RELATIONSHIP, LOYALTY, AND MARKETING

—A CORRELATION STUDY OF TAIWAN HOTEL

CUSTOMERS' PERSPECTIVES

By

RUJIAN WANG

Bachelor of Science in Hospitality Management
Florida International University
Miami, U.S.A.
1992

Master of Science in Hotel and Food Service Management
Florida International University
Miami, U.S.A.
1993

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
December, 2007

RELATIONSHIP, LOYALTY, AND MARKETING

—A CORRELATION STUDY OF TAIWAN HOTEL

CUSTOMERS' PERSPECTIVES

Dissertation Approved:

Jerrold K. Leong, Ph.D., FMP
Dissertation Adviser and Chair

William D. Warde, Ph.D.

Radesh Palakurthi, Ph.D.

Gregory E. Dunn, Ph.D.

A. Gordon Emslie, Ph.D.
Dean of the Graduate College

ACKNOWLEDGMENTS

I owe a debt of enormous gratitude to many people whose help has been crucial to my success in completing this dissertation. First at all, I have been honored to have the construction guidance and eminent inspiration of one excellent mentor who holds the Regents Distinguished Teaching Award: my chair Dr. Jerrold K. Leong. From the initiation of this proposal, Dr. Leong has been generous with his time and has offered wisdom on everything including timing management, conceptual mapping development, research purpose, and children's education. His moral intelligence and his patience in helping me surmount the research obstacles and emotional boundaries has been a blessing. Dr. Leong has always listened to my questions, offered timely feedback on each chapter, and ensured the quality of my research.

My other committee members, Dr. William D. Warde, Dr. Radesh Palakurthi, and Dr. Gregory E. Dunn., have also contributed critical comments, insightful input, and valuable encouragement. Especially, Dr. Warde offered his expertise on surveying design, statistical procedure, and sampling method to build this fundamental research design, and responded promptly to my inquiry. Dr. Palakurthi introduced customer equity theory and important-performance analysis to me, assisted me on my doctoral journey, and shared warm friendship as his family. Dr. Dunn generously shared his collection of literature reviews on E-loyalty, guided me the rational of this research, shared me the rigorous research procedure, and helped me to improve my academic writing.

Dr. Kathleen D. Kelsey and Dr. Mark Gavin both contributed to the development of the dissertation proposal. Dr. Kelsey provided keystone research principles to develop each section of the dissertation proposal. Dr. Gavin expanded the advanced research world in each stage of research process for me and shared critical insights on the conceptual research framework for my dissertation. Dr. Haillian Qu and Dr. David Njite offered crucial comments on this research framework. Dr. Jena Gaines did a wonderful job of proofreading and providing honest critical comments on the side.

My sincere appreciation goes out to the T Hotel, Taipei, Taiwan for covering the cost of the data collection for my study. Mr. Chih-Yuan (Steve) Chan, the associate manager in T Hotel, and his management team consistently supported my study. Without his excellent leadership and firm's approval, this study would not have been possible. I am also grateful to Oklahoma State University that provided the spouse waiver and paid interstate tuition fees during my doctoral journey. The librarian, staff, faculty, and graduate classmates in OSU shared their friendship, warmth, and knowledge to create an excellent learning environment that enabled an international student to achieve academic success. My sincerest gratitude is extended to National Kaohsiung Hospitality College to hold teaching position for me during my academic pursuits.

I am enormously grateful to Dr. Chen-I Wei to for inviting me on the doctoral journey, for stimulating conversations that reassured me of the significance of my research, and for advising me at a crucial time. Without the help of Dr. and Mrs. Wei, I would not have had the key or direction to start my doctoral journey. I am very thankful for the friendship of Dr. Fu-Teng Lee, Dr. Lou-Hon Sun, Dr. Ming-Huei Lee, Dr. Ping-Fu Wang, Dr. John Huang, Dr. Yu, Pen-Jing, Dr. Ching, Min-Hui, Dr. Su, Heng-An, Dr.

Hung, Leo, Dr. Jaw, Yih-Mon, Dr. Lin, Chih-Hsin, and Dr. Jimmy Yung who encouraged my academic progress.

Finally, I owe much love and gratitude to my family, especially to my parents (Liang-Chen Wang 王兩成 and A-Chu Ko Wang 王柯阿珠) for their financial support, infinite encouragement, and confident faith in my academic success. This dissertation is dedicated to them. My brother Yu-Hong Wang (王裕宏) and his family always offered me their prompt back up from Taiwan. My brother Chu-Ming Wang (王志民) contributed his knowledge of the information technology. My wife, Phyllis Chu, has accompanied with me on this journey, helping me to overcome many frustrations, health problems and tears. She was not just my best classmate in my master and doctoral program but nourished my soul and attended to my physical well-being. My son, Andy, and my daughter, Tina read on the side from the picture book to 10 cm wider adventure or fiction books. They brought fun to my research journey and gave me opportunities to enjoy American culture and the community.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Background and Setting

Over the past twenty years, the development of information technology and a knowledge economy have made customer loyalty in the hotel industry a central issue for marketing scholars. By efficiently handling customer profiles through customer equity management, companies could maximize the lifetime value of each customer as one of their assets (Hogan, Lemon, & Rust, 2002). Numerous scholars have used a variety of formulas to prove the value of customers' lifetime patronage to a company (Blattberg, Getz, & Thomas, 2001; Liu & Shih, 2005). What seems to be lacking in customer equity theory, however, is an understanding of the strategies that cause customers to return to a business, a phenomenon known as customer loyalty, and which allows companies to maximize profits through repeat business (Rust, Lemon, & Narayandas, 2005).

Customer loyalty is a most critical variable in the hospitality industry's marketing strategies. Many scholars in the hospitality industry have endeavored to develop a valid measure of customer loyalty. Without strong theoretical support, some studies of customer loyalty have used many operational antecedents or weak mediators such as customer value and customer satisfaction to measure customer loyalty indirectly. In order to find the underlying structure of the consumer buying behavior, some scholars have

both failed to demonstrate the complexity construct of the customer loyalty and to arrive at a marketing approach to increase customer loyalty.

Statement of the Problem

Although most hospitality industries use frequent visitor programs, membership credit cards, or reward points to increase customer retention with a profit-based exchange or non-money privileges, these loyalty programs were easy for competitors to copy. In fact, many airline companies faced intense competition in loyalty programs, which led many of them to the edge of bankruptcy (Borenstein, 1992; Duffy, 1998b; Mark, Grahame, & Kathy, 2003).

Also, the hotels did not use customers' portfolios to increase the partnerships of buyers and sellers (Beverly, 1993; Luck & Lancaster, 2003). The customer profiles in the hotel industry used information technology to develop the customer relationship systems and enhance the service relationships between the guests and sellers (Dowling & Uncles, 1997). The customer profiles in the hotel were reserved as the data system without enabling knowledge power to increase customer loyalty. The hotel industry too often ignores the voices of customers and fails to understand the nature of customer loyalty (Dube & Renaghan, 2000; Oh, 2002; Tideswell & Fredline, 2004). Due to the lack of precise measurements of customer loyalty, the most common measures of customer loyalty in the hotel industry are little more than counting the frequency of visits to a property (Morals, Dorsal, & Backman, 2004; Oh, 2002).

Customer equity theory was developed to maximize the customer life time value which identified the three categories of marketing drivers (value, brand and relationship equity) to attract behavioral outcomes of repurchasing on the same product or service,

affecting the other customer purchasing, or creating common benefits for providers and consumers (Rust et al., 2005; Rust, Lemon, & Zeithaml, 2004). Custom equity theory demonstrated the financial return resulting from customer loyalty due to the marketing drivers or tactics (Rust, Zeithaml, & Lemon, 2000). Does the assumption of customer equity theory, e.g., marketing drivers proposed by customer equity theory affect on customer return, substantially apply to the hotel industry?

Hotel marketers did not understand which marketing strategies attracted loyal customers (Morals et al., 2004). This might lead one to realize that little was known as to how customer loyalty existed in the hotel industry except in repurchase activity leading to profit exchange generated reward and entice additional future purchase due to increase value (Iwasaki & Havitz, 1998; Morals et al., 2004; Pritchard, Havitz, & Howard, 1999). Some hotel marketers still believe that convenient locations, frequent user programs or inexpensive rates could increase customer loyalty (Dowling & Uncles, 1997). Customer loyalty was crucial to the hotel industry, because the most significant segments of the market were mature and competition was strong (Kumar & Shah, 2004).

Could low room rates or convenient location increase customer commitment or generate positive recommendations? What could the customer equity theory imply for the hotel industry? Could the marketing drivers relating to customer equity positively impact on direct or indirect equity (computing the benefits the potential life time values earned by the company) due to customer loyalty? How do the mangers determine customer profiles in terms of the antecedents and behavioral outcomes of customer loyalty? This study would develop a conceptual model to determine the relationship between marketing drivers related to customer equity theory and customer loyalty in the hotel industry.

Purpose of the Study

The purpose of the study was to validate customer equity theory by relating the marketing drivers to the generation of true customer loyalty among the patrons of a five-star hotel in Taipei, Taiwan.

Research Objectives, Research Questions, and Operational Questions

The study was guided by three objectives: (a) to determine the relationship between marketing drivers related to customer equity theory and customer loyalty, (b) to determine the profiles of customers according to the antecedents and behavioral outcomes of customer loyalty, and (c) to determine the association between the customer loyalty and the customer demographic profiles.

Objective 1: To determine the relationship between marketing drivers related to customer equity theory and customer loyalty (refer to left hand side of the proposed conceptual framework as Figure 4):

RQ1: What are the customers' demographic profiles, especially in terms of repurchasing behavior and background?

Operational Questions (Demographic)

1. What are the customer demographic profiles of the target hotel in terms of patrons' age, gender, marital status, ethnicity, household size, education, occupation, income, travel goal, citizenship, or resident nation?
2. What is the customer's repurchasing behavior in the target hotel?

RQ2. How do the marketing drivers related to the customer equity theory affect customer loyalty?

Operation Questions (Marketing Drivers)

3. What are the differences between the delivery performance of value strategy, brand strategy, and relationship strategy perceived by the hotel customers and the importance of value strategy, brand strategy, and relationship strategy ranked by hotel customers?
4. Do the marketing drivers related to customer equity theory predict a positive relationship with attitudinal loyalty?
5. Do the marketing drivers related to customer equity theory predict a positive relationship with behavioral loyalty?
6. Does attitudinal loyalty predict a positive relationship with behavioral loyalty?

Objective 2: To determine the profiles of customers according to the antecedents and behavioral outcomes of customer loyalty (refer to the right hand side of the proposed conceptual research framework in Figure 4):

RQ3. What are the underlying constructs or variables of customer loyalty?

Operational Questions (Customer loyalty)

7. What are the attributes in each dimension of customer loyalty?

RQ4. How are customers classified into the four segments of loyalty: True, Spurious, Latent, or Low loyalty according to the antecedents and behavioral outcomes of customer loyalty?

Operation Questions (classify customer loyalty)

8. Are the composites of attitudinal and behavioral loyalty classified into the four segments of customer loyalty: True, Latent, Spurious, and Low?

Objective 3: To determine the association between the customer loyalty and the customer demographic profiles (refer to the upper half side of the proposed conceptual framework as Figure 4)

RD 5. Do customer demographic profiles predict the relationships with customer loyalty?

Operation Questions (Customer loyalty on customers' profiles)

9. Are Customer demographic profiles independent of the segments of customer loyalty?
10. Will there be any difference among demographic sub-group variables of the customer profiles on attitudinal loyalty?
11. Will there be any difference among demographic sub-groups of the hotel's customer profiles on behavioral loyalty?

Definition of Terms

(a) Customer loyalty. Customer loyalty is a "customer's willingness to make an investment or personal sacrifices in order to strengthen a relationship" between seller and purchaser (Reichheld, 2003, p. 49). Customer loyalty is a psychological process to assure a specific brand, service or product (Morgan & Hunt, 1994). The term customer loyalty in this study consists of an attitudinal and behavioral relationship between customer and the hotel.

(b) Attitudinal loyalty. Attitudinal loyalty is a strong internal disposition towards a brand, product or service. Attitudinal loyalty was conceptualized in terms of three components: resistance to change, volition and cognitive complexity (Pritchard, 1992). Attitudinal loyalty was defined as consumer's predisposition towards a brand as a function of

psychological process (Jacoby & Chestnut, 1978). Attitudinal loyalty consists of three psychological process: cognitive, affective, conative (Oliver, 1997).

(c) Behavioral loyalty. The term behavioral loyalty defines the strengths of customer loyalty in behavioral terms. The term "behavioral loyalty" in this paper refers to repurchase and observed outcomes such as saying positive words, recommending something to friends and cooperating.

(d) Customer equity. This term is "the total of the discounted lifetime value calculated over all of the firm's current and potential customers" (Rust et al., 2005, p. 33). The term customer equity in this research refers to an inclusive marketing management approach designed to increase potential customer total life value in the direct and indirect channels.

(e) Trust. This is a psychological state that comprises a consumer's intention to accept vulnerability based on expectations of the intention, integrity, and competence of a vender under conditions of risk and interdependence (Rousseau, Sitkin, Burt, & Camerer, 1998). Trust is an essential element of a successful relationship (Morgan & Hunt, 1994). It also was defined as "a willingness to rely on an exchange partner in who one has confidence" (Moorman, Deshpande, & Zaltman, 1993, p. 82). Trust is treated as the perceived credibility and benevolence of the exchange partner (Doney & Cannon, 1997).

(f) Commitment. Commitment can be defined as "the enduring desire to maintain a valued relationship" (Moorman, Zaltman, & Deshpande, 1992, p. 136). The term is also an essential element of a successful long-term relationship (Morgan & Hunt, 1994). Thus, in this study commitment was defined as emotional or psychological connection to maintaining a long-term relationship with profit exchange and concern with the partner's achievement and destiny.

(g) Switching cost. This term refers to the one-time exchange cost which results when one supplier's product or service is transferred to another; this is also called transaction-specific assets. Switching costs also include physical assets such as reward points, money, upgrades, late check out and psychological assets such as energy, time, inconvenience, frustration, unfamiliarity, or risk (Sui, 1993).

(h) Word of Mouth. "oral, person-to-person communication between a receiver and a communicator whom the receiver perceives as noncommercial, regarding a brand, a product or a service" (Arndt, 1967, p. 5). The term "word of mouth" in this study is when customers made positive comments about the supplier and recommended that friends or relatives purchase products or services from that supplier.

(i) Cooperation. "Cooperation" refers to flexible customer behaviors that indicate respect for quality service delivery (Graham, 1991). The term cooperation in the service industry describes the understanding of service procedures, courtesy to employees, and acceptance of direction from the service provider (Kelley, Skinner, & Donnelly, 1992; Kelly, Donnelly, & Skinner, 1990).

(j) Proportion of visits. The number of visits in this study was a key element in the measurement of loyal behavior. Each visit to the supplier was considered to have some profits exchange, extension of services or purchase. Thus, it is calculated by dividing the number of visit to a particular hotel property by the total number of visits to all hotels in the geographic region/area.

Scope of the Study

1. The study is limited to exclude customer satisfaction from the research model. The study of customer loyalty should focus on the direct relationship between marketing

strategy and customer loyalty, but not customer satisfaction. This study, therefore, does not measure customer satisfaction.

2. The study is limited to hotel customers in Taipei, Taiwan. The results of the study may or may not be generalized to other places.

3. The study is limited to identifying the impact of three marketing strategies (value, brand and relationship strategy) linked to customer equity. No other factors such as social affiliation, variety situation, and promotional marketing strategy are relevant to the study. In the field study, not all factors can be used to identify all relationships among them, especially those of time, resource, and the capability of comprehension for participants, researcher or reader.

4. The study is limited to generalization of the findings of the other geographical areas due to selecting the convenience sampling procedure. The main reason for selecting this convenience sampling procedure is that the respondents are guests of this five-star hotel. The hotel guest lists (name and contact information) are confidential in hospitality industry business. Moreover, the hotel gave the researcher access to their guests as long as the researcher preserved their confidentiality. This limitation forced the researcher to conduct a convenience sampling method to select survey respondents. However, the cost of a convenience sampling method limited the generalization of the findings to other geographical areas.

Basic Assumptions of the Study

The basic assumptions of the study are that there are some truly loyal customers in the hotel industry. The truly loyal customers usually visit the same property or the same brand, even if there is a slightly higher switching cost. They cooperate with the direction

or policy of the service delivery system of the hotel and always spread positive word of mouth about the hotel to their friends and relatives. The assumption underlying the approach is that the marketing strategy provided by customer equity theory enhances customers' attitudinal and behavioral loyalty toward the associated hotel. In an increasingly competitive world, hotel marketers need to determine which marketing strategy will enhance true customer loyalty.

Significance of the Study

This dissertation has both theoretical and practical rationales. On the theoretical level, this study will incorporate the assumption of customer equity theory relating to three categories of marketing drivers (value, brand and relationship marketing strategy) to determine the impacts on the antecedents and behavioral outcomes of customer loyalty. Customer equity theory has not yet been applied to the hotel industry. While the customer life time value could be calculated on the basis of customer profiles, the customer equity might shape the development of a strategic marketing plan and ensure the quality of the delivery of personal service.

Although there is a lack of empirical evidence to confirm the assumption of customer equity theory that the value strategy, brand, and relationship strategy could increase customer loyalty in the hotel industry, the customer life time value was consistently computed according to the customer loyalty (Bell, Deighton, Reinartz, Rust, & Swartz, 2002; Kumar & Shah, 2004; Prasad & Dev, 2000). There is, however, abundant evidence from insurance companies (Hellier, Geursen, Carr, & Rickard, 2003; Paul D. Berger, 1998; Verhoef & Donkers, 2001), finance businesses (Keller, 1993; Rust et al., 2000), service organizations (Thomas, 2001), hardware manufacturers (Reinartz,

Tomas, & Kumar, 2005) and direct marketing businesses (Chang & Tseng, 2005) that the marketing drivers proposed by the customer equity theory could increase customer loyalty. The results of this study would substantially enrich researchers' understanding of these complex relationships.

In addition, this study identifies the different segments of customer loyalty in terms of attitudinal and behavioral loyalty. While some inconsistency between attitudes and behaviors of customer loyalty was found, this was indicative of customer cognitive dissonance. The phenomenon of cognitive dissonance assists scholars in defining the variables and construct of customer loyalty. The inconsistencies between the antecedents and behavioral outcomes of customer loyalty might also lead to the different empirical results, and reveal the multidimensional phases in the measurement of customer loyalty. The findings of this study will definitely benefit our understanding of the constructs of customer loyalty in the hotel marketing

From a practical perspective, the increased customer loyalty resulting from a marketing strategy could reduce costs, as spending on customer retention would be six times more valuable than customer acquisition outlays (Rosenberg & Czepial, 1984; Warren & Ostergren, 1990). Moreover, there was a simulation on how changing different inputs to the calculating model influenced customer retention rates, acquisition rates, customer profitability, and the firm's return on investment (Reinartz et al., 2005). To keep the high value customer, loyalty was empirically supported as more profitable for the hotel industry.

The marketer of the hotel might wonder whether customers' loyalty behavior would generate more profits than customers' attitudinal loyalty. Therefore, the marketer must

ask the following three questions : (a) Could offering extra services such as spouse preferences, or allowing pets increase customer loyalty? (b) Was the customer's attitudinal loyalty epitomized by customer's decision? (c) Was the long-term customer really bonding with hotel, or did spurious customer retention contribute to the successful operation of this hotel? If the marketers of the hotel sought a true commitment from the customer who occasionally wanted to visit the same destination, the indirect path approach (customer equity-customer attitudinal loyalty-customer retention model) would be recommended.

When the customer demographic profiles were linked to different segments of customer loyalty, the customer information system did not only organize the customer data but also offered the dynamic power for hotel industry to deliver better service. The front line employees could simplify the service procedure, and offer every customer more personal service. It was important for the hotel marketers to understand who their extremely loyal customers were, what the dimensions of customer loyalty were, and which strategies create customer loyalty.

If the hotel adopted this finding, it could create a positive impression on its high value customer and improve service delivery systems to increase the customers' attitudinal loyalty. However, if all attributes of customer equity affect all attributes of attitudinal loyalty identified in this research, at least one attribute of customer attitudinal loyalty might be predicted in this strong association with value strategy, brand strategy or relationship strategy. After that, the hotel marketers could identify which strategy most affected long-term customer attitudinal loyalty. In addition, the hotel marketers could allocate the extra variables after they predict customers' intentions. The hotel marketer

could identify the marketing strategy that could attract the true loyal customer. Also, hotel marketers could discover who the most potentially loyal customers were. This result would save money on a marketing strategy.

In summary, this study has industrial and academic implications. Firstly, with regard to industry, this study can determine which marketing strategies are most likely to drive customer loyalty. Secondly, it offers the practical and composite measurement of customer loyalty in the hotel industry. Thirdly, this dissertation uses customer profiles to determine which customers are truly loyal. Fourthly, this study develops the conceptual framework to help managers in the hotel industry to make marketing decisions.

From an academic perspective, first this study validates customer equity theory in hotel management. Secondly, it interprets the underlying meaning of cognitive dissonance theory. Thirdly, it classifies the different segments of customer loyalty among hotel patrons.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter reviews the literature on loyalty, marketing, customer equity, customer loyalty, attitudinal loyalty, behavioral loyalty, and customer profiles. The review and discussion (Figure 1) will develop hypotheses and a research framework based on the research questions posed in Chapter I.

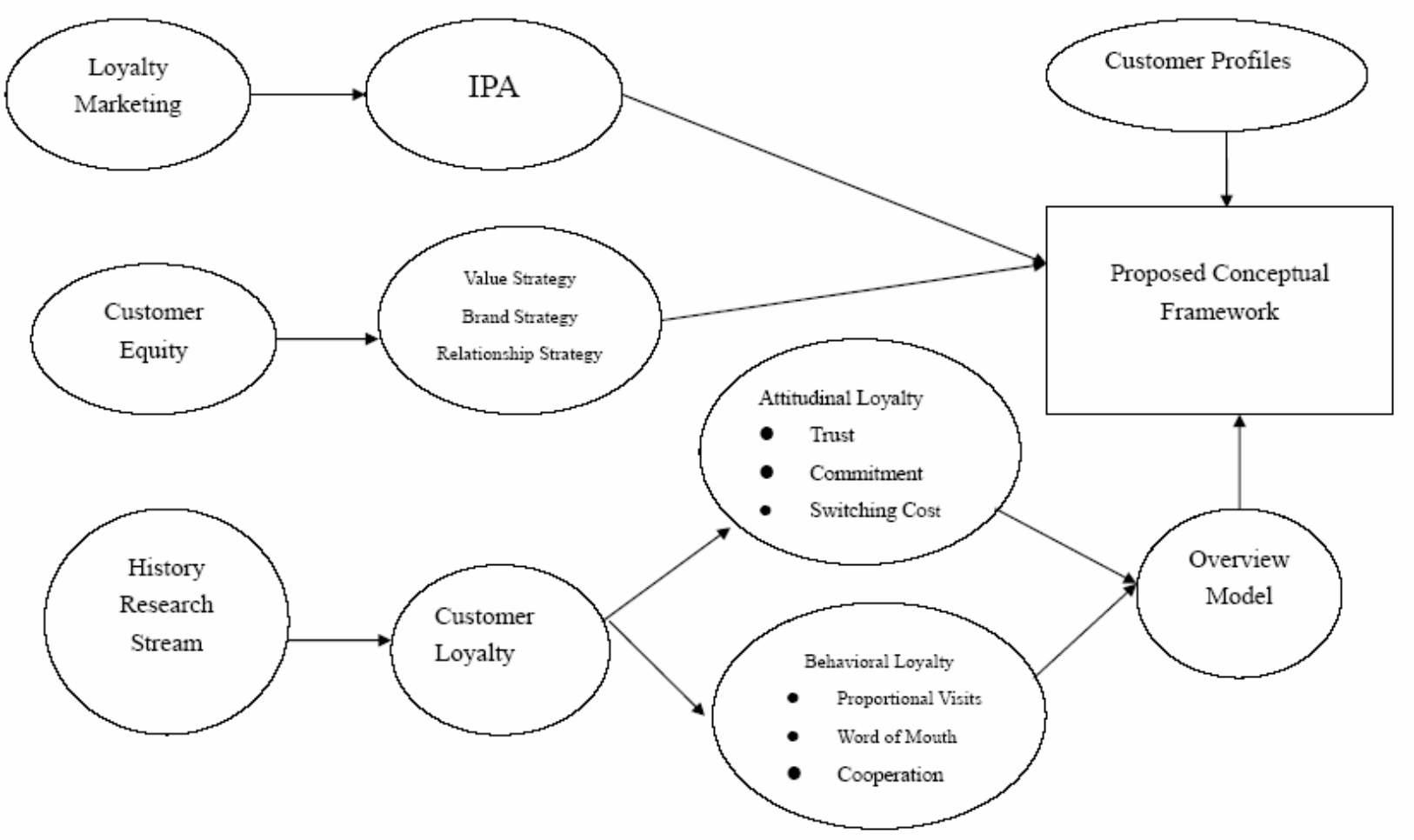


Figure 1 Conceptual map of literature review

Loyalty Marketing

Loyalty Program vs. Frequent Program

Loyalty marketing has became the focal point for research and operation in the hotel industry (Shoemaker & Lewis, 1999). Loyalty programs involve customized recognition, emotional commitment, frequent rewards and following messages as well as discounts, reward points, and free stays or meals (Shoemaker & Lewis, 1999). In other words, hotel marketers created loyalty merchandising through products and services, in the hope of persuading customers to repurchase a product, take advantage of a service, and participate in the frequent user program(Bowen & Shoemaker, 1998). Scholars claimed loyalty programs, sometimes referred to as frequent program, combined with add-on programs could increase emotional commitment (Shoemaker & Lewis, 1999). Many scholars in the hotel industry now use the term *loyalty program* instead of *frequent program*.

