the core customer equity (CE) drivers in the hotel industry, 2) To find the differential impact of traditional versus CE based segmentations in order to measure customer equity of the hotel industry, and 3) To evaluate the marketing mix components required to maximize customer equity in the hotel industry by analyzing marketing efforts, making strategies, and recommending action plans.

4. **Procedures:**

To address the objectives,

- 1) You will be asked questions about your opinions about the sub-drivers of customer equity in hotel industry.
  - a. In your opinion, as an experienced hotel operator, what factors do you think drives customers to return to a hotel?
  - b. What type of issues or factors do hotel customers consider when they think about value including convenience, quality and price?
  - c. What type of issues or factors do hotel customers consider when they think about brand including image, awareness, attitude, and perception?
  - d. What type of issues or factors do hotel customers consider when they think about retention including loyalty programs, special awards or recognition programs, community building programs, and knowledge building programs.?
  - e. Are there any other factors that you would consider to be important for making buying decisions in the hotel industry?
- 2) The focus group will be audio-recorded.
- 3) Date and Time: TBA but will be during the month of October 2008 and the focus group is expected to last about 2.5 hours.
- 4) The place will be a conference room at the Atherton Hotel on the OSU campus.



5. **Risks of Participation:**

There are no known risks associated with this project which are greater than those ordinarily encountered in daily life.

6. **Benefits:**

Through this research, the hotel industry will be able to identify sub-drivers of customer equity. The research will find the similar and different sub-drivers of customer equity in hotel companies, compared of general companies, and also provide the marketing strategies action plans through customer equity management for satisfying customers' individual needs and wants.

7. **Confidentiality and Participant Rights:**

The researcher guarantees the following conditions will be met:

- 1) Your name or any identifying information will not be used at any point in the process of information collection or in the report.
- 2) This research will totally voluntary. If you accept the e-mail invitation, your identity will be kept confidential. You may at any time choose not to participate in this focus group or refuse to answer specific question during the interview. There will be no penalty associated with non-participation or non-response to any questions.
- 3) All data from this study will be destroyed within one year of the completion of this project, or approximately June 2009.

8. **Contacts:**

If you have questions about your rights as a research volunteer, you may contact Dr.Shelia Kennison, IRB Chair.

Dr. Shelia Kennison, IRB Chair.  
219 Cordell North,  
Stillwater, OK 74078.  
Tel: 405-744-1676  
Email:irb@okstate.edu

If you decide to participate in this study, please sign this consent form and return it to the Principal Investigator (PI).

The PI will also give you a copy of this consent form.

Signatures:

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy of this form has been given to me.

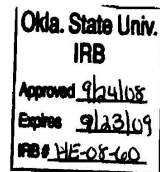
\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Date

I certify that I have personally explained this document before requesting that the participant sign it.

\_\_\_\_\_  
Signature of Researcher

\_\_\_\_\_  
Date



## **Email Invitation**

Dear Colleague:

I am writing to you today to invite you to participate in a focus group study I am conducting to determine the customer equity drivers in the hotel industry. You have been identified as a potential candidate for the focus group because of your managerial position in the industry or your expertise in the field. I would really appreciate if you could send me an email regarding your interest in participating in this focus group study. The details about the study are as follows:

Study Title: A Comparative Study Of Market Segmentation in the Hotel Industry: A Customer Equity

Date and Time: TBA but will be during the month of October 2008 and the focus group is expected to last about 2.5 hours.

Venue: A conference Room at the Atherton Hotel on the OSU campus

Security and Storage: The focus group discussions will be audio recorded only for research purposes. The data will be transcribed by PI (Yumi Park) but individual respondents' comments will be recorded using ID numbers (e.g. Respondent 1, 2, 3) that are randomly assigned. No comments will be linked to any specific individual at any time throughout this project. All data collected for this project will be destroyed by July 2009.

This study has been approved by the OSU's Institutional Review Board (IRB), and you may direct any questions you may have about human subjects related to this research to that office at the contact address provided below. If you need additional information about this research, please do not hesitate to contact me at the address provided below.