Shoemaker and Lewis (1999) list six types of marketing strategies (Table 1) that foster customer loyalty in the hotel industry. Unfortunately, such loyalty programs can be easily emulated by the competition. Loyalty programs did not work because of customers' lack of product knowledge, the refusal to hear the customer, and lack of commitment to the long-term relationship (Dowling & Uncles, 1997). In addition, the perception of the customer retention behaviors is regarded in terms of customer loyalty by the industry, but not by the customer. The marketing manager in the hotel industry should not just look for the delivery of the marketing strategies but also the customers' perception of the marketing strategies (Bowen & Shoemaker, 1998).

Table 1 *Marketing Strategy to Foster Customer Loyalty*

Strategy Style	Example
Social	Interpersonal links with hotel via communication
Emotional	Recognize customer's by name.
Experiential	Offer unique service such as turn down service
Functional	Support specific facilities such as spa facility
Temporal	Increase convenience through late check out or priority check in

Note. Source Adapted from Shoemaker and Lewis (1999).

Dowling and Uncles found that "loyalty programs that sought to bond customers to a company or its products and services by offering an additional incentive pose an interesting dilemma" (1997, p. 71). Clarke (2001) explained that a five-step procedure of allocating purchasers in a category to one of five building blocks (Presence, Relevance, Performance, Advantage, and Bonding) will make up a brand's inherent strength. However, Sarel et al. (2002) proposed that not all customers should be retained; some were too disruptive or too costly to serve.

Loyalty Program and Profits

Barsky and Nash (2002) reported that customers with key emotions such as comfortable, secure, elegant, welcome, and relaxed depending on market segment, paid on average $13 more than what they had paid on their most recent hotel stay. This room rate compared to an average of $3.43 for guests who did not experience key emotions (Barsky & Nash, 2002). The higher the switching cost, the stronger the customer's preference for the same service supplier or service brand (Barsky & Nash, 2002). In a survey of American Express Platinum card members, who took at least six business trips to luxury hotels per year, loyal customers were found to be less likely to ask about price

when making a reservation (Bowen & Shoemaker, 1998). A 5% increase in customer retention resulted in a 25-125% increase in profits in nine service industry classifications (Riechheld & Sasser, 1990). Further, one scholars believe that there are four benefits of customer loyalty (Riechheld, 1996):

- The costs of serving loyal customers are lower
- Loyal customers are less price-sensitive
- Loyal customers spend more time with the company
- Loyal customers pass on positive recommendations about their favorite brands or suppliers.

In fact, the cost of frequent reward programs was often higher than advertising spending—about 3% of revenue was for advertising cost and 3% to 6% was for frequent-flyers program in airline industry (Anonymous, 1993). Furthermore, there was less than 0.5 correlation co-efficiencies between profitability and behavioral loyalty for loyal program in all four companies across industries: high technology, catalogs, grocery, and retail finance (Reinartz & Kumar, 2002). Reichheld's (1996) four benefits of customer loyalty were refuted by empirical and theoretical evidence (Dowling & Uncles, 1997; Reinartz & Kumar, 2002). Therefore, the loyalty program was not profitable to all industries (Oliver, 1999) such as the bankrupt airline industry (Kumar & Shah, 2004). Loyalty programs might not be necessary for the whole service industry (Kumar & Shah, 2004). Wal-Mart, the largest commercial retail company in the world, has no loyalty program (Kumar & Shah, 2004). Thus, only the measurement of behavioral loyalty could not predict a reliable relationship with loyal marketing. The most critical reason was that behavioral loyalty (frequent purchase) could not measure true customer loyalty.

The other reasons for loyalty program leading to unprofitable results were the frequent rewards cumulated based on past or current customer repurchase behaviors, not in the potential repurchasing (Yi & Jeon, 2003). Past frequent visit behavior did not imply future purchases. Recently, many scholars have proposed the customer equity theory in coordination with the variety calculative formulation of the customer lifetime value with current and future forecast which had corrected the leaking for wrong calculation of loyalty program based on past life time value (Kumar & Shah, 2004).

In summary, this section argues that the loyalty program failed to build customer loyalty. This section also identified the weak relationship between loyalty program and profits. This implies that the hotel marketer should create marketing drivers to attract and clarify customer loyalty. This section revealed that the delivery performance of loyalty programs was not perceived as well as the customers' perceived importance of loyalty programs.

The Research Trend of Loyalty Marketing

Many studies have identified issues in customer loyalty program. Hospitality marketing research in 2002-2003 showed that future trends would focus on emotional and affective aspects as Table 2 (Oh, Kim, & Shin, 2004; Shoemaker & Lewis, 1999).

Table 2 *Research Issues and Literature on Customer Loyalty*

Research Issues	Literature Discussion
Loyalty program and frequent program	(Shoemaker & Lewis, 1999)
Loyalty program and affective commitment	(Mattila, 2006)
Loyalty program and Social bonding	(Oliver, 1999; Scanlan & McPhail, 2000)
Loyalty program and company profits	(Kumar & Shah, 2004)
Loyalty program and switch or sunk cost	(Jang & Mattila, 2005; Morals et al., 2004)
Loyalty program and rewards styles	(Jang & Mattila, 2005; Mulhern & Duffy, 2004)
Loyalty program and customer profiles	(Peterson & Lyer, 2005)
Customer loyalty and marketing strategies	※ Need to discover

Above Table 2 discussion, the relationship between marketing drivers and customer loyalty still needs to be examined by the hospitality industry. Many hospitality marketing scholars searched for issues pertaining to *loyalty* programs. Conversely, marketing endeavors that were limited to loyalty programs did not invariably build customer loyalty or generate company profits. Marketing strategies for customer loyalty programs should try to reach the target: point-enhanced customer loyalty.

Importance and Performance Analysis of Loyalty Strategy

The analysis of gaps between what hotel guests expect in return for their loyalty and how the hotels actually delivered these benefits, presented only one of eleven possible benefits in which identified a positive gap – performance exceeding importance (Bowen & Shoemaker, 1998). This specific attribute which connected with individuals or organization was not among the most important factors for building loyalty (Bowen & Shoemaker, 1998). In contrast, the two importance attributes-offering room upgrades when available and allowing the guest to reserved specific room-exhibited the largest gaps (Bowen & Shoemaker, 1998). Importance-performance analysis (IPA) could identify

the level of consumer acceptance of a marketing strategy (Martilla & James, 1997). However, there was no obvious evidence between importance rating and performance rating of the loyalty strategies perceived by hotel guests (Tideswell & Fredline, 2004).

Scholars have tried to identify the differences between the delivered performance of loyalty program and the perceived importance of frequent rewards, which hotel guests treated as similar by. In order to understand which marketing driver fostered truly loyal customers, the gap analysis between performance and importance of marketing drivers that hotel guests perceived can be used to gain additional insights into the effects of marketing strategy (Rust, Lemon, & Narayandas, 2005). Analyzing the importance-performance grid was presented by considering each marketing strategy or attribute in order to indicate the discrepancy between these two key indicators of buying decisions (Martilla & James, 1997).

This section explained differences between importance and performance analysis for marketing strategy. Importance and performance analysis were used to identify the discrepancy between the delivery performance of marketing strategy ranking by hotel customers and the perceived importance of marketing strategy perceived by hotel.

Customer Equity

Customer equity is defined in terms of optimal balance between customer acquisition and customer retention (Blattberg & Deighton, 1996). Blattberg and Deighton (1996) offered eight guidelines for maximizing customer equity:

1. Invest in high-value customers first.

2. Transform product management into customer management.

3. Consider how add-on sales and cross-selling can increase customer equity.

4. Look for ways to reduce acquisition costs.

5. Track customer equity giants and losses against marketing programs.

6. Relate branding to customer equity.

7. Monitor the intrinsic retain ability of your customers

8. Consider writing separate marketing plans—or even building two marketing organizations—for acquisition and retention efforts. (pp. 140-144)

Customer equity is the discounted lifetime values of a firm's customer base, which is made up of three components and key marketing strategy (Rust et al., 2004; Rust et al., 2000). According to the customer equity theory, the three marketing equity are (Rust et al., 2005):

- Value equity: Customers' objective assessment of the utility of a brand, based on what is given up is traded by what is received. Three marketing drivers of value equity are quality, price, and convenience.
- Brand equity: Customers' subjective and intangible judgments of the brand, above and beyond its objective value. Three marketing drivers of equity are customer brand awareness, customer brand attitude affection, and customer perception of brand ethics.
- Relationship equity: Customers' tendency to stick with a brand, above or beyond objective and subjective assessments of the brand. Four drivers of relationship equity are loyalty programs, affinity program, community-building program, and knowledge building program (pp. 24-25).

In the context of the hotel industry, the value strategy through price, convenience, and quality requirement was significant to relate the customer repurchase (Ekinci & Riley,

1999; Zeithaml, 1998). The brand strategies, mostly from the headquarters of hotel channel kept scanning on customer retention through the drivers of brand awareness, affection, ethics, and company citizenship (Jiang, Dev, & Rao, 2002). In a study of twelve luxury hotel, brand loyalty, brand awareness, and brand image among the four attributes of brand equity (brand awareness, brand image, brand loyalty, and perceived quality) showed the strongest direct effect on the finance performance of the hotels (Kim, Kim, & An, 2003).

The most important strategy in enhancing customer loyalty was the relationship strategy (Rust et al., 2005). Relationship marketing was the vehicle to establish, maintain, and enhance relationships with customers and other partners (Gronroos, 1994). This was achieved by a mutual exchange and fulfillment of promises-commitment and trust (Gronroos, 1994). A study of the hotel industry embraced the concepts of improving customer loyalty by promoting interpersonal service encounters to build long term relationships between customers and hotels (Scanlan & McPhail, 2000). The results from multiple regression analysis revealed that hotel guests perceived, in descending order of importance, personalization, social bonding, reliability, and familiarization as the most influential in relationship formation (Scanlan & McPhail, 2000).

Customers were viewed as assets of the firm's attempt to create and build its total customer equity (Hansotia, 2004). A strategic marketing framework which was based on customer equity analysis identified the drivers of marketing strategy to project customer financial return through frequency of purchase (Rust et al., 2004). However, there was not much research that was conducted with the primary assumption of the customer equity—the drivers of the marketing strategy related the customer equity might impact on

customer retention or customer loyalty.

Thus, the notions of customer equity affecting customer loyalty moved from transaction-specific to cumulative evaluation or a key psychological reaction to the value (Olsen & Johnson, 2003). The measurement of perceived value implicated in tourism field included behavioral price (non-monetary as a switching behavior or switching cost), monetary price (the price of service, service value), emotional response, quality, and ability to affect customer loyalty (Petrick, 2002). A survey which explored the mediating role of customer equity in customer retention or acquisition identified that brand equity and value equity exert significant effects on customer retention (Chang & Tseng, 2005). Some marketing strategy related to customer equity might not just impact on the antecedents of customer loyalty (e.g., confidence on purchasing, would like to repurchasing, or risks for inconvenience) but also enhance the behavioral outcomes of customer loyalty (e.g., encouraging the other customers' purchasing, promoting the superior service of the hotel, or would like to further to receive the new menu of preferred restaurants). All direct or indirect benefits of marketing strategy might lead to the basic part calculations of customer equity.

According to Hypothesis 1, there is a difference between the perceived importance of each attribute of marketing driver of customer equity and the rating performance of each of the attributes of marketing drivers. Using only one scale (importance or performance) as the measure of independent variables would lose insight into the marketing drivers of customer loyalty for the hotel customer perspectives (Rust et al., 2005). So the production of importance scale and performance scale of the marketing drivers (Importance multiplied by performance) would be combined with customer

perceived importance of marketing drivers and indicate how well the hotel performed in each of the attributes of marketing drivers.

Value Strategy

To attract loyal customers, marketing managers must make it worthwhile for customers to stay in their hotel (Dube & Renaghan, 2000). One of the best ways of creating loyalty was to create visible value service (Dube & Renaghan, 2000). There were ten value attributes (customer room design, physical public property, interpersonal service, functional service, food-and-beverage-related services, quality standards, location, value for money, bathroom furnishings, brand name and reputation) depending on three marketing segments—leisure, transient and business customers (Dube & Renaghan, 2000). In contrast, some scholars have argued that hotel service should emphasize a basic service strategy in order to increase customer satisfaction and customer loyalty (Ekinci & Riley, 1999).

Customers are value-oriented and they expect service process quality that far exceed the price that they paid (Heskett, Sasser, & Schlesinger, 1997) . The perceived service value became a tradeoff among service quality, customer perception, and price (Dodds, Monroe, & Grewal, 1991). There were 25-item instruments of measurement of perceive valued of a service through confirmatory factory analysis to identified the five dimensions (behavioral price, monetary price, emotional response, quality and reputation) in the recreation and tourism fields (Petrick, 2002). Perceived value has been argued to be one of the best indicators of customer satisfaction related to customer loyalty (Bolton & Drew, 1991; Parasuraman & Grewal, 2000). Moreover, a customer who was satisfied with a service might consider this service as a low value if the payments were considered

too high to repurchase it (Petrick, 2002). A perceived relative value from the hotel by customer was referred to a subjective assessment in comparison to similar service from the associated competitor (Bojanic, 1992). Therefore, perceived relative value might be distorted if hotel managers changed what they were servicing, competitors changed what they were offering, or if customer's needs changed (Petrick, 2002)

Brand Strategy

The strategy to repurchase the same brand refers to brand-use satisfaction, perceived superior value, and a preference or loyalty for the brand (Prasad & Dev, 2000). Brand strategy is a multidimensional concept that consists of brand loyalty, brand awareness, perceived quality, brand association, and the other strategies (Aaker, 1996). A study testing four elements of brand strategy in seven quick service restaurants found that brand awareness had the strongest direct effect on revenues (Kim & Kim, 2004). A longitudinal study of hotel brand strategies revealed that hotel brand franchisors should look at long term goals, not for franchising fees (O'Neill & Mattila, 2004). Brand strategy has several drawbacks: (a) brand strategy was perceived the only useful driver to value in stock, or might not offer premier value for customers (Clarke, 2001), (b) marketing strategy should be less brand-centric and more customer-centric (Prasad & Dev, 2000), and (c) hotel brand was criticized for over expanding and losing customer loyalty (Jiang et al., 2002).

Brand preference in the hotel market was a critical concern for the hotel chain's managers. Some marketing concepts assumed that potential customers were divided into different market segments, which meant that customers were grouped on the basis of their needs, but not in the individual preference (Dev, Morgan, & Shoemaker, 1995). So customer equity theory was useful to replace the brand equity theory to explain the

marketing endeavors on the single customer center (Leone et al., 2006). The maximum possible numbers of hotel sub-brand extensions allowed three sub-brands in the same chain in the empirical data examination (Jiang et al., 2002). In the other words, customers' brand switching decreased as the brand family increased to three extensions, but it rose with further extensions (Jiang et al., 2002).

Relationship Strategy

To trace the history of customer loyalty strategy as practiced by firms both inside and outside the hospitality industry, scholars believed that building loyalty was based on increasing knowledge relationship between customer and service provider (Shoemaker & Bowen, 2003). The process of building customer loyalty would enable a hotel to increase its profitability through the following strategies: sales, targeted promotion, frequent programs, brand relationships, and knowledge relationship (Shoemaker & Bowen, 2003). Moreover, relationship strategy was classified into five categories: core service performance, recognition for contribution, membership interdependence, dissemination of organizational knowledge, and reliance on external commitment (Gruen, Summers, & Voelpel, 2000). The customer retention behavior, including relationship continuation, increased sale or scope relationship, and word of mouth endorsement resulted from customers' beliefs that the value received from one supplier was greater than that from the other supplier (Kassinis & Soteriou, 2003).

Loyalty rewards program enhanced relationships' length and magnitude, but customers would be increasingly exposed to the complete field of service experiences, including experiences that might lead customers to change to other service providers (Bolton, Kannan, & Bramlett, 2000). Hotel guests who were exposed too many loyalty

programs and rewards from different suppliers might lose interest in loyalty programs (Stauss, Schmidt, & Schoeler, 2005).

This section discussed the customer equity associated with value, brand, and relationship strategies. This section identified the crucial research issues and the constructs in value, brand, and relationship strategy. The assumption of value, brand, and relationship is assumed to relate to customer loyalty based on customer equity theory. Therefore, value strategy, brand strategy, and relationship strategy can be employed to build customer loyalty.

Customer loyalty

A History of Customer Loyalty Research

Customer loyalty research (Table 3) has intrigued scholars for at least 63 years. As early as 1944, Guest (1944) examined the housewives' loyalty to given brands (Sui, 1993). Marketing research was primarily interested in the brand loyalty of low-priced home supplies (e.g. Cunningham, 1956; McConnell, 1968). Day (1969) first proposed the composite perspectives in the measurement of customer loyalty with formula equation (Pritchard & Howard, 1997). Following Day's (1969) study, Jacoby (1971, p. 26) stated, "Loyalty implies repeat purchasing based upon cognitive, affective, evaluative and dispositional factors—the classic primary components of an attitude." This classic definition rule for customer loyalty inspired the psychological process of customer loyalty for later scholars further to discover. Jacoby and Chestnut (1978) reviewed more than 300 articles to show 53 attempts to measure the brand loyalty. "And there was an excellent bibliographic reference section—the most complete ever published on this topic" (Jugenheimer, 1979, p. 46).

The next research in customer loyalty focused on studied chain or program loyalty in the context of the leisure or hospitality industries (Jarvis & Mayo, 1986; Selin, Howard, Udd, & Cable, 1988). Backman and Crompton (1991) found that level of involvement, motivation, side bets, and perceived skill were useful variables to classify the participants into four segments of loyalty—true, spurious, latent, and low. Dick and Basu (1994) explored different segments of loyalty. Relative attitude referred to product or service characteristics and provides a strong antecedent of repeat patronage (Dick & Basu, 1994). Balogu (2002) studied the hospitality field and concluded that the composite measures of attitudinal and behavioral loyalty could be classified into four segments of loyalty through cluster analysis.

Table 3 *Crucial Classification of Customer Loyalty*

Author and Year	Contribution	Antecedents	Behavioral outcomes
(Day, 1969)	Indexed service loyalty by formulation	Attitudes	Proportional behavior
(Jacoby, 1971)	A model of multiple-brand loyalty and three phases of attitudinal loyalty	Cognitive, affective, evaluative, and dispositional	Repeat purchasing
(Jacoby & Chestnut, 1978)	Excellent bibliographic references-the most complete ever published on this topic-composite indices	Psychological commitment	Behavior
(Muncy, 1983)	An examination of two-dimensional conceptualization of brand loyalty Cognitive element is key to understanding the relationship between brand loyalty, and perceived risk, purchase importance, ego involvement, information search, price sensitivity, price consciousness, and propensity to try a new brand		
(Jarvis & Mayo, 1986)	A survey of chain loyalty to identify the most promising market segments and to indicate the most effective marketing strategies	Positive, neutral, and negative	Frequent, occasional, and rare
(Backman & Crompton , 1991)	Differentiate four types of loyalty with empirical examination in the leisure industry	Level of involvement, motivation, side bets, and perceived skill	
(Pritchard , 1992)	Measured customer loyalty in term of Psychological Commitment Instrument (PCI)		
(Reichhel d, 1993)	Built a profitable base of right faithful customers, try loyalty employee, learning organization. Identified relationship between CLV and customer loyalty Identified the satisfaction trap		
(Morgan & Hunt,	This study of relationship marketing focuses on loyalty-a	Trust, and commitment	Product use, reactive

1994)	relationship build on trust and commitment between the customer and seller.		opportunity, voluntary partnership, and uncertainty
(Dick & Basu, 1994)	Integrated relative attitude and potential moderators (social norms and situational factors) toward relative behavioral	Cognitive(accessibility, confidence, centrality, and clarity), affective (emotion, mood, primary affects, and satisfaction), and conative (switching cost, sunk cost, and expectation)	Search motivation resistance to counter persuasion, and Word-of-mouth
(Hallowell, 1996)	Examined the relationship between profitability, customer satisfaction and customer loyalty		length (retention) depth (Cross sell)
(Bendapudi & Berry, 1997)	Customers may maintain relationships either because of constrains or dedications.	Environmental, partner, customer, and interaction variables	Alternative, acquiescence, cooperation, enhancement, identity, and advocacy
(Pritchard & Howard, 1997)	A Cluster analysis that combined scored on the composite measure from 328 travelers supported two dimensions matrix that identified four styles of loyalty. Discriminate analysis was used to identify those characteristics that differentiate the truly loyal program.	Involvement, importance, risk probability, risk consequence, pleasure, and sign	Product usage, frequency of purchase, and proportion of purchase
(Bowen & Shoemaker, 1998)	Support for the importance of trust as an antecedent loyalty The use of gap analysis to identify underlie features that would be likely to increase loyalty;	Trust, relationship, commitment, and switching Cost	Opportunistic behavior, voluntary partnership, and Product use
(Oliver, 1999)	Proposed four-phase model of customer loyalty with uniquely adding the fourth action phase	Cognitive, affective, and intentional	Action

(Baloglu, 2002)	Distinguish between truly loyal customers and those who merely appear to be loyal	Trust, commitment, switching cost, relative image, and relative experience	Proportion of visit, time spent, cooperation, and Word-of-Mouth
(Reinartz & Kumar, 2002)	Distinguished loyalty customer based on profitability and duration dimension into four segments: true friends, butterflies, strangers, and barnacles.		
(Back & Parks, 2003)	Customer satisfaction had a significant indirect effect on behavioral loyalty when mediating by attitudinal loyalty, including cognitive-affective-conative brand loyalty stages.	Customer satisfaction, cognitive, affective, and conative brand loyalty.	Proportional stay
(Tideswell & Fredline, 2004)	A four segments of customer loyalty and a gap analysis of preferred rewards for loyalty	W-O-M, response of unavailable, switching behavior, trust, commitment, price sensitive, and internal problem resolution	Proportional stay
(Bourdeau , 2005)	Identification of the antecedents and outcomes of an attitudinal loyalty framework	Overall perceptions of service quality, satisfaction, value, and trust	Identification, exclusive consideration, WOM, strength of preference, and share of wallet

Research Stream in Customer Loyalty

Customer loyalty was traced by three conceptual perspectives (Zins, 2001). First, all measures of behavioral loyalty, such as duration (length of stay, or use), sequence (purchase patterns within or between brands or facilities in the hotel), probability (brand

use over time), intensity (magnitudes over a period of time), frequency (of attendance over time), and proportion (stays over destination) could be used to determine loyalty (Iwasaki & Havitz, 2004; Kumar & Shah, 2004). The concept of customer loyalty corresponds to three main behavioral measures: proportion of purchase, probability of purchase, and sequence of purchase (Jacoby & Chestnut, 1978; Rundle-Thiele, Dawes, & Sharp, 1998). No other behavioral loyalty, such as switch cost or word of mouth, can be incorporated, and other cognitive or little attitudinal loyalty can explain the underlying behavioral actions (Samuelson & Sandvik, 1997). A key danger in the pure measure of behavioral loyalty is overestimating the loyalty of customers who lack other choices.

A monetary measurement of behavioral loyalty in the retail context evolved from the concept which the customer spends more with this product or service and then the customer earns more rewards such as RFM (Recency, Frequency, and Monetary value), PCV (past customer value) (Hughes, 1996), SOP (the relative share of a customer's purchase compared to the total purchase), SOV (the relative share of a customer's visit as compared to the total visit)(Magi, 2003), and share of wallet (SOW) (Berger & Nasar, 1998). Unfortunately, the problems of the monetary measures of behavioral loyalty except from easily switching to competitors may erode profits (Reichheld, 2002). Recently, the research on the measure of behavioral loyalty seemed to have a developed informational technology to calculate customer lifetime value (CLV) including direct and indirect value (Reinartz et al., 2005). CLV measures seemed superior to other measures of customer loyalty in calculating future customer lifetime value (Kumar & Shah, 2004).

Second, attitudinal loyalty could follow behavioral loyalty to reveal customers' mental and emotional commitment, and to mediate between stimuli and behavioral

effects (Back & Parks, 2003; Chaiken, Pomerantz, & Giner-Sorolla, 1995; Eagly & Chaiken, 1993). The second concept in research stream involved with the three-dimensional brand loyalty, trust-commitment theory, and multidimensional views of customer loyalty involved with the psychology aspects to explain the customer loyalty (Bowen & Shoemaker, 1998; Gronroos, 1994; Morgan & Hunt, 1994). The three-dimensional brand loyalty concepts have affective, cognitive, and conative aspects (Back, 2001; Back & Parks, 2003; Oliver, 1997; Ruyter, Wetzels, & Bolemer, 1988). Multidimensional approach for the construct of customer loyalty involved with four steps of procedure of loyalty (Oliver, 1999), five dimensions of loyalty (Scanlan & McPhail, 2000), and six dimensions of loyalty (Jacoby & Kyner, 1973). Trust-commitment theory emphasizes switching cost and trust for the emotional commitment to specific service product through relationship marketing strategy (Bowen & Shoemaker, 1998; Gronroos, 1994; Morgan & Hunt, 1994). The goal of customer loyalty was to build a long-term emotional link with customers through personal service, communication, and differentiated products –personal service (Duboff & Sherer, 1997; Duffy, 1998a; Javalgi & Moberg, 1997; Reinartz et al., 2005). The trade-off of these research approaches was that there was no consistent definition of the antecedents of customer loyalty, and a variety of measures across the samples (Oh, 2002). The measures of attitudinal loyalty have been based on operational rather than theoretical definitions; therefore, attitudinal loyalty was weak on construct validity (Muncy, 1983). Recently, there have been several regressive and unique developments for attitudinal loyalty studies. Affective trust or emotional commitment were identified in the lodging industry (Mattila, 2006); personal involvement was proposed in the leisure industry (Park, 1996); and social bonding was

discovered in the restaurant industry (Mattila, 2001).

The last approach combined attitudinal loyalty (strong vs. weak) and behavioral loyalty (high vs. low), which were classified into four segments of loyalty: true, latent, spurious, and low (Day, 1969; Dick & Basu, 1994; Tideswell & Fredline, 2004). This approach seemed to overcome more scholars (Day, 1969) as well as author of this dissertation to choice the approach of composite attitudinal measures and behavioral measures of customer loyalty in hotel consumer repurchasing behaviors among three above approach. The composite approach could separate true loyal customers from the other segments of loyal customers. The composite approach would be employed in this study so that the respondents could be organized according to true, spurious, latent, and low loyalty.

In other research of customer loyalty, except from discussion in Zins (2001) , exhibited the two distributional methods of constructing a customer loyalty model: Intention (I plan) vs. action (I do) (Oh, 2002; Soderlund & Ohman, 2003), intentions (I plan) as wants (I want) (e.g., Soderlund & Ohman, 2005), and intention (I plan) vs. expectation (I expect) (e.g., Soderlund & Ohman, 2003; Soderlund & Ohman, 2005) of assessments of attitudinal loyalty produce different outcomes of behavioral loyalty (customer retention). Research in customer loyalty should carefully select the construct of behavior or intentions, a wrong choice of construct might affect the answers of the respondents for research survey in the customer loyalty according to the Soderlund and Ohman research (2005). Thus, the conceptualization of customer loyalty was considered in the following section in an attempt to understand the proper measures or modeling of the construct of customer loyalty to develop a conceptual framework.

Conceptualizing Customer Loyalty

One definition of customer loyalty, proposed by Shoemaker and Lewis (1999), is descriptive of emotional psychological aspects of loyalty:

> The customer feels so strongly that you can best meet his or her relevant needs that your competition is virtually excluded from the consideration set; these customers buy almost exclusively from you referring to you as their restaurant or their hotel (p. 349).

Reinartz and Kumar (2002) indicated the relational aspects of customer loyalty between provider and purchaser:

> A loyal customer is one who values the relationship with the company enough to make the company a preferred supplier. Loyal customers don't switch for small variations in price or service; instead they provide honest and constructive feedback, they consolidate the bulk of their category purchases with the company, they never abuse company personnel, and they provide enthusiastic referrals (p. 126).

The comprehensive definition of customer loyalty was proposed by Oliver (1999):

> A deeply held commitment to rebuy or repatronize a preferred product or service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situation influences and marketing efforts having the potential to cause switching behavior (p. 34).

The last definition (Oliver, 1999) of customer loyalty extended prior definition of customer loyalty and integrated both behavioral and attitudinal loyalty. The definition of loyalty can be problematic; one researcher even allowed the respondents to conceptualize

their own understanding of the term (Mason, Tideswell, & Roberts, 2006). Some scholars also argued customer loyalty were difficult to measure, so the integrated approach, which included attitudinal and behavioral dimension of loyalty, was employed through variety combination (Baloglu, 2002; Dick & Basu, 1994). Loyalty programs or relationship marketing should focus not only on repeat benefits, but also on attitudinal loyalty, emotional loyalty, imagination, social influence, and pleasure (Barsky & Nash, 2002; Dube & Renaghen, 2000; Sui & Baloglu, 2003). Due to the difficulty of observing customers' loyalty and learning their viewpoints, the dimensions of true loyalty cannot be identified. In addition, it was difficult to identify what motivators or strategies attracted customer loyalty except the repurchase behaviors by experimental design (Mason et al., 2006).

Attitudinal Loyalty Predicts Behavioral Loyalty

Attitude could predict behavioral outcomes based on the theory of reasoned action (Ajzen & Fishbein, 1980). The theory of reasoned action proposes that customers' beliefs and attitudes are related to their behavioral intentions (Ajzen & Fishbein, 1980). Attitudes precede behaviors (Bentler & Speckart, 1981). The hierarchy of belief-attitude-behavior was supported in the 20th century (Mardrigal, 2001). Beliefs played a key role in the constructs of attitudes (Ajzen, 1991; Albarracin, Fishbein, Johson, & Muellerleile, 2001).

Some scholars proposed that a customer loyalty model describes the differences between short- and long-term behavior intention (Oh, 2002).The customer satisfaction-repurchase link could take one of two directions. One was direct (or chronic) route (that is not affected by exchanges of existing beliefs which customer influences repurchase. The second was an indirect (or transaction) route by adjusting expectations to

effect repurchase (Yi & La, 2004). A customer loyalty model demonstrates that a learning procedure highlights the relationship between attitudinal and behavioral loyalty (Oliver, 1997). Attitudinal loyalty to a specific brand has been operationally defined as an individual and as a brand-specific trait (Bennett & Rundle-Thiele, 2002). Attitudinal loyalty as an individual trait linked to customer profiles seems to show no significant relationship with actual behavioral repurchase, with only seven percent of the variation in behavioral loyalty being explained by attitudinal loyalty (Bennett & Rundle-Thiele, 2002). In travel destination marketing, tourists rarely revisited the same area so the attitudinal loyalty could not really predict behavioral loyalty (Peterson & Lyer, 2005).

The Composite Approach of the Customer Loyalty

Many scholars proposed that loyalty assessments should combine attitudinal and behavioral loyalty components (e. g. Back & Parks, 2003; Backman & Crompton, 1991; Baloglu, 2002; Day, 1969; Dick & Basu, 1994; Oliver, 1997; Tideswell & Fredline, 2004). Because customer loyalty was a subjective behavioral conveyed over time and a function of psychological procedural, neither behavioral nor attitudinal loyalty alone could assess customer loyalty (Back & Parks, 2003; Jacoby & Kyner, 1973). Customer loyalty included both measures of behavior and attitude, and as customer loyalty can be classified with 2 by 2 matrixes depending on the extent of repurchase behavior (high vs. low) and relative loyalty (strong vs. weak) as Figure 2 (Dick & Basu, 1994). The nature of customer loyalty was classified as true, latent, spurious and low loyalty (Dick & Basu, 1994; Tideswell & Fredline, 2004).

Loyalty Attitude	Repurchase intentions: High	Repurchase intentions: low
Strong	True Loyalty	Latent Loyalty
Weak	Spurious Loyalty	Low Loyalty

Note. Adapted from Dick and Basu (1994).

Figure 2 Classification of service loyalty

Attitudinal Loyalty

Importance of Attitudinal Loyalty

It is difficult to develop a marketing strategy to attract behavioral loyalty without a comprehensive knowledge of attitudinal loyalty; attitudinal loyalty is an unobservable predisposition of behavioral loyalty. The reason was that consumers in a non-stable environment would decrease or increase behavioral loyalty (Bennett & Rundle-Thiele, 2002). Measuring attitudinal loyalty could supply the measures of behavioral loyalty, especially on changing needs required by environment. The measures of attitudinal loyalty was more stable than the measures of behavioral loyalty under the changing of the environment or the pressing of social references (Bennett & Rundle-Thiele, 2002).

Operationalized Measures

Attitudinal loyalty could be separated into constructs; one is limited to unobserved long-term beliefs of customers, and the other one includes observed behavioral and unobserved belief—based on traditional measures of true loyalty. The broad dimensions of attitudinal loyalty measurement, except for repurchasing behaviors, include: trust, commitment, positive word of mouth, price insensitivity, response to hotel unavailability, switching behavior, and response to service failure (Tideswell & Fredline, 2004). Only

proportion of visit and length of stay were treated as behavioral loyalty in the Tideswell and Fredline (2004) study.

The narrow dimensions of attitudinal loyalty measures based on predisposition toward a brand or product or antecedent of customer loyalty include trust, commitment, and switching cost (Baloglu, 2002; Morgan & Hunt, 1994). Oliver (1999) proposed three stages of customer loyalty that in order to evaluate the true level of attribute loyalty attributable to a customer. Oliver (1999) stated three attitudinal loyalty phases that are associated with a continued procedure that identified low to deep levels of attitudinal loyalty. These three stages are (a) a confidence on targeted loyal hotel over competing hotel (cognition), (b) associated with an emotional preference toward loyal targeted hotel over than the other hotels (affection), and (c) a strong intention to repurchase the same hotel above and beyond for competing hotel (conation) (Bourdeau, 2005). The central drivers in each dimension of attitudinal loyalty (relative attitude) would be employed as operational measurements: *trust* as the key measurement of the cognitive component, *emotional commitment* as the key measurement of the affective component, and *switching cost* as the key measurement of conative measurement (Baloglu, 2002; Dick & Basu, 1994; Morgan & Hunt, 1994).

Three distinct themes in the definition of attitudinal loyalty in the leisure industry were identified: investment, normative pressure and affective attachment (Park, 1996). Although attitudinal loyalty lacked a consistency in the literature, three components of attitudinal loyalty were identified (Park, 1996). According to the literature review, customer loyalty was measured and classified by trust, commitment (emotional attachment), and switching cost (Baloglu, 2002; Tideswell & Fredline, 2004).

Early in relationship marketing theory, trust and commitment were the antecedents of customer loyalty (Gronroos, 1994; Morgan & Hunt, 1994). Trust was defined as confidence in an exchange partner's reliability and integrity (Morgan & Hunt, 1994). Trust reduces the uncertainty of hotel customers in a strange environment. The Oh's (2002) transaction model incorporates such transaction-oriented variable such as customer satisfaction, value into a trust-based relationship model. In Oh's model(2002), trust as a mediator was separated into benevolence trust and competence trust impacted on repurchase intention. The switching cost was adopted into Wang's proposal model similarly served as the function of benevolence trust. Consequently, customers with a strong trust in the hotel are expected to increase strong intention to repurchase, spread word of mouth endorsement, and continue a cooperative relationship with hotel (Oh, 2002).

Commitment (emotional attachment or affection) was defined as liking as partner, enjoying the partnership, and having a sense of belonging (Geyskens, Steenkamp, Scheer, & Kumar, 1996). In today, a rush travel environment, firms may overlook the importance social and psychological factors that make long term cooperative relationship possible (Crotts, Coppage, & Andibo, 2001). Commitment is a key mediator between marketing drivers and behavioral variables (proportion of visit, word of mouth, cooperation, time spent, and other product usage) (Sui & Baloglu, 2003). Commitment has been treated as a three-dimension (normative, affective and continuance commitment) construct in a customer switching intention model (Bansal, Irving, & Taylor, 2004). The above measurement of commitment based on the multifaceted construct was found in the principle of marketing research, organizational behavioral and social psychology (Bansal

et al., 2004). Mattila's model (2006) suggested that commitment as measured for customer loyalty on frequent program was separated into two dimensions: affective commitment (emotional bonding) and calculative commitment (switching cost). The calculate commitment leaded including switching cost as attitudinal loyalty was discussing in next paragraph.

Switching costs was defined as customers' effort, cost, time, and convenience to move from current service provider to the competitor (Bowen & Shoemaker, 1998; Dick & Basu, 1994). However hotel guests incurred few switching costs (as encounter procedural, financial reward or social influential) served as incentives to remain loyalty to a particular hotel (Bowen & Shoemaker, 1998; Sui & Baloglu, 2003). Loyal customers would do not mind paying a high room rate to stay at their favorite hotel (Ambler et al., 2002; Tideswell & Fredline, 2004). Switching cost was treated as constraint attributes for hotel customers to stay in the same property.

This section argued the importance of attitudinal loyalty and the underlying constructs of attitudinal loyalty. This section contended that attitudinal loyalty, as a disposition of behavioral loyalty, had three dimensions associated with trust, commitment and switching cost. Therefore, it used attitudinal loyalty as a mediator among stimulation of the marketing drivers impacted on behavioral loyalty in the proposed model. In order to simplify the conceptual model, the data deduction for three dimensions of attributes was used as the domain measure of *attitudinal loyalty*.

Behavioral Loyalty

Importance of Behavioral Loyalty

At least eleven articles claimed that behavioral loyalty had demonstrated consistent

measures of behavioral outcome of customer loyalty (Baloglu, 2002). Although attitudinal loyalty was important to measure customer loyalty, behavioral loyalty also needs as compensation for the measures of the customer loyalty. Without behavioral loyalty measures, customer loyalty was difficult to observe. Any marketing effort to identify what benefits hotel guests expect in return for their loyalty must explore the nature of their loyalty. The marketer in hotel industry should not only measure behavioral loyalty but also established attitudinal loyalty (Tideswell & Fredline, 2004).

Operationalized Measures

Behavioral loyalty was divided into proportional visit, positive word of mouth, and cooperation (Baloglu, 2002; Bendapudi & Berry, 1997; Bowen & Shoemaker, 1998; Dick & Basu, 1994; Kim, Han, & Lee, 2001; Riechheld & Sasser, 1990 ; Tideswell & Fredline, 2004). The repurchase measure had been rejected on the basis of improper assessment of customer behavioral loyalty, and lack of a comparable measure of behaviors(Pritchard & Howard, 1997; Sui & Baloglu, 2003). As previous discussion, the behavioral loyalty would easily be assessed and then lead to the fundamental computations of customer equity.

The proportion of purchase in the target market was proposed to be a more suitable measurement of customer behavioral loyalty due to practical environment and shared loyalty with competitors (Prictchard, Havitz & Howard1999; Sui & Baloglu, 2003). The absolute value of repurchase measures such as frequent visits to this hotel might lose its validity without being compared to visits at the other hotel. The proportion of visit in the hotel industry would be more stable than shares in the wallet due to the substantive different segments of the lodging market on the price, location, and expectation (Sui &

Baloglu, 2003). Therefore, the proportion of visit in the target hotel would become one main indicator of direct customer equity to assess the straight purchasing when compared with the other potential competitors.

Word-of-mouth endorsement was defined as promoting the company and making business referrals (Bendapudi & Berry, 1997). Loyal customers would tell up to 12 people about a hotel that they liked and 20% of loyal customers claimed that they would go out of their way to mention their favorite hotel to their relatives and friends (Bowen & Shoemaker, 1998). Positive word of mouth indicated that customers would recommend the hotel to friends and family (Tideswell & Fredline, 2004). Therefore, the word of mouth endorsement would become an important measured driver of indirect customer equity to affect the other peoples to purchasing the same hotel or services. Word of mouth endorsement would also assess the benefits of the expanding advertisement to the customer equity.

Cooperation is defined as working together to achieve mutual goals and as a customer's willingness to help the company (Bendapudi & Berry, 1997). Cooperation was proposed to create affective commitment (Bendapudi & Berry, 1997). For example, cooperative hotel guests would like to appear in the promotional ads for the hotel or would complete a survey to express their opinions about service quality. As Charlisle and Parker (1989, p. 5) indicated "If customer and supplier firms can recognize their common ground in a shared interest in capturing the consumer sale which actually nourishes them both, it should be possible for them to work creatively and effectively together to capture that sale for their product". A customer will undertake risk, coordinated behavior if trust exists between customer and service provider (Pruitt, 1981). Once trust is established,

companies learn that coordinated efforts will lead to results that go over what the company would reach if it worked solely in its own best concern (Anderson & Narus, 1990). Thus, the variable of cooperation could become the key measured drivers of indirect customer equity in order to assess the common benefits in the both sides of consumers and the hotels.

This section associated behavioral loyalty with proportional stay, word of mouth endorsement, and cooperation. This section interpreted behavioral loyalty as behavioral outcomes of marketing stimulation and indications of direct or indirect customer equity. These three components of behavioral loyalty would be employed as the measures of behavioral outcomes of customer loyalty and key drivers of customer equity.

Overview of Research Model

Pioneer model

Day (1969) was the first to state that brand loyalty that consisted of repurchase patronage was provoked by a strong internal disposition. Day's (1969) equation framework, introduced below, indexed loyalty, composite attitudinal loyalty, and behavioral loyalty. By proposing service loyalty (SeLi) as the interaction index of loyal attitudes (Ai) and proportional behaviors (Pbi) (Hair, Black, Babin, Anderson, & Tatham), this formula created a two-dimensional matrix of the measurement of loyalty.

$$SeLi = P〔Bi〕 \times Ai = f(X_1, X_2, X_3, \ldots, X_k)$$

Where

Li = the loyalty type for i^{th} buyer for travel service brand M,

P〔Bi〕= the proportion of total purchases of s travel service that buyers devoted to travel service brand M over a set period of time.

Ai = the attitude toward travel service brand M, and

X_k = the descriptive variables of Li which were hypothesized to valid and explain what differences in loyalty might arise.

Personal Involvement

—Personal Involvement Discriminated the Composite Measurement of the Attitudinal and Behavioral Loyalty Framework

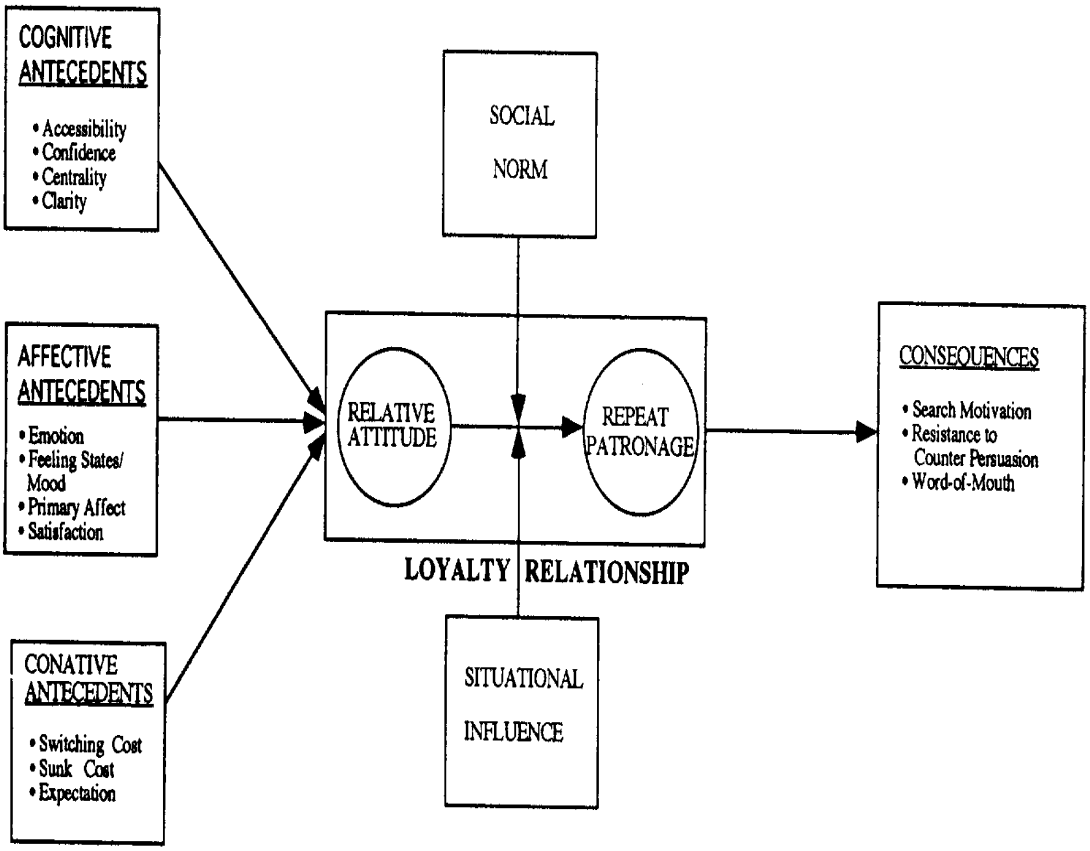
Bachman and Crompton (1991) viewed loyalty as based on psychological attachment and behavioral consistency. The concept included four segments of loyalty. This model emphasized that the more personal the involvement with leisure activity, the more customer loyalty would result.

Classic framework

The crucial contribution of this framework (Figure 3) provided the conceptualization of loyalty as the relationship between relative attitude toward a brand, service, or product and repeat patronage (Dick & Basu, 1994). Second, this framework inspires future empirical research on the measurement of loyalty by discussing the relative attitude of loyalty (antecedent) that facilitates or mediates the behavioral consequences (Dick & Basu, 1994). Dick and Basu (1994, p.99) claimed that integrated conceptual framework was as follows:

> Customer loyalty is viewed as the strength of the relationship between an individual's relative attitude and a repeat patronage. The relationship is seen as mediated by social norms and situational factors. Cognitive, affective, and conative antecedents of relative attitude are identified as contributing to loyalty, along with motivational, perceptual, and behavioral consequences (p. 99).

Although this proposal framework offered a progress view about antecedents and consequences of the customer loyalty, this conceptual framework awaits future empirical investigation. Firstly, Dick and Basu's model use relative value to replace the absolute value from the past model. Secondly, Dick and Basu's model involved the confounding variables (situational influence and social norm) into the model. Moreover, this framework just reflects the relationship between attitudinal and behavioral loyalty, but the stimulators of the antecedents was lacking in the model.



Note. Source Adopted from Dick and Basu (1994, p.100).

Figure 3 A conceptual framework for customer loyalty relationship

Psychological Commitment Model

—Conceptual model of the relationships among involvement, psychological commitment, and behavioral loyalty.

This conceptual model highlighted the psychological sequences in leisure industry in which antecedents of involvement leading to participants' behavioral loyalty mediate psychological commitment and resistance to change (i.e., involvement →psychological commitment→resistance to change→behavioral loyalty) (Iwasaki & Havitz, 1998). In addition, personal characteristics and social-situational factors moderate the developmental process in the model (Iwasaki & Havitz, 1998). This model also involved the third or confounding such as situation, personal attitudes, and demographic profiles.

Since the psychological process in this complex model has not yet been fully investigated through real data analysis, the mediators of psychological commitment and resistance in the revised model were examined in later research (Iwasaki & Havitz, 2004). The attitude strength and differentiations in Dick and Basu (1994) were reflected in psychological commitment and resistance to change (Iwasaki & Havitz, 1998). It was more important to focus on relationships between marketing strategy and the antecedent variables in the proposed model in order to understand the characteristics of customer loyalty, and to expand the number of loyal customers (Iwasaki & Havitz, 1998, 2004).

The Antecedent and Outcome of customer loyalty Model

In this structural equation model, customer satisfaction was an exogenous variable, three customer voluntary performance behaviors—loyalty, cooperation, and participation were endogenous variables although mediated by trust and commitment (Dai, 2002). This model which is based on social exchange theory was tested for lodging or non lodging

frequent guest programs (Dai, 2002). This study did not manage the confounding variables in the model, so there were other latent variables offered different support (Dai, 2002).

Modern Composite Measurement Model

Baloglue (2002) began a framework through clustering analysis of 19 questions in order to examine the crucial aspect of loyalty in the casino case. This study included antecedents (trust, commitment, switching cost) and outcomes (voluntary partner——word of mouth and cooperation) based on the construct proposed by Bowen and Shoemaker (1998), proportional stays based on the construct discovered by Selin et al.(1988), dispositional measures (trust, emotional attachment, switching cost) based on the Dick and Basu's construct (1994), and motivation on the antecedents of loyalty (constraints-switching cost and dedication-trust and commitment) based on the construct in Bendapudi and Berry (1997). This model supported a statistically significant separation of three groups of casino clubs members which was the four paradigms of loyalty based on Backman and Crompton (1991). There were some shortcomings in this model. First, the construct validity-discriminate and convergent validity were questionable (Mason et al., 2006). Second, factor analysis and cluster analysis were used to group similar numerical patterns in the data analysis (Mason et al., 2006). Because the distributions of scores looked similar, they were measuring the same thing (Mason et al., 2006).