Participation in this study is voluntary. If you accept the e-mail invitation, your identity will be kept confidential. You may withdraw from this research at any time and may even refuse to participate in any specific discussion during the focus group. However, we would like to state that there are no know risks associated with this research.

I thank you in anticipation of your participation. Please send me an email at [yumi.park@okstate.edu](mailto:yumi.park@okstate.edu).

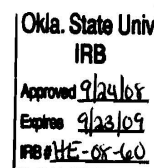
Sincerely,

**Yumi Park, Ph.D student**

210 HESW  
Oklahoma State University  
Stillwater, OK 74078  
(443) 928-4358 (Voice)  
(405) 744-6299 (fax)  
[yumi.park@okstate.edu](mailto:yumi.park@okstate.edu)

If you have any questions about your rights as a research volunteer, you may contact:

Dr. Shelia Kennison, IRB Chair.  
219 Cordell North,  
Stillwater, OK 74078.  
Tel: 405-744-1676  
Email: [irb@okstate.edu](mailto:irb@okstate.edu)



**Appendix H**

**IRB Approval Letter for Phase II**

Oklahoma State University Institutional Review Board

Date: Wednesday, January 14, 2009  
IRB Application No HE092  
Proposal Title: A Study of Market Segmentation in the Hotel Industry: Customer Equity Approach  
Reviewed and Processed as: Exempt

**Status Recommended by Reviewer(s): Approved Protocol Expires: 1/13/2010**

Principal Investigator(s):

|  |  |
|--|--|
| Yumi Park ✓<br>210 HES<br>Stillwater, OK 74078 | Radesh Palakurthi<br>210 HES<br>Stillwater, OK 74078 |
|--|--|

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The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

X The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

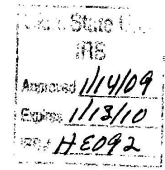
1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,



Shelia Kennison, Chair  
Institutional Review Board



## **E-mail Invitation/Informed Consent Form**

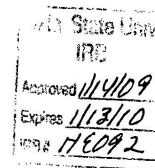
Dear Participants,

My name is Yumi Park and I am a doctoral student at Oklahoma State University in Stillwater, OK. I am conducting a research project to better understand your perception about the trade-offs you make while choosing to stay at a hotel. I am writing to invite you to participate in the survey that will help me complete my project. The full details of my project are listed below:

This form outlines the purpose of the study and provides a description of your involvement and rights.

1. **Project Title:**  
A Study of Market Segmentation in the Hotel Industry: Customer Equity Approach
2. **Investigators:**  
Yumi Park, Ph.D student  
  
210 HESW  
Oklahoma State University  
Stillwater, OK 74078  
(443) 928-4358 (Voice)  
(405) 744-6299 (fax)  
[yumi.park@okstate.edu](mailto:yumi.park@okstate.edu)
3. **Purpose of the Study:** The focus of the current study is to evaluate customer equity-based segmentation in the hotel industry. The specific objectives of the research are; 1) To determine the core customer equity (CE) drivers in the hotel industry, 2) To find the impact of CE-based segmentation in order to measure customer equity in the hotel industry, and 3) To utilize the CEM process through CE-based segmentation to maximize customer equity in the hotel industry.
4. **Procedures:** To address the objectives, you will be asked questions related to typical hotel stay and your responsiveness to hotel marketing programs. It will take 15 to 20 minutes to complete the survey.
5. **Risks of Participation:** There are no known risks associated with this project which are greater than those ordinarily encountered in daily life.
6. **Benefits:** Through this research, the hotel industry will be able to identify sub-drivers of customer equity. This research will provide action plans for satisfying customers' individual needs.
7. **Confidentiality and Participant Rights:**  
The researcher agrees that the following conditions will be met:





- 1) Your name or any identifying information will not be used at any point in the process of information collection or in the report.
- 2) Your participation in this research is totally voluntary. Your identity will be kept confidential. You may at any time choose not to participate in this study or refuse to answer specific question. There will be no penalty associated with non-participation or non-response to any questions.
- 3) All data from this study will be destroyed within one year of the completion of this project, or approximately June 2010.

8. **Contacts:**

If you have questions about your rights as a research volunteer, you may contact Dr.Shelia Kennison, IRB Chair.