Above all, the research framework separated the participants into four cells of a loyal paradigm by examining the data and clarifying the concept. The antecedent variable or attitudinal loyalty was treated as exogenous or mediated variable in behavioral loyalty.

However, the relationship between marketing stimulation and attitudinal loyalty or antecedent of loyalty awaited more attention.

The Gap in the Research Framework

Including customer satisfaction in the model may often be "a matter of picking low-hanging fruit" (Reichheld, 1996). Several models identified the weak link between overall satisfaction and loyalty (Heskett et al., 1997; John & Stowe, 1998; Skogland & Siguaw, 2004). One study reported 38% of respondents with high levels of satisfaction mentioned that they routinely switched to competing properties (Mittal & Lassar, 1998). In the examination of the auto industry, customer satisfaction could reach to 85% to 95%, but the repurchase rates averaged only 40% (Reichheld, 1993). This was often the case for satisfied customers who switched, for reasons of convenience, price, or competitive actions (Keaveney, 1995). Customer satisfaction could not be shown to lead to customer loyalty without the customer's expectation, convenience, or price competition in the model of consideration (Oh, 2002). The study of customer loyalty should focus on relationship marketing strategy instead of customer satisfaction (Heskett, Jones, Loveman, Sasser, & Schlesinger, 1994; Skogland & Siguaw, 2004; Zins, 2001).

Customer Profiles

Customer profiles are valuable marketing tactics which can assist in the service and retention of hotel customers (Sparks, 1993). Customer demographic profiles cultivating the unique customer needs can predict customer profits (Reinartz & Kumar, 2003) and improve customer relationship management (Sheth & Parvatiyar, 1995). Customer profiles might melt away or act up within hotel culture that stressed the requirements to treat each customers as a unique individual (Palmer, McMahon-Beattie, & Beggs, 2000).

A data mining approach was proposed to develop the profiles of hotel customer in order to maintain a loyal customer relationship (Min, Min, & Emam, 2002). Customer history data or profiles were collected by the hotels but these could not be used to improve customer service and create customer retention (Min et al., 2002). However, there were some drawbacks of research into the relationship between attitudinal loyalty and customer profiles. There were no statistically significant differences among demographic sub-groups on attitudinal loyalty of leisure lodging from a nationally representative sample in the USA (Peterson & Lyer, 2005).

Elderly diners were more likely to return to a specific restaurant that was friendly and empathetic (Fu & Parks, 2001). Females tended to be less loyal than males, older people tended to be more loyal than younger people, and parents traveling with children tender to be less loyal than customers traveling without children (Tideswell & Fredline, 2004). The business customers were less loyal than the leisure customers due to company policy or requirement of convention event (Tideswell & Fredline, 2004). There were significant differences in travel purpose-attitude loyalty, travel purpose-word of mouth, gender-risk reduction, age-attitudinal loyalty, income-switching cost, education-word of mouth and education-self-imagination (Skogland & Siguaw, 2004). Business travelers were the least loyal (Skogland & Siguaw, 2004).

Conceptual Research Framework

An original conceptual framework was developed for this study, referred to as the Wang Model of Customer Loyalty. The Wang Model was adopted from Baloglu (2002) and Tideswell and Fredline (2004) to classify true loyalty group from frequent guests. The proposed conceptual research model is diagrammed in Figure 4 and was designed to

predict attitudinal loyalty from customer equity and to predict behavioral loyalty from customer equity.

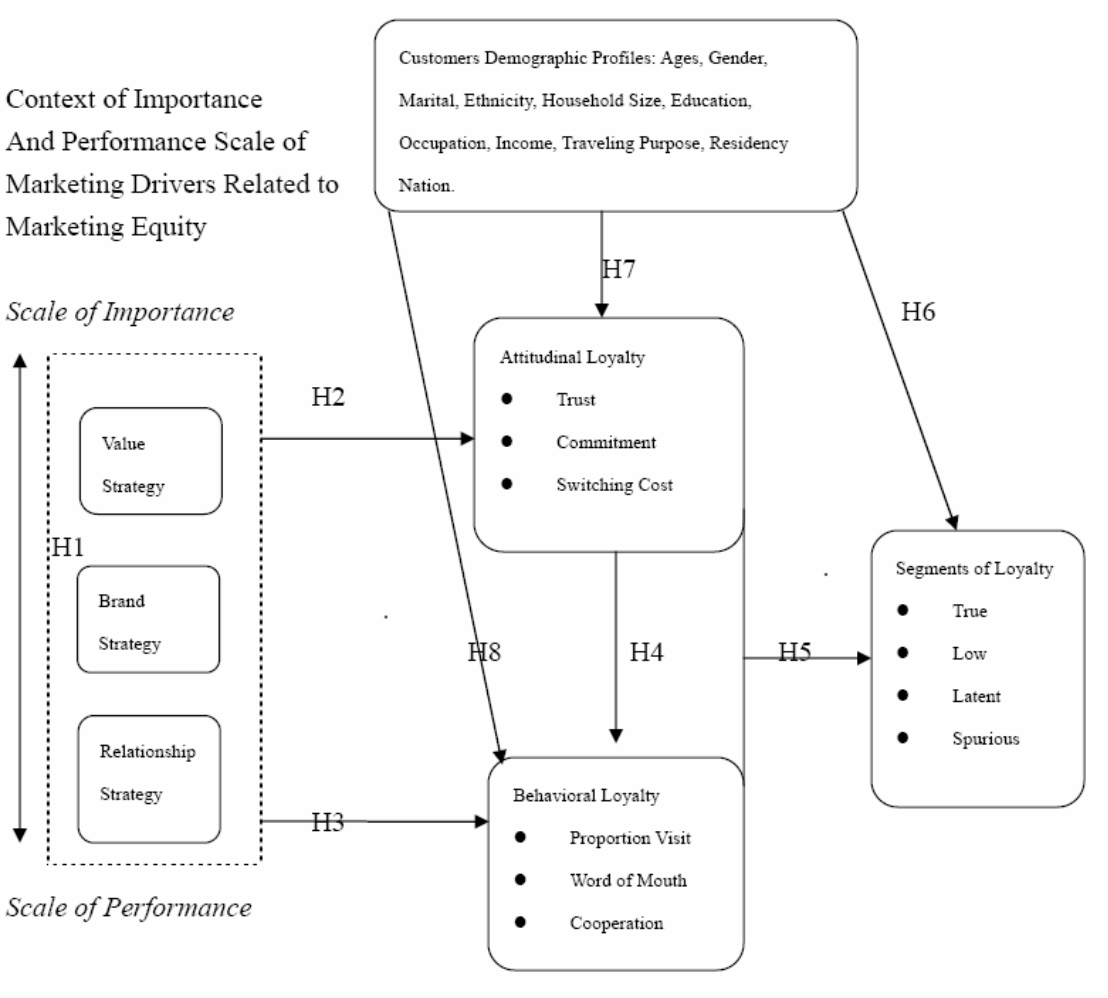


Figure 4 Proposal conceptual model of customer loyalty

The purpose of this conceptual framework was to predict marketing drivers of customer equity on customer loyalty in a five-star hotel in Taipei, Taiwan. The proposed conceptual model of customer loyalty identifies the differences between the delivery performance of the marketing drivers of the customer equity and hotel guests' perception of the importance of the marketing drivers of the customer equity. The performance and

importance scale of value strategy, brand strategy, and relation strategy of customer equity were projected directly on behavioral loyalty, or indirectly on behavior loyalty by mediating attitudinal loyalty. The composite of the attitudinal and behavioral loyalty was classified into four segments of loyalties: true, latent, spurious, and low loyalty. The effects of the customer demographic profiles on behavioral loyalty, attitudinal loyalty, and the four loyalty segments are identified in this study.

Hypotheses

$H_0$1: There are no significant differences between the importance ranking of marketing drivers and the delivery performance of marketing drivers as perceived by the hotel customers.

$H_0$2: There are no significant positive impacts on attitudinal loyalty from the context of importance scale and performance scale of the marketing drivers related to customer equity.

$H_0$3: There are no significant positive impacts on behavioral loyalty from the context of importance scale and performance scale of the marketing drivers related to customer equity.

$H_0$4: There are no significant positive impacts on behavioral loyalty from attitudinal loyalty. .

$H_0$5: There are no significant relationships on the four segments of loyalty: true, latent, spurious, and low loyalty from the composites of attitudinal loyalty and behavioral loyalty by distinguishing the T-hotel customers.

$H_0$6: There are no significant differences among each group of customer loyalty (true, spurious, latent, and low loyalty) when compared with customer demographic

profiles.

$H_0$7: There are no significant differences among attitudinal loyalty when compared with customer demographic profiles.

$H_0$8: There are no significant differences among behavioral loyalty when compared with customer demographic profiles.

Theoretical Background of Proposed Conceptual Framework

One scholar has criticized six weakness (Oh et al., 2004) in the marketing research in the hospitality field:

1. Empirical data applications cannot support theory development
2. No accumulation knowledge of dominated theory
3. Lack of experimental and qualitative research
4. Method and data only cannot mean on contribution
5. There is no new development for the theory in hospitality marketing
6. Limitations are lack of systematic attention from researchers.

In order to accumulate the knowledge of the dominant theory, the conceptual proposal research framework must ground the associated theory to interpret the research question. The proposed conceptual framework which was deduced from the literature review involved social exchange theory, customer equity theory, commitment-trust theory of relationship marketing, and cognitive dissonance theory.

(a). Social Exchange Theory

Social exchange defines voluntary actions that extend beyond basic role obligations and suggest a personal commitment to the partner (Blau, 1964; Organ, 1988; Thiabut & Kelley, 1959). Social exchange deals with social intangible costs or benefits such as

respect, trust, and friendship... (Grefen & Ridings, 2002). Social exchange had no guarantee of reciprocal rewards in return for the costs incurred such as economic exchange (Greenbaum, 1996). Social exchange theory has been applied to fields such as relationship marketing (Luo, 2002), market imperfections (Emerson, 1976), network analysis (Cook & Whitmeyer, 1992), and e-commerce (Luo, 2002). The antecedents or dispositions involved in social exchange relationships can be emotion (Lawler & Thye, 1999), commitment (Dai, 2002), or trust (Luo, 2002).

(b). Customer Equity Theory

Customer equity was a value measure by which to evaluate all marketing strategy expenditures on the basis of customer life time value (Blattberg & Deighton, 1996). Customer lifetime value was a measure of the future financial return based on the individual customer's value to an organization (Rust et al., 2000). When developing a customer-focused marketing strategy , the critical objective was to maximize customer equity—the total of the discounted lifetime value over all of the firm's current and potential customers (Rust et al., 2005). The three key mechanisms of customer equity were value, brand, and relationship. Customer equity was applied in the insurance, banking, and direct marketing industries. It was little researches to examine the customer equity theory in the hotel industry or hospitality industry. Customer equity management allows the customer to develop marketing strategies that increase the customer lifetime value to the firm (Rust et al., 2005).

(c). Commitment-Trust Theory of Relationship Marketing

Relationship marketing was used to establish, develop, and maintain successful relational exchanges (duration) reflecting an ongoing process in ten forms, between

customers and providers (Morgan & Hunt, 1994). The ten discrete forms showed exchange relationship on lateral partnership including competitors, nonprofit organization, and buyer partnership-intermediate customers, ultimate customers, internal partnership-business units, employees, and functional departments, and the supplier partnership-goods suppliers, and services suppliers (Morgan & Hunt, 1994). Trust and commitment were key mediators in the model (KMV model). Acquiescence and propensity to leave, cooperation, functional conflict, and decision-making uncertainty were the qualitative outcome in the models (Morgan & Hunt, 1994). The shortcoming in the KMV model of relationship marketing theory could explore both terminated cost and sociological costs were the key mediators in the model (Morgan & Hunt, 1994).

(d). Cognitive Dissonance Theory

Festinger (1957) published *A theory of Cognitive of Dissonance* which indicated the uncomfortable tension experienced by two or three inconsistent cognitions drive the reduction of cognitive dissonance (Joel, 2007). The more of the inconsistent tension state among two or three more cognition the person have, the more he or she needs to reduce the cognitive dissonance (Joel, 2007). Furthermore, the modern theory of dissonance did not limit to comparison cognitive with each other, which now include the behavior outcome, responsible for actions, and the self-affirmation (Joel, 2007). The theory of cognitive dissonance explains how people diminish their internal conflicts when they experience an inconsistency between their attitudes and their behavior (McGuire, 1966). In most situations, the attitude was modified to support the behaviors (Insko, 1967).

According to cognitive dissonance theory, two situations are implied in this framework:

- A repurchasing decision associated with a negative outcome (Insko, 1967): If the loyal customer decided to revisit his favorite hotel, he or she found that the service and facilities hotel did not meet his expectations. He or she might reduce the dissonance by rationalizing that the other hotel might have been even worse.
- Someone is forced to stay in a disgusting hotel (Festinger & Carlsmith, 1950): If company policy forces a customer to stay in a certain that he didn't like, he might pretend that his stay had been forced by his employer to reduce the dissonance.

Summary

This chapter reviewed the literature on loyalty marketing, customer equity and customer loyalty. The literature on loyalty marketing criticized loyalty programs which measured behavioral loyalty leading to profitability. The IPA (importance and performance analysis) was proposed to determine the differences between the importance and performance scale of loyalty marking strategy. The customer equity consists of customer lifetime value especially on the future potential repurchase led by three main strategies including value strategy, brand strategy, and relationship strategy.

The composite measures of behavioral and attitudinal loyalty were presented through historical review. Attitudinal loyalty was identified as mediators between loyalty marketing strategies and loyal behavioral outcomes. The cognitive (trust), affective (emotional commitment), and conative factors (switching costs) were constructed as elements of attitudinal loyalty.

The overview model section found that the situational variables and customer

demographic profiles were confounding variables that could moderate customer loyalty. The literature does not establish a relationship between marketing strategies and customer loyalty. The conceptual framework provided the structure to organize the literature review. The next chapter would describe the methodology used to answer the research questions.

CHAPTER III

METHODOLOGY

This chapter would explain the research method used to answer the research questions. First, the research design and the measurement of the associated variables were discussed, in addition to analysis the threats to validity and reliability. Second, the population and sample was selected; frame problems and corrections were discussed. Third, the development of instrument was shown, including the valid and reliable analyses for this instrument. Fourth, the instrument administration in data collection was described, including non-response analysis. Finally, the steps in data analysis were suggested.

Research Design and Variables

Design

Drawing from a broad-based theoretical framework, including social exchange theory, customer equity theory, trust commitment theory of relationship, and cognitive dissonance theory, this research used a correlation design through multiple stages of research (Pedhazur & Schmelkein, 1991). There was at least one exogenous variable (e.g., value strategies, brand strategy, and value strategy) and at least two endogenous variables (e.g., attitudinal loyalty, behavioral loyalty, or four segments of classified customer loyalty) (Pedhazur & Schmelkein, 1991).

Variables

In the first stage, the differences between the performance scales of marketing drivers related to customer equity and the perceived importance of marketing drivers linked to customer equity according to hotel customers' perspectives were identified. In the second stage, according to social exchange theory, attitudinal loyalty was traded as intangible exchange benefits to target hotel due to the marketing drivers stimulating. Attitudinal loyalty has three attributes—trust, commitment and switching cost—which are proposed as key mediators in the trust-commitment theory of relationship marketing. The customer's attitudinal loyalty would be treated as the key mediator in the customer equity-attitudinal loyalty-behavior loyalty relationship. Mediator-attitudinal loyalty was a variable that predicts or affects at least one independent variable: value strategy, brand strategy, and relationship strategy to one or more dependent variables of behavioral loyalty (Baron & Kenny, 1986; Oh, 2000). In the third stage, the theory of cognitive dissonance is used to interpret the phenomena which attitudinal and behavioral loyalty exist inconsistent leak and how attitudinal and behavioral loyalty can reach consistent. The composite of attitudinal and behavioral loyalty could be classified as true, spurious, latent, and low loyalty.

In the fourth stage of the study, a moderator is a third variable that integrates or interacts with one or more independent variables to predict one or more dependent variables (Baron & Kenny, 1986). In a correlation study, a third variable (Skogland & Siguaw, 2004) or spurious situational event, will be correlated with attitudinal loyalty or with behavioral loyalty as traveling goals, which may allow the researcher to predict a particular relationship from the marketing drivers of customer equity to attitudinal loyalty,

or from attitudinal loyalty to customer retention (Michell, 1985). It is worth exploring whether attitudinal loyalty or behavior loyalty differences because of the extraneous variable attributes of the demographic profile. However, it is impossible to identify all effects of the extraneous variable in the survey model.

Therefore, according to Iwasaki and Havitzs' (Iwasaki & Havitz, 1998) situational and demographic model, the attributes of the customer demographic profiles would be included in this research model to compare them with different surveys and demographic sub-groups . The differences in attitudinal and behavioral loyalty on the subgroups of the demographic variables would be studied. In addition, the difference among four segments of loyalty should be studied.

Threats to Validity and Reliability

No research design is perfect. Each contains a variety of threats to validity and reliability. In order to reduce methodology variances in this proposal, these threats are discussed in Table 4. A multiple regression model might have specification and measure errors (Pedhazur, 1973). According to the tailed design method, there are four survey errors in conducting survey design: sampling, coverage, measurement, and no response (Dillman, 2007). However, an evaluation of the validity of correlation research should focus on response rate, construct validity and reliability, sample error, statistical error, and cross-validation (Michell, 1985).

Table 4 *Threats to Validity and Reliability*

Error Reduction	Scope	How to improve validity and reliability
Specification Errors	"To omit relevant variables from the regression equation, including irrelevant" (Pedhazur, 1973).	1. To seek strong literature review support and theoretical back up. 2. To scan and discuss the third variables, customer satisfaction and confounding variables demographic variables
Sampling Errors	"The result of surveying only some, and not all elements of the survey populations" (Dillman, 2007).	1. To seek the available frame for survey population. 2. To identify and correct frame problems. 3. To determine the sample size
Non-coverage Errors	"The result of not allowing all members of the survey population to have an equal or known chance of being sampled for participation in the survey" (Dillman, 2007).	1. To identify and correct the missing elements. 2. To identify the potential cluster problems in the frame. 3. To suggest a probability sampling method
Measurement Errors	"The result of poor question wording or question in such a way that inaccurate or un-interpretable answers are obtained"(Dillman, 2007). This includes systematic errors —e. g. social desirable responses, unreliability, conceptual errors-unidimensionality .	1. To follow the six writing principles to adapt wording of questions: a. Use simple words b. Avoid vague meaning c. Brevity d. Specificity e. Avoidance of bias f. Avoidance of two more topics. 2. Focus on nomological validity: a. Precision variable defined b. Theoretical review supported c. Logical developed and d. Pilot data confirmed to improve the validity and reliability.
Non-response Errors	"The result of people who respond to a survey being different from sampled individuals who did not respond, in a way relevant to the	1. To increase the response rate: a. Conduct with the panel of expert to avoid problems with wording. b. Conduct pilot tests to enhance validity.

	study" (Dillman, 2007).	c. Guaranteed by the independent institution d. Make the following call. e. Build up trust relationships between respondents and investigators through questionnaire design and consent informed form. f. Write and layout the questions and answer choices clearly. 2. To determine the difference between responses and non-responses.

Subject Selection

Population

The target population for this study was the customers, who stayed over one night at the five-star T Hotel in Taipei, Taiwan. The survey population for this dissertation study was the customers, who would stay more than one night at T hotel from March to April, 2007. The average room rate in T Hotel is $212 per night.

Obtaining an accurate frame for this study is difficult because the survey population is the part of the hotel's confidential record. A frame is a method of locating all elements of the survey population. A daily new guests list which recorded the room no. and guest name at the front desk in T Hotel daily was available in housekeeping department. This daily new guest list was the frame of the survey population. A listing is a physical list of all elements in the survey population so that each element appears on the list exactly once.

Frame Problem and Correction

This daily new guest list identified four problems as in the survey population (Kish, 1995).The researcher would overcome this problem by correcting the frame problems:

1. Missing elements

    a. The daily guest list is printed out before the hotel guests check in.

    Correction: Ask the secretary of the housekeeping "When is the list updated?" and make sure that the guest list is updated before selected samples.

    b. Hotel guests who were not on the guest daily list due to guests' family, or friends.

    Correction: Ask the front desk to add the guests into list by coding the names.

2. Foreign Elements

    a. Employees with complimentary benefits such as general managers, or the presidents of the hotel were guests.

    Correction: The housekeeping manager scanned the daily list. All foreign elements were erased.

    b. The guest checked out after the day's new guest list was printed out.

    Correction: Ask the secretary of housekeeping "When is the list updated?" and make sure that the guest list is updated before samples are selected.

3. Duplicate Elements

    a. This frame identified no duplicate elements on the new daily guest list.

4. Cluster Elements

    a. The traveling goal of the guests was to join the convention.

    Correction: The front desk managers would identify them among the

events of the convention schedules and erase them.

b. The number of hotel guests in the same group was estimated from one to nine people.

   Correction: The systematic sampling was suggested to be used for the housekeeping manager to select one from nine guests.

Sampling

Although the researcher did not have access to the daily guest list, the general manager and his management teams agreed to help collect data for this survey. According to the general manager in T Hotel, the number of guests in same group who stayed in T hotel was estimated from one to nine (cluster elements in this frame). In order to avoid the interaction effects among the respondents in the same group and the cluster elements of the frame, one guest would randomly be selected from among the nine guests on the new guests' daily list by systematic simple randomly sampling method.

Sample Size Estimate

The minimum required sample size in this survey was estimated for 296 cases (see Table 5) with Alpha=0.05, Power=0.8, and Medium Effective Size depending on different statistical methods: factor analysis, multiple regressions analysis, ANOVA, cluster analysis, discriminate analysis and MANOVA (Cohen, 1988; Cohen, 1992; Hair et al., 2006).

Table 5 *Sample Size Estimated According to the Associated Statistical Tests*

Statistical test method	Required Condition	Estimated Sample Size	Adopted Approach
Pair-sample t-test	2 groups	128 subjects (=2 ×64)	(Cohen, 1992)
Multiple regression	3 independent Variables	76 subjects	(Cohen, 1992)
ANOVA	df=8-1=7	256 subjects (=8× 32)	(Cohen, 1988, p. 402)
MANOVA	6 variables & 4 groups	296 subjects (=74×4)	(Stevens, 2002, p. 627)
Cluster Analysis	4 clusters	Not identified	(Hair et al., 2006, p. 571)
Discriminate Analysis	6 predictors	120 Subjects (=6×20)	(Hair et al., 2006, p. 288)
Factor Analysis	3 variables	More than 100 Subjects	(Hair et al., 2006, p. 112)

According the sample size formulation used for attribute sampling: $n^*=z^2p(1-p)/d^2$ at d=0.05 (be assumed), p=0.3 (from the history of T-hotel survey by itself), and confidence interval=0.95, the minimum required valid sample size (n*) in the infinite population for this survey is (Kish, 1995; Scheaffer, Mendenhall III, & Ott, 1996):

$N^*=1.96^2\times0.3\times(1-0.3)/(0.05)^2 \fallingdotseq 323$ respondents

According to General Manager of T Hotel in the Taipei, Taiwan, the population in two months would be estimated at 6,000 guests = 3,000 guests/per month ×2 months. The minimum required valid sample size (n) in the finite population for this survey after justifying the *fpc* is:

$n=n^*/(1+n^*/N)=323/(1+323/6000) \fallingdotseq 306$

When *fpc*=n*/N<5%, it is not necessary to justify *fpc* (Kish, 1995) .

With regarding to conservation estimation of the power for this study, more power is

welcomed to support the significant founding. So the minimum required valid sample size for this study is 306 respondents.

Instrumentation Development

Development Procedures

The measurement of model variables included multi-item measures, single measures, and single index measures —e. g. proportion of stay. The structure of the questionnaire was divided into three parts (Appendix A). The first part asked the respondents about the perceived performance of the marketing drivers. The variables in marketing drives were measured by five point-Likert scale: Perceived Performance: 1=Poor performance, 5=Excellent Performance. The second parts showed information about attitudinal loyalty construct and customer behavior outcome. The variables in customer loyalty except from the proportion of visit were measured on a five point-Likert scale: 1=strongly disagree, 5=strongly agree. The measures for the proportion of visit used the ordinal scale for all three questions.

The third part included the demographic profile of customers and their reason for travel. The demographic profile consisted of ten variables: age, gender, marital status, ethnicity, household size, education, occupation, annual income, travel goal, and country of residency. The nominal scale was used for the measures of the gender, marital status, ethnicity, occupation, travel goal, and country of residency. The ordinal scale was used for the measures of age, household size, education, and annual income.

According to the tailed design method (Dillman, 2007), all items described in each variable (Appendix A) were adapted from the literature review (Appendix B) and revised by three faculty members and the general manager in T Hotel in Taipei, Taiwan.

Dillman's (2007) tailored design method was used in this survey to develop the survey procedures that created respondent trust, perceptions of increased rewards and reduced costs for being a respondent, which take into account features of the survey situation and had as their goal overall reduction of survey error (Dillman, 2007, p. 27). The writing of the questionnaire would focus on simplicity and accuracy so that respondents would find it easy to complete this survey. The layout of the questionnaire and choice answers (Appendix E) was clear and easy to understand.

IRB Procedures

To comply with the mandate of the OSU Institutional Review Board, the researcher finished the principal investor education training module. According to IRB regulations, the consent inform as a cover letter (Appendix D) was developed to inform the participants of their rights. Following the assessment of risks and benefits, the researcher studied the possible risks of to participants. The right not to participate in the research is stated on the consent form (Appendix D). The risks, analysis, volunteers, confidentiality, IRB contact information and purpose of study are comprehensively and precisely stated in the cover letter (Appendix D) and followed rigorously in the investigation. The human subjects were protected from harm or possible harm from the research. The researcher was supervised by the IRB committees: the third independent justice party. The IRB approval number of this instrument is HE0681 (Appendix C).

Pilot Study and Pilot Test

The general manager of the T Hotel, Taipei would invite 32 frequent guests to volunteer for the focus group. A self-administered questionnaire would be given to each member of focus group. Respondents in the focus group were selected so that the groups

were relatively homogenous, minimizing both conflicts among group members and the discussion of issues that are not relevant to study objectives.

Construct Validity and Reliability

In developing the survey, the researcher tested the internal consistency and reliability of this questionnaire by Cronbach's Alpha reliability analysis. All items with a critical value above 0.6 (Hair et al., 2006) on each construct were retained in the instrument for the data collected from the pilot study. Cronbach's Alpha for multi-dimension variables was used to identify and remove the less reliable items (Cortina, 1993). While Cronbach's Alpha Coefficient value for any variable with multiple dimensions was below 0.6, the researcher would identify the less reliable items and remove them until the Cronbach's Alpha Coefficient supported the internal consistency reliability for the instrument (Cortina, 1993; Peter, 1979). A self-development and adapted instrument must possess a certain level of reliability, however, having a reliable measure did not guarantee that the scale measurements in this instrument were good enough valid (Peter, 1981). The following two types of validity should be employed to examine the validity of the instrument: content and construct validity-criterion (Cronbach & Meehl, 1955).

Three faculty members in the hospitality administration department and two managers from the T Hotel were chosen to serve as s panel of the experts. In order to possess content validity, each item in the attribute or variable should measure the full domain of content that is relevant to the measurement situation and accurately examine the target population (Trochim, 2000). After rewording the questionnaires and forming more accurate answers for each question, the panel of experts agreed that this instrument

supported strong content validity.

Three approaches were incorporated into construct validity: unidimensionality measurement; convergent validity, discriminate validity, and nomological validity (Peter, 1981) . This research would follow the rigorous research rule from definition of variable to instrument development in order to ensure nomological validity (Peter, 1981). Nomological validity should be taken more seriously during developing a scale than any other kind of validity (Cronbach & Meehl, 1955). The convergent validity in this study was recommended to ensure that the multiple items related to the associated variables in the construct of the attitudinal and behavioral loyalty (Peter, 1981). Discriminate validity was used to evaluate the construct of each variable to establish that the constructs were not related to each other (Peter, 1981). Discriminate validity would be established if none of independent variables were confounded or related. Basically, the convergent and discriminated validity weigh the concepts of the same strength but in opposite directions. This means that discriminate validity would not be empirically examined again.

Results for Pilot Study

Unidimensionality, reliability analysis, and convergent validity (Table 6) would be operationalized and examined during the pilot study (Clark & Watson, 1995). Unidimensionality and Cronbach's Alpha internal reliability analysis were employed to assess the psychometric appropriateness of all scales based on an individual variable with multiple dimensions. For all scales on an individual variable with multiple dimensions was found with exploratory principle component analysis. Unidimensionality analysis should be conducted before the Cronbach's Alpha internal reliability analysis (Cortina, 1993; Voss, Stem, & Stergios, 2000).

The assessment of the unidimensionality property for each attribute under the denoted variable was over the threshold of 0.6, meaning practical significance to measure the same direction. The check of convergent validity for each attribute was satisfactory by grouping under the donated variable (over the critical value of 0.5). The internal consistent reliability analysis except for the important scale of loyalty, community, and affinity was over the threshold of 0.6.

The Cronbach's Alpha of the importance of loyalty, community and affinity was below the critical value 0.6, meaning these three variables are unreliable. In contrast, the Cronbach's Alpha of the performance scale for loyalty, community and affinity was over the threshold 0.6, meaning these three variables on the performance scale had acceptable internal reliably. The different needs of each respondent might make the scaling of each marketing driver unstable. In addition, the multidimensional nature of the importance concept could weaken the reliability of importance measures when operating in field surveying design (Oh, 2001; Oliver, 1997). Later, the marketing drivers would be entered into the exploratory factor analysis (EFA) by the entire samples. The respondents would regroup the marketing drivers under the new constructs through EFA. In this case the low reliability of important scale of the marketing drivers in pilot study was not a serious problem.

Table 6 *Unidimensionality, Reliability and Validity for Pilot Study*

Check		Reliability	Unidimensionality	Convergent Validity
Construct with Multiple Dimensions	Item	Cronbach's Alpha	Factor Loading	Correlation Coefficients (item to total items)
Importance Scale				
Quality		0.670		
	1		0.867	0.504
	2		0.867	0.504
Ethics		0.807		
	1		0.916	0.678
	2		0.916	0.678
Loyalty		0.382*		
	1		0.786	0.237
	2		0.786	0.237
Community		0.541*		
	1		0.829	0.373
	2		0.829	0.373
Knowledge		0.885		
	1		0.948	0.796
	2		0.948	0.796
Affinity		0.431*		
	1		0.801	0.282
	2		0.801	0.282
Performance Scale				
Quality		0.822		
	1		0.928	0.721
	2		0.928	0.721
Ethics		0.840		
	1		0.928	0.724
	2		0.928	0.724
Loyalty		0.699		
	1		0.877	0.537
	2		0.877	0.537
Community		0.716		
	1		0.887	0.572
	2		0.887	0.572
Knowledge		0.916		
	1		0.963	0.854
	2		0.963	0.854
Affinity		0.688		
	1		0.873	0.525
	2		0.873	0.525
Attitudinal Loyalty				
Trust		0.816		

	1	0.857	0.644
	2	0.911	0.776
	3	0.817	0.603
Commitment	0.837		
	1	0.847	0.663
	2	0.879	0.713
	3	0.887	0.732
Switching Costs	0.843		
	1	0.930	0.730
	2	0.930	0.730
Behavioral Loyalty			
Cooperation	0.900		
	1	0.894	0.761
	2	0.923	0.820
	3	0.927	0.827
Word of Mouth	0.840		
	1	0.804	0.604
	2	0.937	0.827
	3	0.883	0.703

Note. * indicate Cronbach's Alpha reliability coefficients below critical value 0.6.

Instrument Administration

Data Collection Procedures

The survey method would use self-administrated questionnaires in the hotel. The questionnaires, including one cover letter are put into the guests' rooms from March to April, 2007. The guests were asked to return the finished questionnaires to the front desk. The attendants and front desk clerks would assist in collecting questionnaires. Two locked boxes were placed on the front desk at the T Hotel; in one locked box the finished questionnaires were stored, and the unfinished questionnaires were stored in the other. The front desk clerks would instruct the guests to locate the locked box. If guests had checked out and left questionnaires in the room, the room attendant would bring the questionnaires to the housekeeping office. The secretary of the housekeeping office would bring the completed and uncompleted questionnaires to the locked box in the front

desk. Only the general manager could unlock the boxes. General Managers would periodically forward the completed questionnaires to the primary researcher for further coding. Any participant who completed the survey would be entered into a drawing to win a free stay at the hotel. In order to raise the response rate, a reminder call for guests who were staying an extra night would be made around 17:00-18:00 or 20:00-21:00 by the secretary of the housekeeping office.

Non Response Analyses

Non response error exists to the extent that participants failed to provide usable responses and more diverse than those who do (Lindner, Murphy, & Briers, 2001). In order to reduce non response biases, eight methods are discussed in the literature: (a) archival analysis — compares respondents to population, (b) follow-up approach, (c) wave analysis — compares early response to late response, (d) passive non-response analysis — related available time with non response (e) interest level analysis — predicts relationship between interest item and survey item, (f) activity non response analysis— compromise difference between active non-respondent to the respondent, (g) the worst case resistance— compare data from actual study and, and (h) demonstrate generalizability — triangulating method in the same sample (Kish, 1995; Michell, 1985; Miller & Smith, 1983; Rogelberg et al., 2003). According to this research design, the archival analysis was used to identify the differences between respondents and the survey population, and then implied the differences between respondents and the survey population.

Data Analysis Procedures

The Process of Statistical Analysis

1. Cronbach's Alpha for multi-dimension variables identified and removed the low reliability of items.

2. Descriptive statistics were employed to identify the frequency and proportional respondents in the subgroup of each demographic variable of customers' profiles.

3. Paired samples t-test would identify the difference between importance scale and performance scale of marketing drivers of value strategy, brand strategy, and relationship strategy—H1.

4. Analyzing the importance-performance grid was presented by considering each marketing strategy in order to indicate the discrepancy between these two key indicators of buying decisions.

5. The performance scale of each marketing drivers times their related weighted important value would be transferred into the name "the index of each marketing driver".

6. The exploratory factor analysis for the index of the marketing drivers of value strategy, brand strategy, and relationship strategy would purify the relationship among value strategy, brand strategy, and relationship strategy.

7. The exploratory factor analysis for attitudinal loyalty would purify the relationship among trust, commitment, and switching cost.

8. The exploratory factor analysis for behavioral loyalty would purify the relationship among cooperation and word of mouth endorsement.

9. Simultaneous multiple regression analysis would be conducted to predict relationships with attitudinal loyalty—H2, or relationships with behavioral loyalty—H3 from factor

loading scores of the indexes of the marketing drivers.

10. Univariate multiple regression would predict the relationship with behavioral loyalty from attitudinal loyalty—H4.

11. Standardizing variables of composite of attitudinal loyalty and behavioral loyalty would be conducted to control different units of measurements.

12. A hierarchical clustering analysis for composite for standardizing points of composite of attitudinal loyalty and behavioral loyalty was employed, using Ward's method and squared Euclidean distances as measures (Hair et al., 2006). The cluster analysis was set to compute the solutions of four clusters, and an examination of group membership and group sizes according to the literature review.

13. The outcome of MANOVA used in conjunction with multiple discriminate analysis exposed the distinctive characteristics of each cluster group—H5.

14. Multiple discriminate analyses (MDA) would identify the three discriminate functions and dependent variables loadings on each discriminate function.

15. The Chi-Square analysis would identify the associations between each demographic variable of customer profiles and the four classified segments of customers loyalty —H6.

16. The one-way variance of analysis would identify differences among sub-groups demographic variable of customer profiles on attitudinal loyalty trust, commitment, and switching cost—H7.

17. The one-way variance of analysis would identify differences among sub-groups of demographical variables of customer profiles on behavioral loyalty—proportional visit, word of mouth, and cooperation—H8.

Summary

Each section in this chapter discusses crucial principles and their theoretical support shown as Table 7. In order to reduce variances in method, corrections of errors and improvements to the validity and reliability were shown in each section of this chapter. The empirical test for this study was feasible and reasonable.

Table 7 *Crucial Principles and Theoretical Background*

Sections	Crucial Principle	Theory adopted
Research Design	Correlation design, multistage models	(Pedhazur, 1973; Pedhazur & Schmelkein, 1991)
Population and Sample	Systematic Sampling method	(Kish, 1995; Scheaffer et al., 1996)
Instrument administration	Self-administrated measurement , Tailed designed method	(Dillman, 2007; James, 1998; Sheatsley, 1983)
Data Collection	On site survey	(Dillman, 2007; Lindner et al., 2001; Rogelberg et al., 2003)
Data Analysis Procedure	Applied multivariate statistics	(Hair et al., 2006; Stevens, 2002)

Exploratory factor analysis would be employed to discover the common components of the similar attributes based on the literature reviews. A multiple regression analysis was used to examine relationships among marketing drivers proposed to customer equity

theory and customer loyalty in the sample of the hotel customers. Next, cluster analysis was used to classify the customers in terms of the composite of behavioral loyalty and attitudinal loyalty into the four segments of customer loyalty: true, spurious, latent, and low loyalty. MANOVA in connected with multiple discriminate analysis would be used to interpret and assess the solutions of cluster analysis. ANOVA and Chi-Square would be performed to identify the connections between demographic profiles and the solutions of cluster analysis. All results from the survey population were computed by SPSS 14 (statistical package for the social sciences) software, and then produced logical implications for this study. The hospitality marketers, hotel customers and marketing scholars will benefit greatly from this study. The results of this study could make a significant contribution to the development of comprehensive marketing strategy, the measurement of customer loyalty and the examination of assumption of customer equity theory. The next chapter would present the data analysis and results.

CHAPTER IV

DATA ANALYSIS AND RESULTS

This chapter, consisting of ten sections, describes the results of the statistical analysis, and hypothesis testing. Section 1 describes data screening and discusses how the data were cleaned up and coded, potential non-response bias was assessed, how missing values were handled, and how the outlier was detected. Section 2 describes the respondents' demographic profile. Section 3 shows the output of the reliability analysis. Section 4 presents the results of the exploratory factor analysis (EFA) used in later statistical tests. Section 5 discusses the results of important-performance analysis (IPA) and t-test of the proposed hypothesis. Section 6 provides the results of hypotheses testing through multiple regression analysis. Section 7 shows the statistic results of hypotheses testing through simple regression analysis. Section 8 presents the results of multivariate data analysis of hypotheses tests through cluster analysis, discriminate analysis and MANOVA. Section 9 presents the results of ANOVA to determine the difference in loyalty behavior or attitude on the basis of customer demographic profiles. Finally, Section 10 describes the results of hypotheses tests in Chi-square analysis to connect the four segments of customers' loyalty with customers' demographic profiles.

Data Coding, Screening and Detecting

Non-response Bias

A total of 1,004 questionnaires were distributed during a two-month survey period. A total of 422 questionnaires (42%) were returned; 367 were usable. Although it is normal to have a very low response rate in the hospitality industry, it was important to assess the non-response bias in this data set. The 42% response rate did not demonstrate that this research was free from non-response bias (Rogelberg & Stanton, 2007). There was no way of knowing the opinions of the non-responders in this study.

Archival analysis could be used to identify non-response bias. This technique allowed for the profiling of comparisons between the survey sample and the archival information gleaned for the entire research population. The researcher identified an archival data base consisting of the whole survey population (e.g., customers' monthly statistical data for T Hotel by the Taiwan Tourism Systems). The percentages of frequency for nation residency in customer demographic profiles are compared with the Taiwan Tourism Bureau's statistical data (Table 8). This comparison revealed that respondents to this survey were not disproportionately representative of any particular group of T Hotel customers, but rather, represented a typical T Hotel patron. Consequently, non-response bias was not a problem in this study.

Table 8 *Archival Analysis for Non-response Bias*

Nationality / Groups	Asia	North American	European	Others	Total

Respondents	63%	21.5%	10.1%	6.4%	100%
T Hotel customers in Tourism Statistical Data Base	68.8%	20.1%	9.3%	1.8%	100%

Note. The time for computing the data of T Hotel customers in Tourism Statistical Database was as same as the surveying period for this study.

Data Coding and Data Cleaning

The data cleaning process ensured that once a raw data set was in hand, a verification procedure was followed to check for the appropriateness of numerical codes for each value of each item. The challenge in data cleaning process was to determine for each item in each case whether contains only legitimate value and even whether these legitimate code seems reasonable and satisfactory. The unreasonable responses were commonly operated by returning to the samples to receive better data, assigning missing values, or discarding unacceptable value (Malhotra, 2007). The returning to the field to receive better data in this study seemed to be unfeasible. Each case with more than 40% unreadable responses or missing answers in the whole page of instrument was discarded. The missing value in each variable would be assigned into 9 in the data set. A data consistency check was conducted to correct incorrect coding data, out of range, or logically inconsistent. Then this statistic adjustment would be conducted to enhance the quality of the data (Malhotra, 2007).

In Section 1 of the instruments, each question had an importance scale and a performance scale. Based on Hypothesis 1, the important scale in each question was different from the performance scale. Without losing information on either side, each respondent in the data set was assigned a self-weight to reflect its importance relative to

each question. Value 1 in important scale would recoded into 0.2 represented the least weighted item. Value 2 would recode into 0.4. The missing Value 9 and Value 3 would recode into 0.6 as the neutral weighted item. Value 4 would recode into 0.8. Value 5 would recode into 1, representing the most weighted item. Then the performance scale of each marketing driver multiplied by its related weighted value would be "the index of each marketing driver."

In order to get the value in the proportion of visit for each case, the answers to two questions (i.e., how many nights did customers stay in Taipei and how many nights did customers stay in T Hotel) would be recorded as the following: (a) 1 to 3 nights were recorded as two nights, (b) 4 to 6 nights were recorded into 5 nights, (c) 7 to 10 nights were recorded into 8.5 nights, (d) 11 to 14 nights were recorded into 12.5 nights, (e) 15 nights and over 15 nights were recorded into 16 nights (Kinnear & Gray, 2004; Norusis, 2005). A total of 40 questionnaires presented as larger than 1 in the value of the proportion of visit, meaning that respondents spent more nights in the T hotel than in Taipei. The values in the proportion of visit which presented as larger than 1 were identified as of unreasonable or unsatisfactory value. When the values of proportion of visit were larger than 1, they would be recorded into 9 as a missing value.

Missing Data Analysis

Fifty-seven of 422 questionnaires were unusable. A small percentage of surveys (57 questionnaires) were unusable because of respondents' failure to follow instructions, unacceptable levels of item nonresponse, respondents' rush to do something else, or obvious unreliable responses within intra-individual. Twenty-nine of 57 unusable questionnaires were identified the same ratings across Section One and Section Two of

questionnaires. Twenty-six of 57 unusable questionnaires were recognized for over 40% uncompleted items through all questionnaires. Consequently, 367 of 422 returned questionnaires which were useable and acceptable represented 87% of returned questionnaires.

This study employed Missing Value Analysis (MVA), an analysis function in SPSS (statistical package for the social sciences), to handle the missing data where in the collected useable data. The system-missing values in this study on each case or variable were less than 10% according to description analysis. The Chi-square measures obtained through the Little's MCAR test was significant at the level of alpha equal to 0.05. It indicated the observed pattern of missing data was different from random pattern. In other words, the missing data is not missing completely at random (MCAR). On the basis of the above two conditions, the model-based methods for expectation-maximization (EM) method was suitable for estimating and replacing all the missing values in this data set (Hair et al., 2006).

The EM approach in SPSS (statistical package for the social sciences) was an interactive two-stage estimating method in which the expectation stages makes the best possible estimate of the missing data and the maximization stages then estimates the parameters (means, standard deviation, or correlation) assuming the missing data were replaced. The process continues going through the two stages in the estimated values is negligible and they replace the missing data (Hair et al., 2006). If the replacing value exceeded the extreme acceptable value, the replacing value would be recoded into only extreme acceptable value.

Outlier Detection

A problematic outlier could seriously distort statistical results or make a Type I or Type II error. The outlier detection would include univariate, bivariate, and multivariate diagnoses. While an influential outlier was identified, a decision based on retention or deletion should make before data analyses.

Univariate diagnoses. The univariate diagnoses used the explore function in SPSS (statistical package for the social sciences) to make sure all variable were within range, mean and standard deviation were satisfactory. Then, each variable was explored by stem-and-leaf graphics to identify whether there were any outliers in each individual variable. At last, each variable would transfer to standard value (Z score) by SPSS's descriptive function. While any Z score would exceed ±3 with 367 sample size, it would be considered a potential outlier (Hair et al., 2006).

Bivariate diagnoses. The two variables within specific variable relationships, such as the independent versus dependent variables, would use scatterplots to identify the potential outlier (Hair et al., 2006) by visual inspection. The scatterplots with a graphical portrayal of ellipse facilitates the identifications of the outliers.

Multivariate diagnoses. Multivariate diagnoses would be used to examine more than two variables relationship, such as independent variables in regression. The D^2/df measure (D^2 or Mahalanobis distance measures the multivariate distance between each case and the group multivariate mean) above 3 at 367 sample size would be considered as a potential outlier (Hair et al., 2006).

If outliers were identified through above diagnoses and approved away from any observation of the population, they would be discarded. If outliers did represent any

element of the population, they would be retained to ensure the generalizability of the population (Hair et al., 2006). The univariate diagnoses were useful to find out coding error or potential outliers. The results of the bivariate and multivariate diagnoses which existed in the associated statistic function in SPSS (statistical package for the social sciences) would be presented in the latter associated section. In summary, no potential outliers in univariate were extreme (deleted) on the whole set of variables to be considered unrepresentative of the population.

Description Analysis for Respondents' Demographic Profiles

Table 9 summarized the demographic profiles of 367 respondents. The largest percentages of respondents were male (59.6%), married (60%), and 26-35 years old (39%). The second-largest percentage of respondents (21%) was between 36 and 45 years old. Fifty-six percent of respondents reported their ethnicity as Asian.

The average household size of respondents was 3.1. More than a fifth (23.3%) of respondents lived in two-person households. Just under a fifth (19.6%) of respondents lived alone. Just over 18.5% of respondents lived in three- person households. More than a third (39.2%) of respondents had a college degree. A smaller percentage (36.9%) had some with graduate education. The three main occupations of respondents were commercial (34%), engineering (19%), and service industry (13%). Only 6.4% of respondents were "retired" or "not in workforce."

Sixty-seven percent of respondents earned $30,000 to $59,999 annually, while nearly 23% of respondents earned $40,000 to $49,999. The primary reasons for the visit among respondents were business (40%), conference/meeting (20%), and pleasure (18%). Sixty-three percent of T Hotel customers come from Asia, while half of Asia customers

came from Taiwan). The majority of customers from other Asian came from Japan (25%). Twenty percent of respondents traveled from North America.

Respondents stayed in T Hotel for an average of 7.5 nights; the average number of nights that respondents stayed in Taipei was 9.4. The average percentage for the proportion of visit in T Hotel among respondents was 80%. Fifty-nine percent of respondents indicated that they always stayed in the T Hotel when visiting Taipei. The majority of respondents stayed 4-6 nights in the T Hotel (33.5%) and more than 15 nights in Taipei (30.8%).

The majority of respondents had had relationships with T Hotel for two to three years (24.5%). The duration of relationship with T Hotel among respondents was less than one year (13.9%), 1-2 years (24.0%), 2-3 years (24.5%), 3-4 years (4.4%), 4-5 years (21.5%), over 5 years (11.7%). The duration of relationship with T Hotel among respondents was over one year (86.3%).