219 Cordell North,  
Stillwater, OK 74078.  
Tel: 405-744-1676  
Email: irb@okstate.edu

If you wish to continue to the survey, please click on this link: [Complete survey](#).  
By clicking on the link, you are consenting to the terms of this research and agreeing to participate.

VITA

Yumi Park

Candidate for the Degree of

Doctor of Philosophy

Dissertation: A STUDY OF MARKET SEGMENTATION MANAGEMENT IN THE  
HOTEL INDUSTRY: A CUSTOMER EQUITY APPROACH

Major Field: Hotel and Restaurant Administration

Biographical:

***Education:***

Doctor of Philosophy in Hotel and Restaurant Administration at Oklahoma  
State University, Stillwater, Oklahoma in July, 2009

Master's Degree Hotel and Tourism Management at Kyung Hee University,  
Seoul, Korea in 2005

Bachelor of Arts in English Language and Literature at Dong Seo University,  
Busan, Korea in 2002

***Professional Memberships:***

International Council of Hotel Restaurant Institute Educators (I-CHRIE)

Asia Pacific Tourism Association (APTA)

American Hotel & Lodging Association (AHLA)

National Society of Minorities in Hospitality (NSMH)

***Honors:***

2009 *Best Paper Award*, International Council of Hotel Restaurant Institute  
Educators

2008 *Best Paper Award*, International Conference on Service Management

2007 *Presidential Challenge Grant*, The President's Office Institute For  
Tourism Studies Colina de Mong-Ha Macau SAR, P.R.China

2007 *Best Paper Award*, International Council of Hotel Restaurant Institute  
Educators

Name: Yumi Park

Date of Degree: July, 2009

Institution: Oklahoma State University

Location: OKC or Stillwater, Oklahoma

Title of Study: A STUDY OF MARKET SEGMENTATION MANAGEMENT IN THE  
HOTEL INDUSTRY: A CUSTOMER EQUITY APPROACH

Pages in Study: 392

Candidate for the Degree of Doctor of Philosophy

Major Field: Hotel and Restaurant Administration

Scope and Method of Study: The focus of the current study was to evaluate whether the Customer Equity based segmentation approach has an effect on customer equity in the hotel industry. In order to achieve the highest possible Customer Equity, the study suggested the following Customer Equity Management (CEM) process: (a) analyze marketing effort, (b) evaluate marketing strategies, and (c) recommend action plans. The specific objectives of the research were (a) to determine the core Customer Equity drivers in the hotel industry; (b) to examine the impact of the CE-based segmentation on Customer Equity in the hotel industry; and (c) to utilize the CEM process to maximize Customer Equity in the hotel industry. After a thorough literature review, a focus group study was conducted with professionals in the hotel industry in order to identify the primary CE drivers. The results of the qualitative study confirmed the five key drivers of Customer Equity (i.e., convenience, quality, price, brand image, and relationship driver) in the hotel industry. A quantitative analysis was performed, (a) to determine the key CE segments; (b) to demonstrate the five CE drivers' impact on marketing effort using Conjoint Analysis; (c) to maximize the Return-on-Investment (ROI) on marketing effort responsiveness through @Risk® simulation; and (d) to develop the marketing action plans for each of the CE segments.

Findings and Conclusions: This study found that the CE-based segments consisted of Relationship-Seeking Customer Segment (*RSCS*), Convenience-Seeking Customer Segment (*CSCS*), Quality-Seeking Customer Segment (*QSCS*), Brand Image-Seeking Customer Segment (*BSCS*), and Price-Seeking Customer Segment (*PSCS*) in the hotel industry. The drivers that are most effective in terms of marketing effort are different for each of the CE-based segments. The driver that identified the CE-based segment was not always the significant driver in terms of the probability of brand switching, the increase in room-nights they are willing to stay, and the increase in room rate they are willing to pay. Therefore, it behooves the hotel managers to target marketing efforts for each segment separately by clearly identifying what works for them rather than assuming the same efforts would work for all. This study implies that segmenting the hotel customers by CE drivers makes better sense than traditional segmenting methods since it allows better targeting of marketing effort.

ADVISER'S APPROVAL: Radesh Palakurthi, Ph.D

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