Table 9 *Respondents' Demographic Profiles (N=367)*

Variable	Frequency	Valid %	Cumulative %
Age			
≤ 25 years old	46	12.5	12.5
26-35 years old	143	39.0	51.5
36-45 years old	79	21.5	73.0
46-55 years old	46	12.5	85.6
56-65 years old	50	13.6	99.2
≥ 66 years old	3	0.8	100.0
Gender			
Female	148	40.4	40.4
Male	218	59.6	100.0
Missing Value	1		
Marital Status			
Single	148	40.4	40.4
Married	214	58.5	98.9
Other	4	1.1	100.0
Missing Value	1		
Ethnicity			
Asian	207	56.4	56.4
American	62	16.9	73.3
European	30	8.2	81.5
Caucasian/White	18	4.9	86.4
Hispanic/Latino	18	4.9	91.3
Multiracial	18	4.9	96.2
Would rather not say	11	3.0	99.3
Other	3	0.8	100.0
Household			
1 person	72	19.6	19.6
2 persons	85	23.2	42.8
3 persons	68	18.5	61.3
4 persons	43	11.7	73.0
5 persons	73	19.9	92.9
6 persons and above	26	7.1	100.0
Education			
High School	14	3.9	3.9
Two-Year College	73	20.1	24.0
Four-Year College	142	39.2	63.1
Post Graduate	134	36.9	100.0
Missing Value	4		
Occupation			
Commerce	123	34.1	34.1
Education	40	11.1	45.2
Government	30	8.3	53.5
Engineer	67	18.6	72.0

Service Industry	50	13.9	85.9
Self-employed	28	7.8	93.6
Not in Work Force	18	5.0	98.6
Retired	5	1.4	100.0
Missing Value	6		
Income			
≤ US$20,999	22	6.0	6.0
US$21,000-US$29,999	29	7.9	14.0
US$30,000-US$39,999	78	21.4	35.3
US$40,000-US$49,999	85	23.3	58.6
US$50,000-US$59,999	81	22.2	80.8
US$60,000-US$69,999	35	9.6	90.4
US$70,000-US$79,999	14	3.8	94.2
≥ US$80,000	21	5.8	100.0
Missing Value	9		
Goal			
Business	144	39.8	39.8
Pleasure	64	17.7	57.5
Visiting Friends/Relatives	48	13.3	70.7
Meeting/Conference	71	19.6	90.3
Events/Sports	16	4.4	94.8
Transit	13	3.6	98.3
Others	6	1.7	100.0
Missing	5		
Nation			
Taiwan	115	31.5	31.5
Other Asia Country	115	31.5	63.0
North America	75	20.5	83.6
South America	17	4.7	88.2
Europe	37	10.1	98.4
Others	6	1.6	100.0
Missing	2		
Nights in T Hotel			
1- 3 nights	85	23.2	23.9
4-6 nights	122	33.5	56.4
7-10 nights	54	15.5	71.9
11-14 nights	24	6.8	78.7
Above 15 nights	78	21.3	100.0
Nights in Taipei			
1- 3 nights	41	11.2	11.2
4-6 nights	97	26.4	37.6
7-10 nights	73	19.9	57.5
11-14 nights	43	11.7	69.2
Above 15 nights	107	30.8	100.0
Proportion of Visit			
≤ 0.2	7	1.9	1.9

0.21-0.40	54	14.7	16.6
0.41-0.60	48	13.1	29.7
0.61-0.80	25	7.1	36.8
0.81-1	233	63.2	100.0
Duration of Relationship			
Under 1 years	51	13.9	13.9
1-2 years	88	24.0	37.9
2-3 years	90	24.5	62.4
3-4 years	16	4.4	66.8
4-5 years	79	21.5	88.3
More than 5 years	43	11.7	100.0

Reliability Analysis and Construct Validity Check

Reliability analysis was used to assess the quality of the internal consistency within the multiple measurements of a variable. When the Cronbach's alpha coefficient for any variable with multiple dimensions was 0.6 or above, the value was considered a good indicator of internal reliability (Hair et al., 2006). Even though a reliability analysis in a pilot study was conducted, there was a need to verify the reliability of multiple measurement of a variable in the whole sample.

The results of the reliability analysis (Table 10) demonstrated that the scales were reliable: importance ranking of marketing drivers with Cronbach's alpha=0.89, performance ranking of marketing drivers with Cronbach's alpha=0.92, trust with Cronbach's alpha=0.725, commitment with Cronbach's alpha=0.793, switching cost with Cronbach's alpha=0.672, cooperation with Cronbach's alpha=0.769 and WOM with Cronbach's alpha=0.822. The Cronbach's alpha scale exceeded the minimum acceptable value (0.6) indicated by Hair (2006). This instrument presented internal reliability.

The factor loading over critical value 0.6 (Table 10) showed the practical significant unidimensionality in the attributes of trust, commitment, switching cost, cooperation, or WOM (Word of Mouth) endorsement. The check of convergent validity indicated high

correlation coefficients for each attribute over critical value 0.5. The factor scale for attitudinal loyalty was suitable for later statistical analysis.

Thus, trust, commitment, switching cost, cooperation, word-of-mouth with a summated scale would be appropriate to be used in latter statistical analysis.

Table 10 *Reliability, unidimensionality and Validity for Trust, Commitment, Switching Cost, Cooperation, and Word-of-Mouth Endorsement*

Variables / Dominant Attributes	Reliability Coefficients (Cronbach's Alpha)	Unidimensionality (Factor Loading)	Convergent Validity (Item to total Items) Correlation Coefficients
Trust	0.725		
Hotel cares about customers (Trust2)		0.820	0.569
Customers rely on hotel's promises (Trust3)		0.809	0.553
Hotel is honest (Trust1)		0.784	0.522
Commitment	0.793		
A sense of belonging to hotel (Commitment2)		0.885	0.710
Emotional attachment (Commitment1)		0.830	0.618
Enjoy visiting (Commitment3)		0.806	0.583
Switching Cost	0.672		
Higher cost in time and effort to change hotels (Switch1)		0.868	0.506
Very inconvenient to go to the other hotel (Switch2)		0.868	0.506
Cooperation	0.769		
Allow name and comment used in advertisements (Cooperation2)		0.851	0.640
Would like to receive information about this hotel (Cooperation3)		0.822	0.596
Share idea with employees (Cooperation1)		0.809	0.570
WOM Endorsement	0.822		
Proud to tell other people about experiences (WOM3)		0.876	0.704
Say positive words (WOM2)		0.875	0.706
Encourage other people to stay (WOM1)		0.825	0.624

Exploratory Factor Analysis

Data Reduction of Index of Marketing Driver

The purpose of exploratory factor analysis (EFA) was to reduce the data of the index of marketing drivers among 16 attributes. Exploratory factor analysis could summarize the information in larger numbers of original variable into composite factors for regression analysis or the other related statistic analysis without losing too much information. The principal components methods represented the total variances to derive the factors which contained small proportion of unique variance (error variance). The principal components analysis focused on the minimum number of factors needed to account for the maximum portion of the total variance.

Since the extracted factors would be treated as independent variables for later regression analysis, the extracted factors would be required without being correlated to each other (multicollinearity). While varimax rotational method maximized the sum of variances of required loadings of the factor matrix, the varimax rotational method would more clearly separate the extracted factors. Thus, the principal component method using varimax rotation was selected for this analysis.

Examining Assumptions

In order to ensure the appropriate statistical assumption for exploratory factor analysis, visual inspection for correlation coefficients, Bartlett test of sphericity, and the measure of sampling adequacy (MSA) were used to examine the correlation of the data matrix. Firstly, while the correlation matrix was inspected the substantial value of correlations greater than 0.3, then factor analysis was most likely fitted. Secondly, Bartlett test of sphericity provided the statistically significant correlation among at least

some variables. The null hypothesis for Bartlett test of sphericity was that the correlation matrix among the variables was the identity matrix (no correlation among matrices) by using the Chi-square test. The other ways of identifying the intercorrelations among variables was the measure of sampling adequacy (MSA). The MSA index, which ranged from 0 to 1 would be interpreted as follows: below 0.5 is unacceptable, 0.5-0.59 is poor, 0.60－0.69 is mediocre, 0.70—0.79 is middling, and greater than 0.8 is good (Hair et al., 2006). While the MSA value fell below 0.5, then specific variable with lowest value of the MSA would be deleted to arrive at an acceptable value of 0.5 (Hair et al., 2006).

Visual inspection of the correlation matrices revealed that most of the correlation coefficients exceeded 0.3. The correlation matrix was statistically significant. This provided an empirical measure of intercorrelations of the correlation matrix. The measures in KMO-MSA (Table 11) KMO-MSA and Bartlett test were 0.924, above 0.8 (good). The Bartlett test of significant was significant at P=0 with 120 degrees of freedom. These findings supported the data set as suitable for exploratory factor analysis.

Table 11 *KMO-MSA and Bartlett Test of Sphericity for Index of Marketing Driver*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)	0.92
Bartlett Test of Sphericity	
Approx. Chi-square	304.126
Degree freedom	120
P	*.000* *

Note. "*" represented statistical significance at Alpha=0.05

Criteria for the Number of Factors to Extract

A criteria decision for the number of factors to be extracted should be based on the

following considerations: factors with the size of eigenvalues, predetermined number of factors based on the literature review, the percentage of variance, the factor loading degree, and the factors before inflection point in the scree test. The priori criterion (number of factors extracted) was used while a theory or prior literature supported the number of factors to be retained. The most common and reasonable criteria were that only factors with eigenvalues greater than 1 were retained. The logic for the size of eigenvalues that were greater than 1 was that any factor should be explained for the variance of at least a single variable for which it was interpreted.

In order to ensure practical significance, retained factors could account for at least 60% of the total variance in social science (Hair et al., 2006). Although factor loadings of 0.3 were statistically acceptable based on a sample size of 350, values exceeding 0.5 were considered clear and necessary for practical significance (Hair et al., 2006). Each item which explained one factor loading over critical value 0.5 would be retained; otherwise the factor loading of this item on the other factor would be deleted. The scree plot (Figure 5) depicts the curve point to evaluate the cutoff point for extracted factors. The scree test was used to calculate the ideal number of factors that could be extracted before the number of unique variances started to dominate the common variance structure.

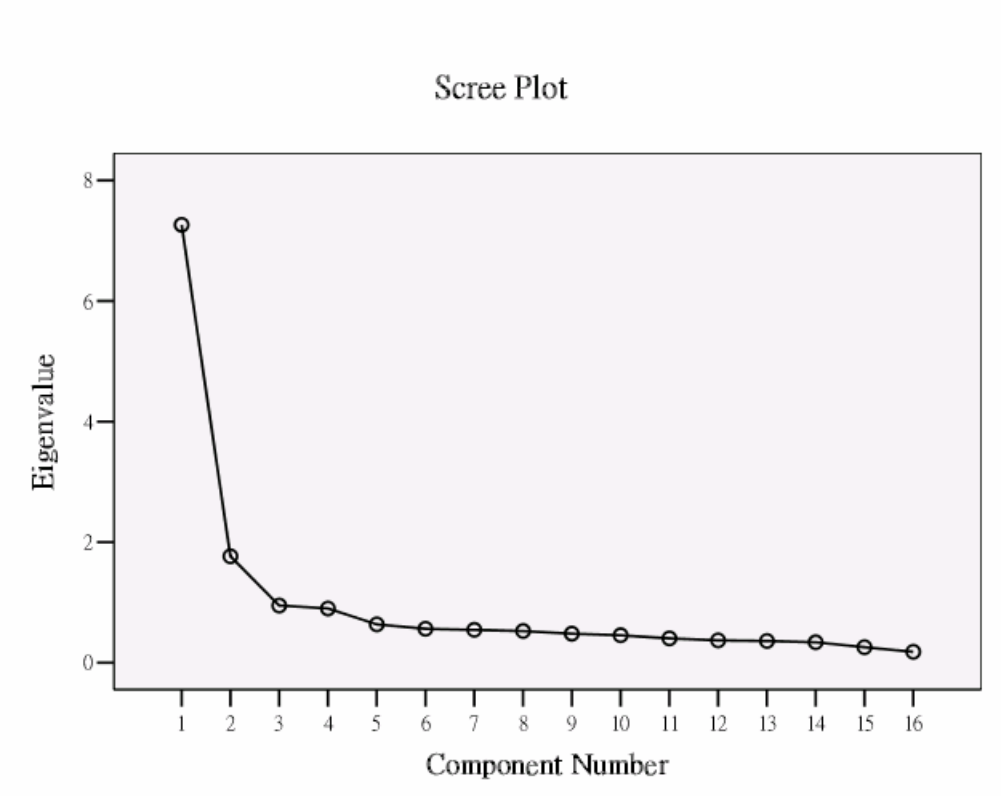


Figure 5 Scree plot for index of marketing drivers.

Table 12 shows that the two factors with eigenvalues greater than 1.0 were extracted. The communalities ranged from 0.471 to 0.706. The communality was the estimate of the common variance of a given variable with other variables in the factor analysis represented by all of the derived factors. In other words, the communality of an attribute was the sum of its squared loading on all its derived factors. The higher value of communalities for any item presented, the stronger the affected power on the associated factor. Two extracted common factors accounted for 56.43% of the total variances.

The factor loading for 16 attributes varied from 0.509 to 0.831 which was higher than the critical value of 0.5 (the derived factor accounting for 25% of the variance of the attribute), meaning practical significance. The varimax rotational method made the factor

loading of each attribute practically significant for only one factor above 0.5 in 367 samples. Each factor loading indicated the effect of an extracted factor on a predictor attribute when was partial out of the other factors.

Table 12 *Exploratory Factor Analysis for Index of the Marketing Drivers*

Extracted Factors and Dominant Attributes	Eigen Value	Variance Explained	Factor Loading	Communalities
C1: *Progressive marketing Strategy*	7.264	45.398		
An active sponsor of community events (Community1)			0.790	0.635
An active sponsor of destination meeting events (Community2)			0.781	0.619
Related mailing information (affinity 1)			0.764	0.595
The preferential treatment from loyalty program (loyalty1)			0.690	0.595
Worthy of the loyalty program (loyalty2)			0.681	0.575
Participate in related activity (affinity2)			0.665	0.455
An excellent corporate citizen (ethics2)			0.606	0.579
The image of the hotel fit customer's personality (affection)			0.578	0.497
The media advertisement (awareness)			0.565	0.493
Know a lot of information about customer (knowledge1)			0.548	0.471
C2*:Fundamental marketing strategy*	1.766	11.035		
Location of the hotel (convenience)			0.831	0.705
Comfortable physical surroundings (quality1)			0.803	0.668
Superior Service (quality2)			0.801	0.672
Good value (price)			0.716	0.546
High ethical standards (ethics 1)			0.541	0.469
Remembered customer's name (knowledge 2)			0.509	0.455

Note. a. Extracted Method: Principal Component; Rotational Method: Varimax Rotation. b. The attributes were ranked by the order of their factor loading

Interpreting the Extracted Factors

The first factor was extracted with eigenvalues 7.264 including the attribute of community 1, community 2, affinity 1, loyalty 2, loyalty 1, affinity 2, ethics 2, affection, awareness, and knowledge 1. Based on the attributes included in first factor, the first extracted factor was renamed "progressive marketing strategy." It reflects 45.4% of total variance with an eigenvalue of 7.264.

The second factor which was retained with eigenvalue 1.766 includes the index of quality1, quality2, price, convenience, ethics1, and knowledge2. According to the attributes marked in the second extracted factor, the second factor was renamed "fundamental marketing strategy." It accounted for 11.04% of the total variance with an eigenvalue of 1.766.

Check for Unidimensionality, Reliability and Convergent Validity

The Cronbach's alpha for progressive marketing strategy was 0.898, above the critical value 0.6 (Table 13). It indicated high internal consistency within each item of behavioral loyalty. The factor loading over the critical value of 0.6 showed the practical significant unidimensionality in each attribute. The check of convergent validity indicated high correlation coefficients for each attribute over the critical value of 0.5. This indicates that the factor score for progressive marketing strategy was appropriate for use in later statistical analysis.

There are three methods available in SPSS (statistical package for the social sciences) to estimating factor scores: regression, Anderson-Rubin, and Bartlett (Norusis, 2005). The factor scores in the regression method were produced through a variance equal to the squared multiple correlation between estimated factor scores and the true factor values

(Norusis, 2005). Factor scores in Bartlett method minimize the sum of squares of the unique factors over the variables (Norusis, 2005). The factor scores in Anderson-Rubin method were calculated into uncorrelated scores with a standard deviation of 1 (Norusis, 2005). Due to selecting the principal components extraction method in this study, all three methods produced the same factor scores (Norusis, 2005). The factor sores of progressive marketing strategy were calculated by basing in the size of its factor loadings. The factors scores of progressive marketing strategy are calculated by regression method of exploratory factor analysis in the SPSS (statistical package for the social sciences) program. The equation for calculating the factor scores of the progressive marketing strategy is: factor scores of progressive marketing strategy= W1 (community 1) + W2 (community 2) + W3 (affinity 1) + W4 (loyalty 2) + W5 (loyalty 1) + W6 (affinity 2) + W7 (ethics 2) + W8 (affection) + W9 (awareness) + W10 (knowledge 1), the W1—10 are the factor score loadings in related factor on each attribute in Table 12.

Next, the Cronbach's alpha for fundamental marketing strategy was 0.847, above the critical value 0.6 (Table 13) It indicated high internal consistency within each item of behavioral loyalty. The factor loading over the critical value of 0.6 showed the practical significant unidimensionality in each attribute. The check of convergent validity indicated high correlation coefficients for each attribute over the critical value of 0.5. This indicated the factor score for fundamental marketing strategy was appropriate for later statistical analysis.

The fact sores of fundamental marketing strategy are calculated on the size of its factor loadings. The factors scores of fundamental marketing strategy are calculated by regression method of exploratory factor analysis in the SPSS program. The equation for

calculating the factor scores of fundamental marketing strategy is: the factor scores of fundamental marketing strategy = W1 (quality1) + W2 (quality2) + W3 (price) + W4 (convenience) + W5 (ethics1) + W6 (knowledge2), the W1─6 are the factor score loadings in related factor on each attribute in Table 12.

Table 13 *Reliability, Unidimensionality and Convergent Validity for Marketing Strategy*

Extracted Factors / Dominant Attributes	Reliability Coefficients Cronbach's Alpha	Unidimensionality Factor Loading	Convergent Validity (Item to Total Items) Correlation Coefficients
C1: *Progressive marketing Strategy*	0.898		
An active sponsor of community events (Community1)		0.790	0.686
An active sponsor of destination meeting events (Community2)		0.781	0.683
Related mailing information (affinity 1)		0.764	0.656
The preferential treatment from loyalty program (loyalty1)		0.690	0.657
Worthy of the loyalty program (loyalty2)		0.681	0.675
Participate in related activity (affinity2)		0.665	0.581
An excellent corporate citizen (ethics2)		0.606	0.682
The image of the hotel fit customer's personality (affection)		0.578	0.626
The media advertisement (awareness)		0.565	0.634
Know a lot of information about customer (knowledge1)		0.548	0.578
C2*:Fundamental marketing strategy*	0.847		
Location of the hotel (convenience)		0.831	0.719
Comfortable physical surrounding (quality1)		0.803	0.700
Superior Service (quality2)		0.801	0.694
Good value (price)		0.716	0.584
High ethical standards (ethics 1)		0.541	0.545
Remembered customer's name (knowledge 2)		0.509	0.531

Data Reduction of Attitudinal Loyalty

Examining Assumptions

In order to reduce the number of variables of attitudinal loyalty, exploratory factor analysis (EFA) was conducted to analyze the correlations among eight dominant attributes of attitudinal loyalty: the variables of trust, commitment, and switching cost. Before employing the EFA, the assumptions which include the correlation coefficients of correlation matrix, the Kaiser's-Meyer-Olkin measure of sampling adequacy (KMO-MSA), and the Bartlett test of sphericity were investigated (Table 14). The visual inspection revealed many correlation coefficients that were greater than the critical value of 0.3, so factor analysis was likely to be appropriate. The Kaiser-Meyer-Olkin measure of sampling adequacy 0.879 (Table 14) which was above the critical value of 0.8 indicated excellent intercorrelations among attributes. The Bartlett test of sphericity indicated statistical significance at 28 degrees of freedom (Table 14). The assumption for the measure for intercorrelations revealed that the data set was appropriate for exploratory factor analysis. The principal component analysis with varimax rotational method was used in EFA.

Table 14 *KMO-MSA and Bartlett Test Sphericity for Attitudinal Loyalty*

Kaiser-Meyer-Olkin measure of Sampling Adequacy (KMO-MSA)	0.879
Bartlett Test of Sphericity	
Approx. Chi-square	1003.484
Degree freedom	28
P	*.000* *

Note. "*" represented statistical significance at Alpha=0.05

Criteria for the Number of Factors to Extract

Values of eigenvalues, variance explained, factor loadings, item communalities and scree plot were used to explain the number of factors derived. Only one factor was extracted with eigenvalues greater than 1 (Table 15) so the varimax rotational method was not necessary. The visual inspection in scree plot (Figure 6) confirmed the curve point between the first and second components.

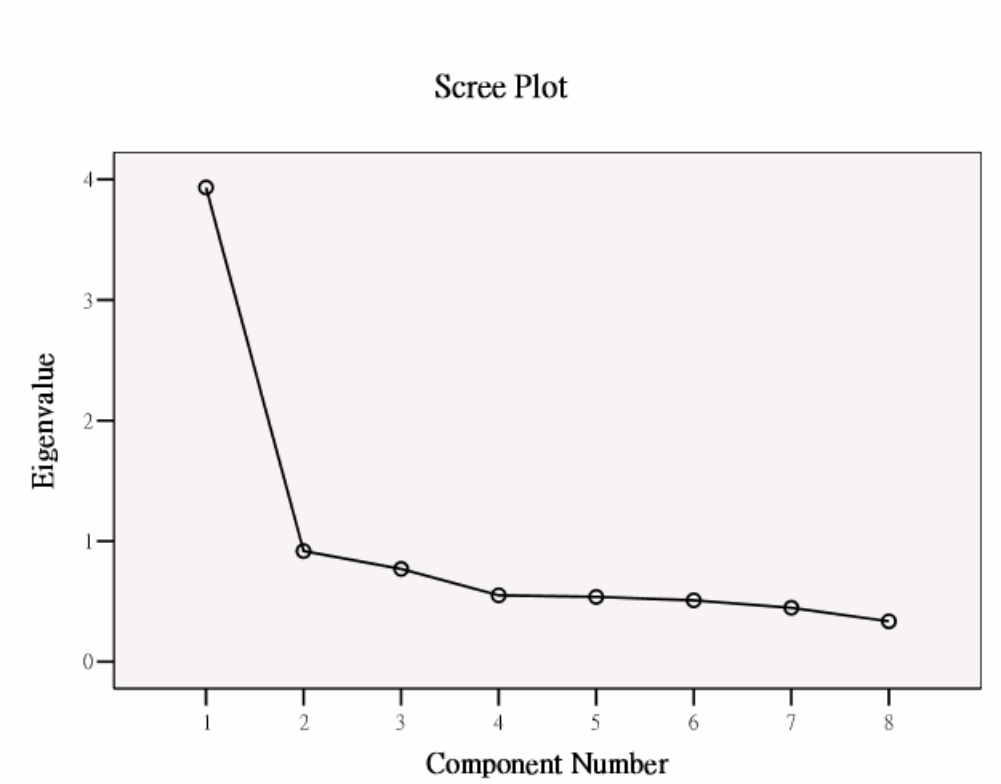


Figure 6 Scree plot for attitudinal loyalty.

Attributes with factors loadings above critical value 0.5, which revealed practical significant and statistic significant in 350 cases, were retained. The factor loadings in eight items ranged from 0.791 to 0.619 (Table 15). The attributes with larger factors loading indicated more importance for the associated factor than the other attributes. The

communalities varied from 0.626 to 0.383 (Table 15), indicating the variance of each original variable was rationally explained by one factor.

Table 15 *Exploratory Factor Analysis for Attitudinal Loyalty*

Extracted Factors and Dominant Attributes	Eigen Value	Variance Explained	Factor Loading	Communalities
C1*: Attitudinal Loyalty*	3.933	49.160		
A sense of belonging to hotel (Commitment2)			0.791	0.625
Emotional attachment (Commitment1)			0.732	0.536
Rely on hotel's promises (Trust3)			0.726	0.527
Cares about customers (Trust2)			0.701	0.491
Enjoys visiting (Commitment3)			0.701	0.491
Hotel is honest (Trust1)			0.673	0.453
Higher cost in time and effort to change hotels (Switch1)			0.654	0.428
Very inconvenient to go to the other hotel (Switch2)			0.619	0.383

Note. a. Extracted Method: Principal Component Analysis (n=367). b. The attributes were ranked by the order of its factor loading

Interpreting the Extracted Factors

Only one factor which was extracted with eigenvalues 3.933 included eight items. The extracted factor encompassed three attributes for trust, three attributes for commitment, and two attributes of switching cost. Based on the characteristics of the attributes was marked under this extracted factor, this factor would be renamed "attitudinal loyalty" supported by the literature review in Chapter II. The extracted factor--attitudinal loyalty--was explained by 49.16 % of the total variance.

Checks for Unidimensionality, Reliability and Convergent Validity

The Cronbach's alpha for attitudinal loyalty was 0.850, above the critical value 0.6 (Table 16). It indicated high internal consistency within each item of attitudinal loyalty. The factor loading over the critical value of 0.6 showed the practical significant unidimensionality in each attribute. The check of convergent validity indicated high correlation coefficients for each attribute over the critical value of 0.5. This indicated that the factor scores for attitudinal loyalty were suitable for use in later statistical analysis.

The fact sores of attitudinal loyalty are based on the size of its factor loadings estimated by the regression method of factor analysis in the SPSS (statistical packages for the social sciences) program. The equation for calculated the factor scores of attitudinal loyalty is: factor scores of attitudinal loyalty= W1 (Commitment2) + W2 (Commitment1) + W3 (Trust3) + W4 (Trust2) + W5 (Commitment3) + W6 (Trust1) + W7 (Switch1) + W8 (Swith2), the W1─8 are the factor score loadings in related factor on each attribute in Table 15.

Table 16 *Reliability, Unidimensionality and Validity for Attitudinal loyalty*

Extracted Factors	Reliability Coefficients	Unidimensionality	Convergent Validity (Item to Total Items)
Dominant Attributes	Cronbach's Alpha	Factor Loadings	Correlation Coefficients
C1*: Attitudinal Loyalty*	0.850		
A sense of belonging to hotel (Commitment2)		0.791	0.688
Emotional attachment (Commitment1)		0.732	0.620
Rely on hotel's promises (Trust3)		0.726	0.616
Cares for customers (Trust2)		0.701	0.590
Enjoy visiting (Commitment3)		0.701	0.589
Hotel is honest (Trust1)		0.673	0.554
Higher cost in time and effort to change hotels (Switch1)		0.654	0.548
Very inconvenient to go to the other hotel (Switch2)		0.619	0.511

Note. a. The attributes were ranked by the order of its factor loading.

Data Reduction of Behavioral Loyalty

Examining Assumptions

Exploratory factor analysis (EFA) was employed to reach the data reduction among six dominant attributes of behavioral loyalty (including two variables: word-of-mouth endorsement and cooperation). Three assumptions of the intercorrelations among data set (e.g., the visual inspection on the correlations coefficients, the Kaiser-Meyer-Olkin measure of sampling adequacy and the Bartlett test of sphericity) were investigated before the EFA. Most of the correlation coefficients of correlation matrix was in excess of the critical value of 0.3, meaning that the exploratory factor analysis was acceptable. The Kaiser-Meyer-Olkin measure of sampling adequacy 0.842 (Table 17) which was over 0.8 indicated the meritorious intercorrelations pattern among attributes. The Bartlett test of

sphericity revealed statistical significance at 15 degrees of freedom (Table 17). Thus, the exploratory factor analysis proceeded with confidence.

Table 17*KMO-MSA and Bartlett Test of Sphericity for Behavioral Loyalty*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA)	0.842
Bartlett Test of Sphericity	
Approx. Chi-square	886.532
Degree freedom	15
p	*.000*

Note. "*" represented statistical significance at Alpha=0.05

Criteria for the Number of Factors to Extract

The principal component was used in exploratory factor analysis. The scree plot (Figure 7) showed the curve point between the first and second components to reconfirm that only one factor was extracted. Only one factor was extracted with eigenvalues greater than 1 (Table 18). Each attribute with a factor loading above 0.5 (meaning practically and statistically significant) was retained. Factor loadings for six items varied from 0.806 to 0.698. The given attribute with larger factor loading revealed more importance for the associated factor than the other attributes. The communalities ranged from 0.65 to 0.48, meaning that the variance of each dominant attribute was rationally explained by one factor.

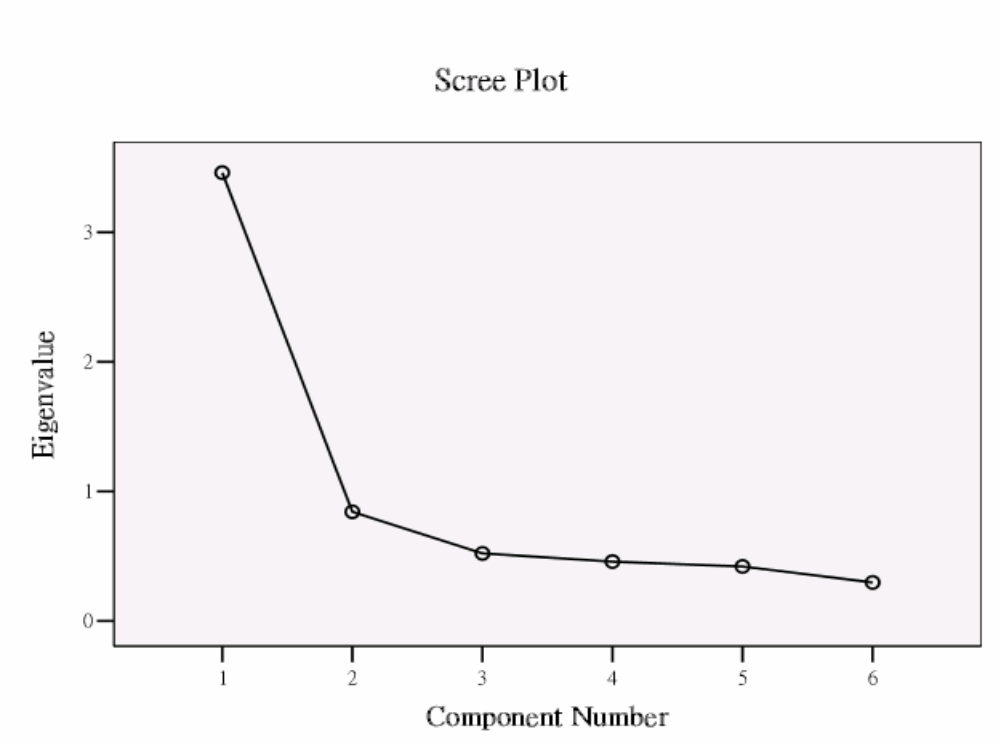


Figure 7 Scree plot for behavioral loyalty

Table 18 *Exploratory Factor Analysis for Behavioral Loyalty*

Extracted Factors / Dominant Attributes	Eigen Value	Variance Explained	Factor Loadings	Communalities
C1: *Behavioral Loyalty*	3.460	57.668		
Proud of telling other people about experiences (WOM3)			0.806	0.650
Say positive words (WOM2)			0.786	0.618
Share idea with employees (Cooperation1)			0.768	0.590
Encourage the other people to stay (WOM1)			0.753	0.567
Allow name and comment used in advertisements (Cooperation2)			0.740	0.547
Would like to receive information of this hotel (Cooperation3)			0.698	0.488

Note. a. Extracted Method: Principal Component (n=367). b. The attributes were ranked by the order of factor loading.

Interpreting the Extracted Factors

One factor with eigenvalues 3.46 that was extracted in EFA analysis included six attributes. The main extracted component represented the three attributes for WOM endorsement and three other attributes for Cooperation. Thus, this factor would be "behavioral loyalty," as confirmed by the literature reviews in Chapter II. This extracted factor explained 57.67% of the total variance.

Checks for Unidimensionality, Reliability and Convergent Validity

Cronbach's alpha for behavioral loyalty was 0.851 above the critical value 0.6 (Table 19). It indicated high internal consistency within each item of behavioral loyalty. The factor loading over the critical value of 0.6 indicated practical significant unidimensionality in each attribute. The check of convergent validity indicated high correlations coefficients for each attribute. This indicated that the factor score for

behavioral loyalty was suitable for later statistical analysis.

The fact sores of behavioral loyalty are based on the size of its factor loadings. The factors scores of behavioral loyalty are calculated by regression method of exploratory factor analysis in SPSS program. The equation for calculated the factor scores of behavioral loyalty is: Factor scores of behavioral loyalty= W1 (WOM3) + W2 (WOM2) + W (Cooperation1) + W4 (WOM1) + W5 (Cooperation2) + W6 (Cooperation3), the W1─6 are the factor score loadings in related factor on each attribute in Table 18.

Table 19 *Reliability, Unidimensionality and Validity for Behavioral Loyalty*

Extracted Factors/ Dominant Attributes	Reliability Coefficients Cronbach's Alpha	Unidimensionality Factor Loadings	Convergent Validity (Item-total items) Correlation Coefficients
C1: *Behavioral Loyalty*	0.851		
Proud to tell other people about experiences (WOM3)		0.806	0.691
Say positive words (WOM2)		0.786	0.661
Share idea with employees (Cooperation1)		0.768	0.651
Encourage the other people to stay (WOM1)		0.753	0.625
Allow name and comment used in advertisements (Cooperation2)		0.740	0.623
Would like to receive information of this hotel (Cooperation3)		0.698	0.573

Note. a. The attributes were ranked by the order of factor loading.

T-test and Important-Performance Analysis

$H_0$1: There are no significant differences between the importance ranking of marketing drivers and the delivery performance of marketing drivers as perceived by the hotel customers.

In order to examine the null hypothesis 1, the paired sampling t-test was conducted to compare the mean scores of the importance ranking and the performance rating of each marketing driver as perceived by T Hotel customers. Table 20 depicts the mean scores for both the performance and importance ratings associated with an indicator of the perceived gap and paired sampling t-test. The list of each item of marketing drivers (Table 20) was sorted by mean importance ranking. The first three most important ratings of the marketing drivers by the order were "Super service," "recognized customer's name," and "worthy of the loyalty program."

All 16 attributes for t-test statistic (Table 20) indicated significant statistical differences between the performance scale of marketing drivers and importance ranking of marketing drivers as perceived by the hotels' customers. Thus, the null hypothesis 1 was rejected. This result supported the perceived gap between the two assessments of performance and importance ranking of marketing drivers.

A positive result in the gap column (Table 20) revealed that the marketing drivers of the T Hotel performed better than the customers would expect, based on the importance rating. The largest positive gap for the marketing drivers was "comfortable surroundings." The guests might found the facilities more comfortable that they had expected. Moreover, the second large positive gap was "location of the hotel" and the third was "good value."

Table 20 *Gap Analysis and T-test Comparison for the Importance Rank versus Performance Rank of Marketing Drivers*

Attribute Number	Description of Marketing Drivers	Means for Performance Ranking (Standardized Mean)	Means for Importance Ranking (Standardized Mean)	The Gap Performance -Importance	*T*	*P*
1	Superior Service (quality 2)	4.18 (1.050)	3.86 (1.036)	0.32	*6.526*	*0* *
2	Recognized customer's name and treat me special (knowledge 2)	4.04 (1.015)	3.83 (1.028)	0.21	*4.376*	*0* *
3	Worthy of the loyalty program (loyalty 2)	3.99 (1.003)	3.80 (1.020)	0.19	*3.720*	*0* *
4	Good value of the room rate (price)	4.15 (1.043)	3.79 (1.018)	0.36+	*7.107*	*0* *
5	High ethical standards to its customers (ethics2)	4.04 (0.990)	3.78 (0.991)	0.26	*4.903*	*0* *
6	Comfortable physical surrounding (quality1)	4.14 (1.040)	3.76 (1.010)	0.38+	*7.558*	*0* *
7	The media advertisement of the hotel (awareness)	3.96 (0.995)	3.76 (1.010)	0.2	*3.830*	*0* *
8	Know a lot of information about customer (knowledge1)	3.96 (0.995)	3.76 (1.010)	0.2	*3.988*	*0* *
9	Location of the hotel (convenience)	4.12 (1.035)	3.75 (1.007)	0.37+	*7.769*	*0* *
10	The image of the hotel fit customer's personality (affection)	4.01 (1.008)	3.75 (1.007)	0.26	*5.047*	*0* *
11	The preferential treatment from loyalty program (loyalty 1)	3.92 (0.985)	3.73 (1.002)	0.19	*3.510*	*0* *

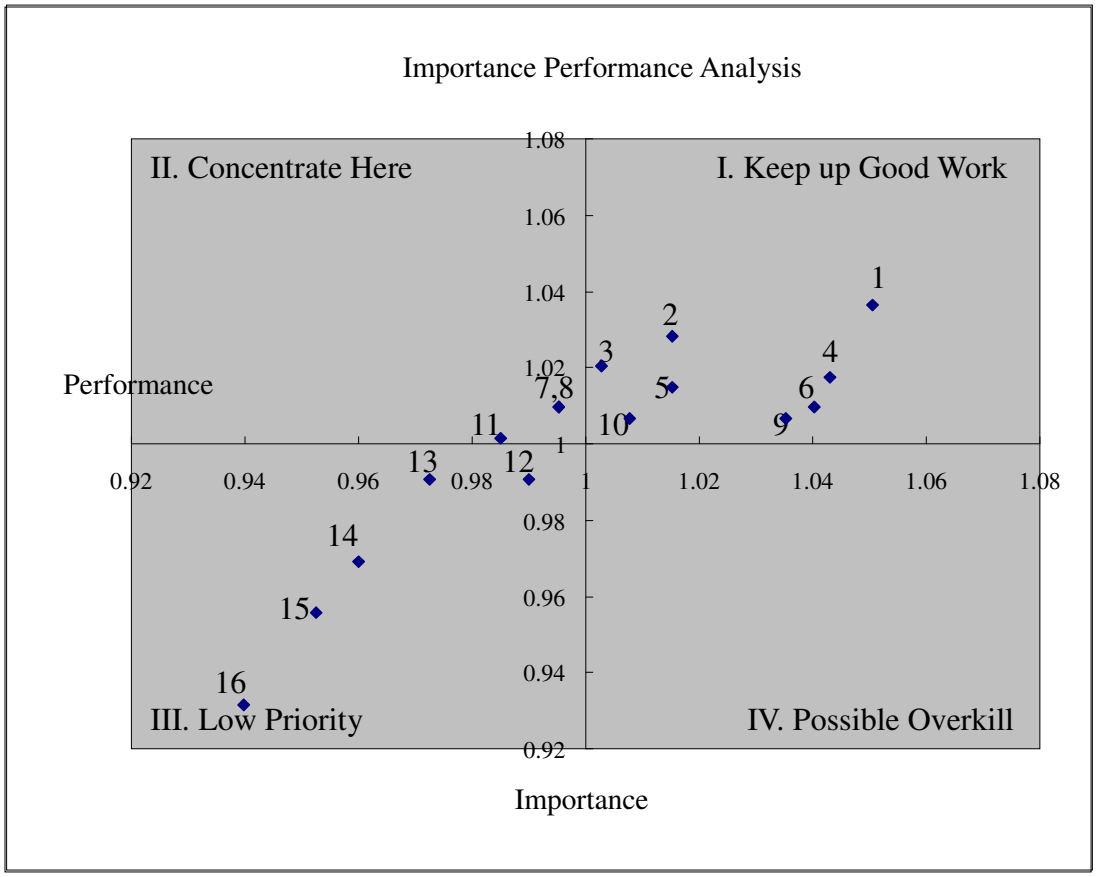
12	An excellent corporate citizen (ethics 2)	3.94 (0.990)	3.69 (0.991)	0.25	*5.052*	*0* *
13	Related mailing information (affinity 1)	3.87 (0.973)	3.69 (0.991)	0.18	*3.704*	*0* *
14	An active sponsor of community events (Community 1)	3.82 (0.960)	3.61 (0.969)	0.21	*4.226*	*0* *
15	An active sponsor of destination meeting events (Community 2)	3.79 (0.952)	3.56 (0.952)	0.23	*4.868*	*0* *
16	Participate in related activity (affinity 2)	3.74 (0.940)	3.47 (0.932)	0.27	*6.209*	*0* *

Note. a. "*" represented the statistical significance at Alpha=0.05. b. Attribute numbers represented each items of the associated marketing drivers used in the latter figure. c. + represented the three largest positive gap

The two columns of means score for the important ranking and performance ranking of marketing drivers (Table 20) was standardized and then plotted onto a two-dimensional grid. The performance scale was depicted along the x-axis and importance along the y-axis. The standardized mean importance and performance rating for 16 items of marketing driver are presented in Figure 8. Once a two-dimensional grid was plotted by customers' ratings on the importance of each marketing driver and their rankings on the performance of each marketing driver, the space would be divided into Quadrants I, II, III, and IV. The labels of Quadrants I, II, III, and IV were denoted as the marketing improvement (Martilla & James, 1997) .

The marketing drivers in Quadrant I (Figure 8) were evaluated as having high performance and importance. Hotel guests were happy with the performance. Managers of T Hotel should sustain competitive advantages as Attributes 1, 2, 3, 4, 5, 6, 9, and 10,

and continue to emphasize their efforts in the marketing campaign. The marketing drivers in Quadrant II with high importance and low performance suggested that Attribute 7 (media advertisement of hotel), Attribute 8 (know a lot of information about the customers), and Attribute 11 (the preferential treatment of loyalty program) should focus on the further efforts and locate the extra resources. The general manager in T Hotel should concentrate on these three attributes and require more resources on these three attributes. The marketing drivers in quadrant III with low importance and low performance (e.g., Attributes 12, 13, 14, 15, and 16) could be low priority to locate resource and few benefits to be received on improving marketing drivers. These attributes in Quadrant III indicated they were redundancies in the marketing battles. Quadrant IV with low importance and high performance might sustain operation but not generate any additional resources. No attributes in T Hotel were treated as possible overkill, meaning no attribute over performed.



Note. a. List attributes in each quadrant

Quadrant II : 7. The media advertisement of the hotel 8. Know a lot of information about customer 11.The preferential treatment from loyalty program	Quadrant I : 1. Superior service. 2. Personal service treatment 3. Worthy of the loyalty program 4. Good value 5. High ethical standards 6. Comfortable physical surrounding 9. Location of the hotel 10. The image of the hotel fits customer's personality
Quadrant III 12. An excellent corporate citizen 13. Related mailing information engage me 14. An active sponsor of community events 15. An active sponsor of destination meeting events 16. Participate in related activity	Quadrant IV

b. Attributes 1—16 represented each item of the associate marketing drivers in Table 20
c. X-axis: Standardized Performance Scale; Y-axis: Standardized Importance Scale

Figure 8 Plots of importance performance grid with the marketing drivers

Multiple Regression Analysis

Predicted Relationships on Attitudinal Loyalty from Marketing Strategy

$H_0$2: There are no significant positive impacts on attitudinal loyalty from the context (index of marketing drivers) of importance scale and performance scale of the marketing drivers related to customer

For the purpose of examining the null hypothesis 2, multiple regression analysis was used to determine the positive impact on attitudinal loyalty (dependent variable) from the fundamental marketing strategy and the progressive marketing strategy (combined two independent variables). Attitudinal loyalty was the factor scores extracted from eight attributes (related to trust, commitment, and switching cost) by exploratory factor analysis. Fundamental and progressive marketing strategies were the scores of two common factors retrieved from 16 attributes of index of marketing drivers by exploratory factor analysis. In simultaneous multiple regression, all the predictor variables were entered into regression variate together. These methods combined two predictor variables to determine the impacts on dependent variable was appropriate, due to closing to real world which presented all the independent variables together. The data set firstly examined the assumptions of regression analysis. Then the proposed research model was assessed and interpreted.

Examining Assumptions

The major assumptions for multiple regression analysis were examined in the five areas: (a) normality distribution of error term, (b) linearity between dependent and independent variables, (c) independence of error terms, (d) constant variance of the error term (homoscedasticity), and (e) lack of collinearity. Scatter plotting graph of the residual

of independent versus predicted variables was a used to assess the assumptions for regression analysis.

Normality distribution of error term.

The normality distribution of the error term was examined by the histogram of regression standardized residuals and normal plot of regression standardized residual. The histogram of studentized residuals was visually inspected to ascertain whether the histogram distributed approximate normality. Normal distribution of the error term would draw a symmetric bell-shape curve in the histogram graphs. The histogram of standardized residuals (Figure 9) for attitudinal loyalty appeared to have an approximate normal distribution as evidence of normality distribution of error term.

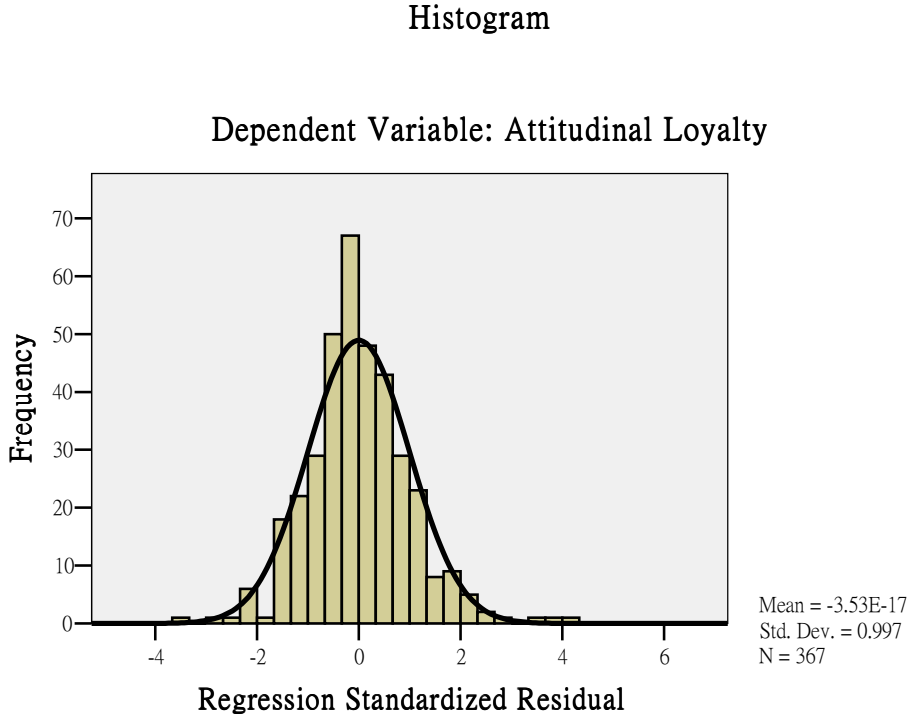


Figure 9 Histogram for the standardized residual of attitudinal loyalty.

However, the histogram could be distorted by the small sample size. A normal plot of regression which compared the cumulative distribution of regression standardized residual to the cumulative of a normal distribution was more reliable than histogram methods. While a distribution of regression standardized residual was normality, the line of regression standardized residual would closely track the diagonal line that represented the normal distribution of error terms. The normal probability plot for the regression standardized residual of attitudinal loyalty (Figure 10) followed the normal distribution line. This suggested the normality distribution of error term.

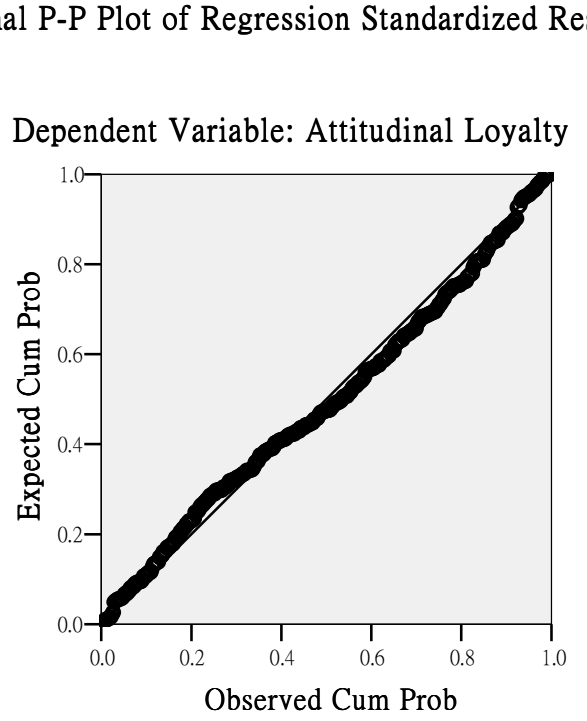


Figure 10 Normal plots for the expected cumulative probability against the observed cumulative probability of attitudinal loyalty

Inspected the linearity phenomena.

The scatterplots of standardized studentized residual against the standardized

predicted value of dependent variable would show the obvious horizontal pattern, while the linearity of the phenomena was confirmed. While the scatterplots showed crescent-shapes or curves between standardized studentized residuals and standardized predicted variables, it indicated nonlinearity between predictor and criterion variables. The studentized residual plot against the standardized attitudinal loyalty (Figure 11) which appeared the horizontal pattern indicated the linear relationships of attitudinal loyalty to progressive and fundamental marketing strategy.

The studentized residual which was the residuals divided by an estimate of its standard deviations correspond to the t-value. This correspondence made it quite easy to investigate the assumption of linearity phenomena. Also the form of standardization was recommended to compare the residuals.

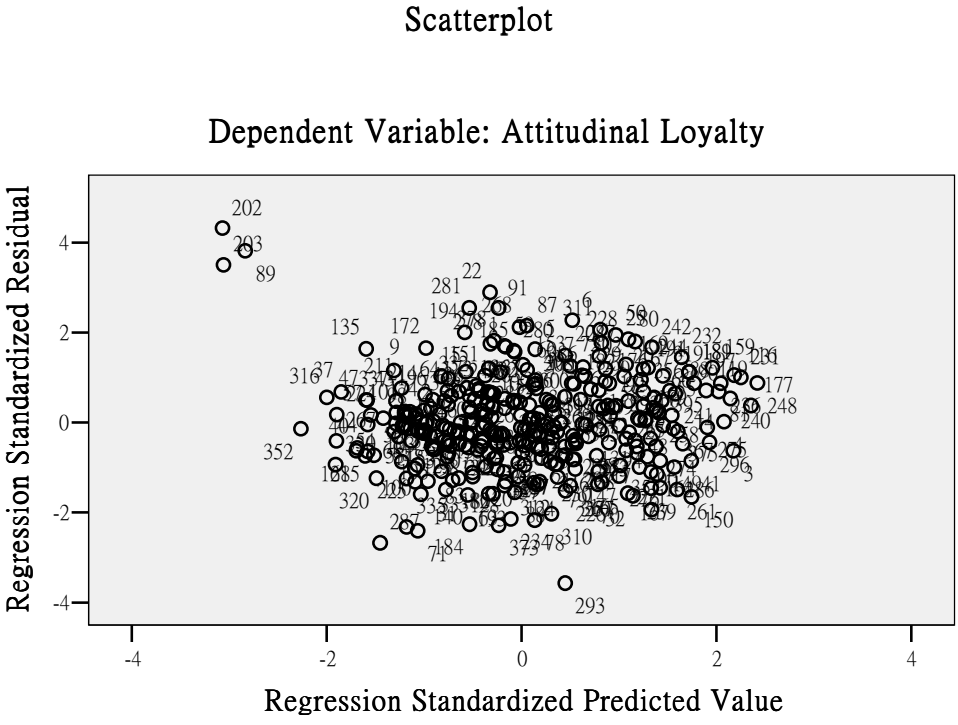


Figure 11 Scatterplots of studentized residual against standardized predicted value.

The partial regression plot was conducted to inspect the unique linearity (spreads of plot as slope up or down) between a single independent variable (fundamental strategy or progressive strategy) and dependent variable (attitudinal loyalty). The partial regression plot of progressive marketing strategy to attitudinal loyalty (Figure 12) appeared the unique approximate linearity of relationships. The partial regression of fundamental marketing strategy to attitudinal loyalty also showed the upward slope pattern (Figure 13). The assumption for unique linearity relationship was met.

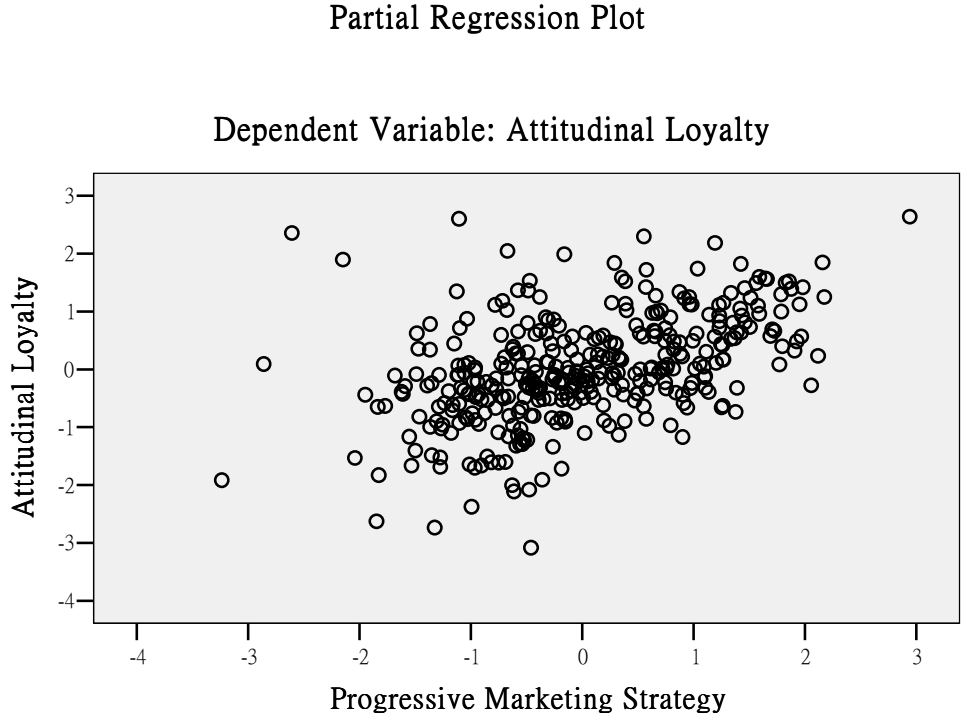


Figure 12 Partial plot of progressive marketing strategy to attitudinal loyalty

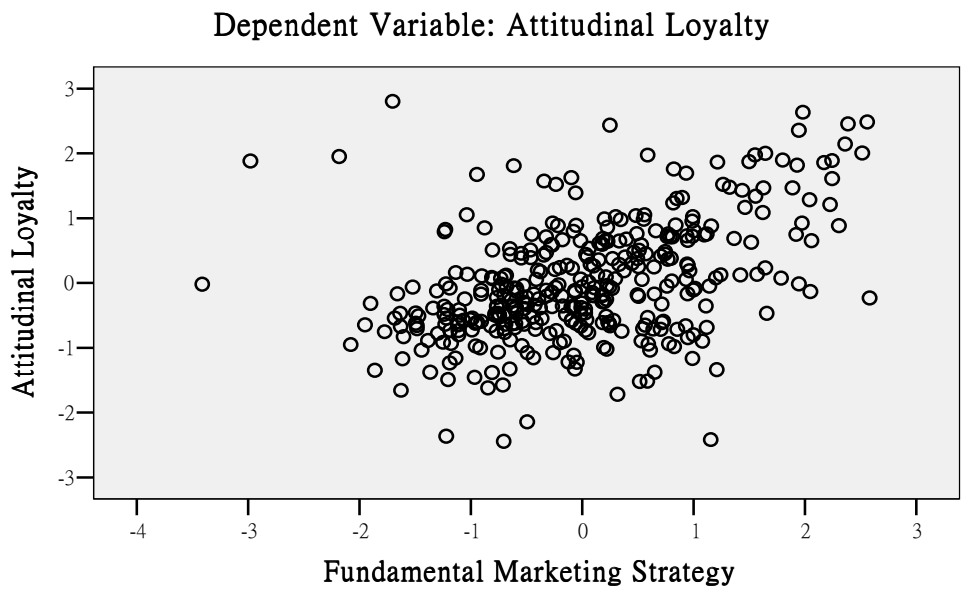


Figure 13 Partial plot of fundamental marketing strategy to attitudinal loyalty

Independence of error term.

Regression analysis assumed that each predicted value was independent. Scatterplots of residual against case numbers (any sequential variable or time of collected data) were used to investigate the independence of residuals. Both the graphical scatterplots and Durbin-Watson statistic tests were used to examine the independent observation. The scatterplots of residual against the sequence (the case numbers was coded by the order of data collection; the variable sequences is transfer by the sequence=$ case number, $ in front of the case number created by SPSS means no interruption by the order of number) for attitudinal loyalty appeared to have no consistent pattern (Figure 14) (Norusis, 2005). This result indicated agreement of the independent of the error terms. The Durbin-Watson statistical test in SPSS was used to examine the correlation of adjacent residuals. In other

words, the Durbin-Watson statistic is a measure of correlation of residuals over the order (sequence) of data collection (Tabachnick & Fidell, 2007). The sequence of data collection is referred to the order of case by enter the number of cases when the researcher receive the data. The value (Durbin –Watson coefficient) ranged from 0 to 4. The statistical value would indicate the following situation: close to 2 (does not correlate each other), value greater than 2 (negatively correlated), and value less than 2 (positively correlated) (Norusis, 2005). While it presented the independent observation, the Durbin-Watson coefficient should be between 1.5 and 2.5. The Durbin-Watson coefficient for this regression analysis was 1.9 (close to 2) which indicated the independence of error term.

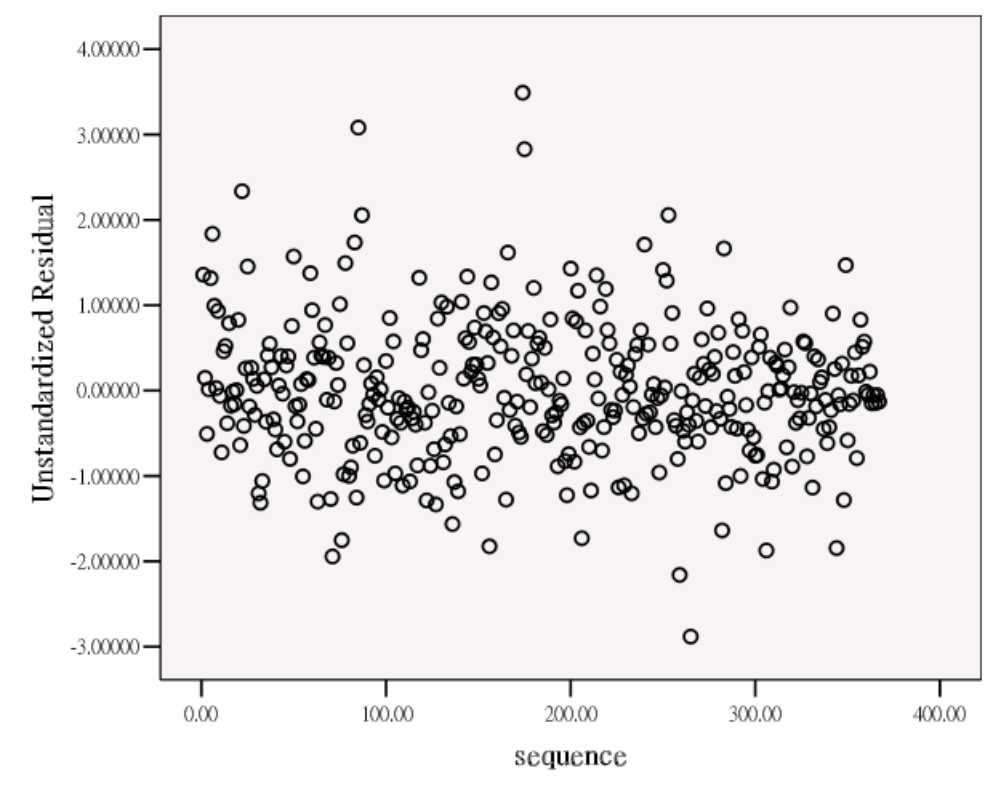


Figure 14 Plot of residual against sequence for attitudinal loyalty

Constant variance of the error term (homoscedasticity).

The assumption of equal variance was examined by the standardized residual plots against the standardized predicted dependent values. Homoscedasticity was the assumption that dependent variable showed equal variance across the range of the predictors. While the spreads of the residual plots against the predicted dependent values fell randomly, the assumption of equal variance was met. While the scatterplots of residuals against the predicted scale presented the funnel-shaped output, it indicated the violation of homoscedasticity. The visual inspection for the scatterplots of the standardized residuals against the standardized predicted dependent values showed a random pattern shown as Figure 15. Therefore, the assumption of constant variance of the error term was not a problem in this study.

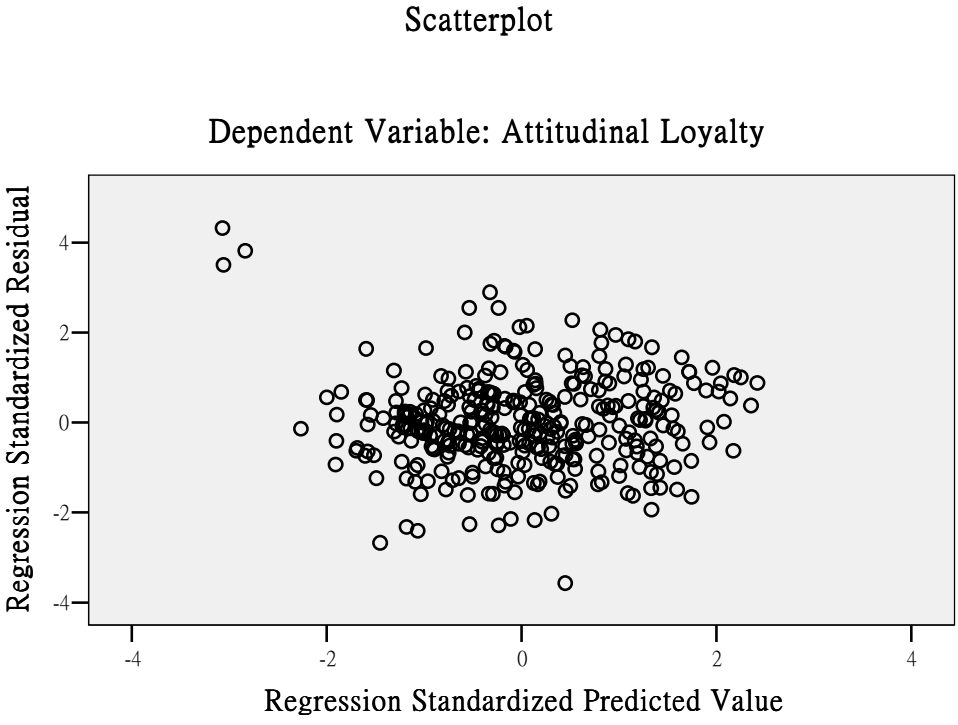


Figure 15 Scatterplot of regression standardized residual against regression standardized

predicted value for attitudinal loyalty

Lack of collinearity.

The measure of collinearity was the degree to which each independent variable was explained by the set of other independent variables. In other words, collinearity in the regression model would show high intercorrelations among the independent variables. It would be unreliable in the estimations of the beta weights and R square. The assumption for non-collinearity was examined through the values of tolerance and the variances inflation factor (VIF). The VIF was equal to the inverse of the tolerance value. The tolerance was calculated as $1-R^2$. The value of tolerance ranged from 0 to 1, and the value of VIF ranged from 1 to 10. The cutoff value for tolerance was over 0.2 and all VIF values were under 4, when the multicollinearity was not a problem. The VIF equal 1 (also the tolerance equal 1) for this study indicated no problem with collinearity. Therefore, the assumption for non-multicollinearity was met.

Outlier Detection and Influential Analysis

An outlier could substantially change the results of the regression analysis. The outlier detection included the extreme value in dependent variables (e.g., standardized residuals) and independent variables (e.g., Mahalanobis distance and central leverage) for regression analysis. The potential outlier might be the incorrect point which did not have any effect on the regression. So the influential analysis (e.g., Cook's distance, standardized DFFITS, and Standardized DFBETAS) should be associated to contact with outlier detection.

The visual inspection for outlier in scatterplots of studentized residual against predicted value (Figure 11) indicated that cases 89, 202, 203, and 293 were potential

outliers. The total cases for standardized residual greater than ±2 critical values were 20 cases (potential outliers). The case number with Mahalanobis distances/df which were over the cutoff value of 3 (Table 21) meaning potential outliers were cases 203, 202, 89, 172, 168, and 1. The case numbers for central leverage above 0.0245 were 203, 202, 89, 172, 168, and 1, meaning potential outliers. The case numbers for Cook's distance were greater than 0.95 were 203, 202, and 89, meaning influential outliers. The potential outlier for the standardized DFBETAS of regression coefficients greater than critical value 0.1044 would be identified as the influential outliers (case numbers: 1, 6, 22, 59, 71, 89, 168, 172, 202, 203, and 293). Also the potential outliers for standardized DFFITS value over 0.1808 (case numbers: 1, 6, 71, 89, 172. 202, and 203) would be influential outliers. Thus, the case 203, 202, 172, 168, 89, 71, 59, 22, 6, and 1 would be influential outliers and deleted. The 357 remaining cases would reenter into multiple regression analysis.

In summary, all of the major assumptions for multiple regression analysis were met. The following section will assess the regression model and interpret the statistical results.

Table 21 *Critical Value for Diagnostic Analysis of Influential Outliers*

Measure	Formula	Critical Value
Standardized Residuals	P<0.05	±2
Mahalanobis Distance	Mahalanobis Distance/p	3
Central Leverage	3p/n	0.0245
Cook's Distance	F(0.05, p, n-p)	0.9852
Standardized DFBETAS	$\pm 2/\sqrt{n}$	0.1044
Standardized DFFITS	$\pm 2\sqrt{(p/n)}$	0.1808

Note. P is number of the variables; n is the size of sample

Assessing and Interpreting the Regression Variate

Table 22 shows that F (2, 354) =143.981 and was statistically significant. These indicated that the fundamental and progressive marketing drivers (two predictors) significantly combined to predict attitudinal loyalty. Thus, the null hypothesis 2 was rejected. The multiple correlations coefficient (R) using all predictors together was 0.670, meaning a large effect size (Cohen, 1988). The adjust R^2 was 0.445, meaning that 44.5% of total variance for attitudinal loyalty could be explained by the simultaneous combination of progressive marketing strategy and fundamental marketing strategy.

The t-value and the significance (Table 22) in each independent variable presented that progressive marketing strategy or fundamental marketing strategy contributed unique significance to regression equation for predicting the impact on attitudinal loyalty. However, all predictors needed to be included to arrive at this result, because the overall F value was computed with all the variables in the equation. The standardized beta coefficients showed the ability of the fundamental marketing strategy or progressive marketing strategy to predict attitudinal loyalty, especially in comparing variables with differently measured units. It showed the progressive marketing strategy predicted a little stronger effect on attitudinal loyalty than the fundamental marketing strategy. The identified regression equation to determine this relationship was: $Y=-0.046+0.498*X_1+0.455*X_2$, Y=the raw factor score of the attitudinal loyalty; X_1=the raw factor score of progressive marketing strategy; X_2=the raw factor score of fundamental marketing strategy. The factor sores of fundamental marketing strategy, progressive marketing strategy, and attitudinal loyalty are calculated by the size of its factor loadings. The factor scores of fundamental marketing strategy, progressive

marketing strategy, and attitudinal loyalty are calculated by regression method of exploratory factor analysis.

Table 22 *Multiple Regression Analysis for Attitudinal Loyalty in Progressive and Fundamental Marketing Strategy (N=357)*

$H_0$2: There are no significant positive impacts on attitudinal loyalty from the context of importance scale and performance scale of the marketing drivers related to customer.

Dependent variable: Attitudinal Loyalty (Y)

Independent variable: Progressive marketing strategy (X_1), and Fundamental marketing strategy (X_2)

Equation: $Y=-0.046+0.498*X_1+0.455*X_2$

R=0.670, R^2=0.449, Adjust R^2=0.445; F(2, 354)=143.981, *P=0.000* *

Predictors Variable	B	Std. Error	Standardized Beta	*t*	*p*
(Constant)	-0.046	0.38		*-1.185*	*0.237*
Progressive Strategy	0.498	0.041	0.486	*12.298*	*0.000**
Fundamental Strategy	0.455	0.040	0.448	*11.350*	*0.000**

Note. * represented statistical significance at Alpha=0.05 for each independent variable

Predicted Relationship on Behavioral Loyalty from Marketing Strategy

$H_0$3: There are no significant positive impacts on behavioral loyalty from the context (index of marketing drivers) of importance scale and performance scale of the marketing drivers related to customer equity.

In order to examine the null hypothesis 3, simultaneous multiple regression was

performed. Two independent variables were entered into the regression model at the same time. Simultaneous multiple regressions was selected because it was a better explanation in the real world while two independent variables contributed simultaneously to the dependent variable.

Examining Assumptions

Five assumptions for multiple regression analysis were investigated as the following areas: (a) normality distribution of error term, (b) linearity between dependent and each of the predictor variables, (c) independence of error terms, (d) the constant variance of the residuals (homoscedasticity), and (e) lack of collinearity.

Normality distribution of error term.

The histogram of the standardized residuals and the p-p cumulative normal probability plot examined the assumption for the normality distribution of error term. If the multiple regressions met the normality distribution of error term, the histogram of standardized residual in larger sample size distributed as a bell shape and the normal cumulative probability plot would be adjacent to the diagonal line. The histogram of the standardized residual for behavioral loyalty (Figure 16) and the cumulative normal probability plot for behavioral loyalty (Figure 17) indicated normality distribution of error term.

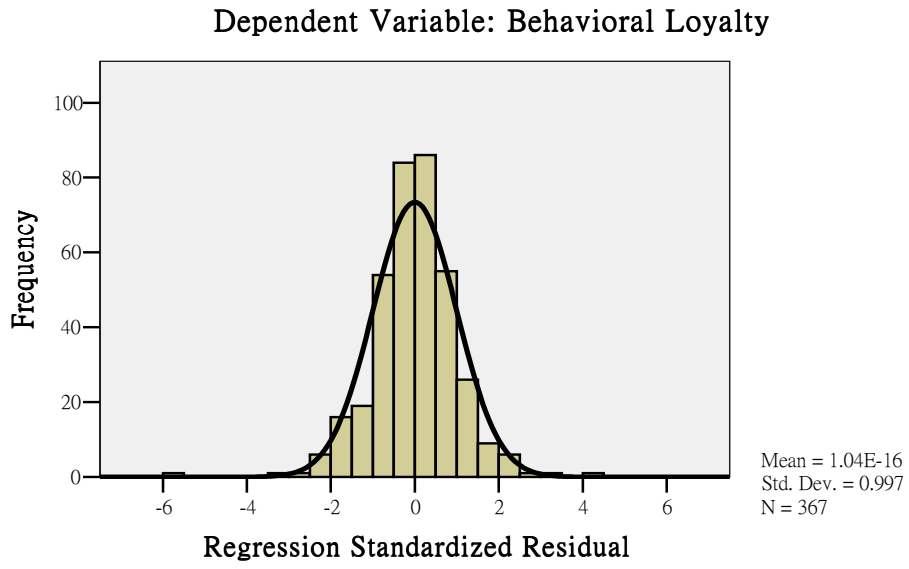


Figure 16 Histogram for the standardized residual of behavioral loyalty

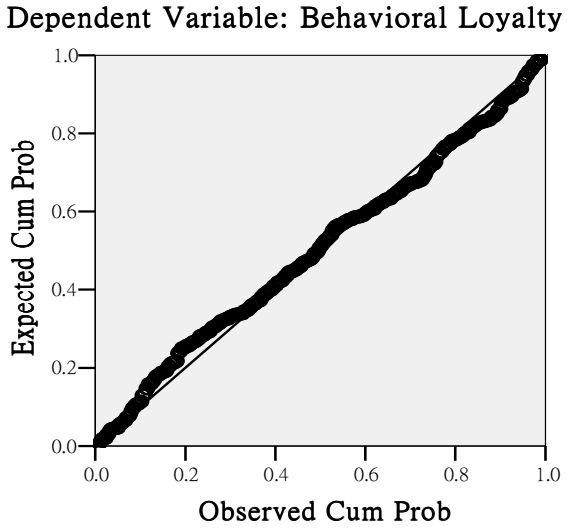


Figure 17 Normal plots for the expected cumulative probability against the observed cumulative probability of behavioral loyalty

Inspected the linearity phenomena.

Simple visual inspection of scatterplots was a common way when statistic method unavailable to determine the linearity phenomena. The studentized residual plots against the standardized attitudinal loyalty (Figure 18) appeared in the horizontal pattern. These residual plots indicated the linear relationship of behavioral loyalty to progressive and fundamental marketing strategies.

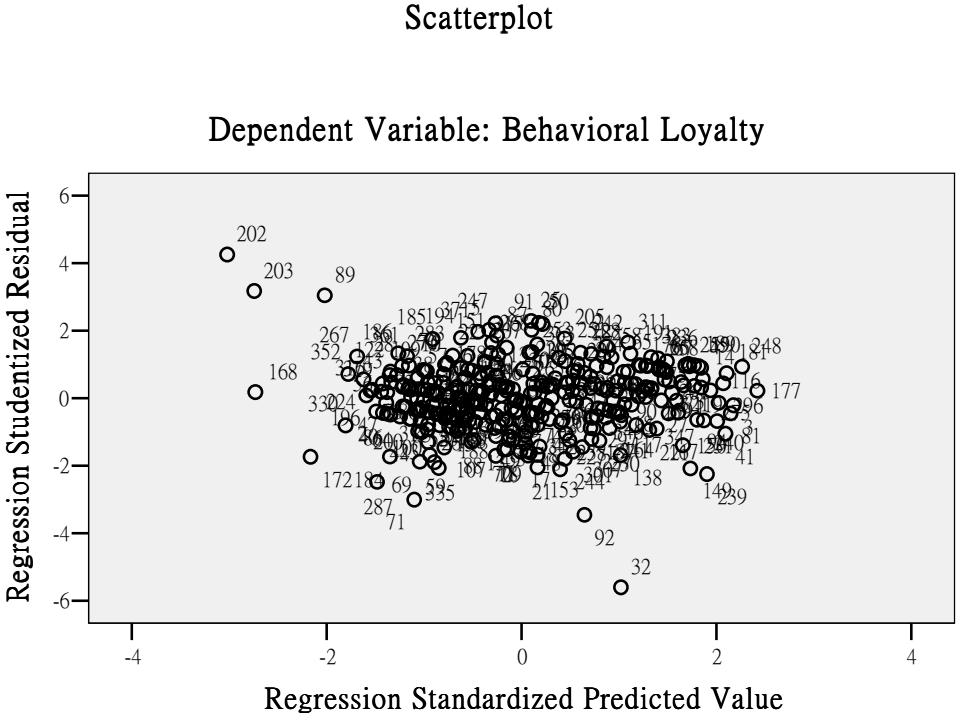


Figure 18 Scatterplot of studentized residual against standardized predicted value of behavioral loyalty

The partial regression plot was used to examine the unique linearity between each independent variable (e.g., fundamental or progressive marketing strategy) and dependent variable (e.g., behavioral loyalty). The partial regression plot of progressive marketing

strategy to behavioral loyalty (Figure 19) and the partial regression plot of fundamental marketing strategy to behavioral loyalty (Figure 20) both exhibited the slope pattern. These results confirmed the unique linear relationship.

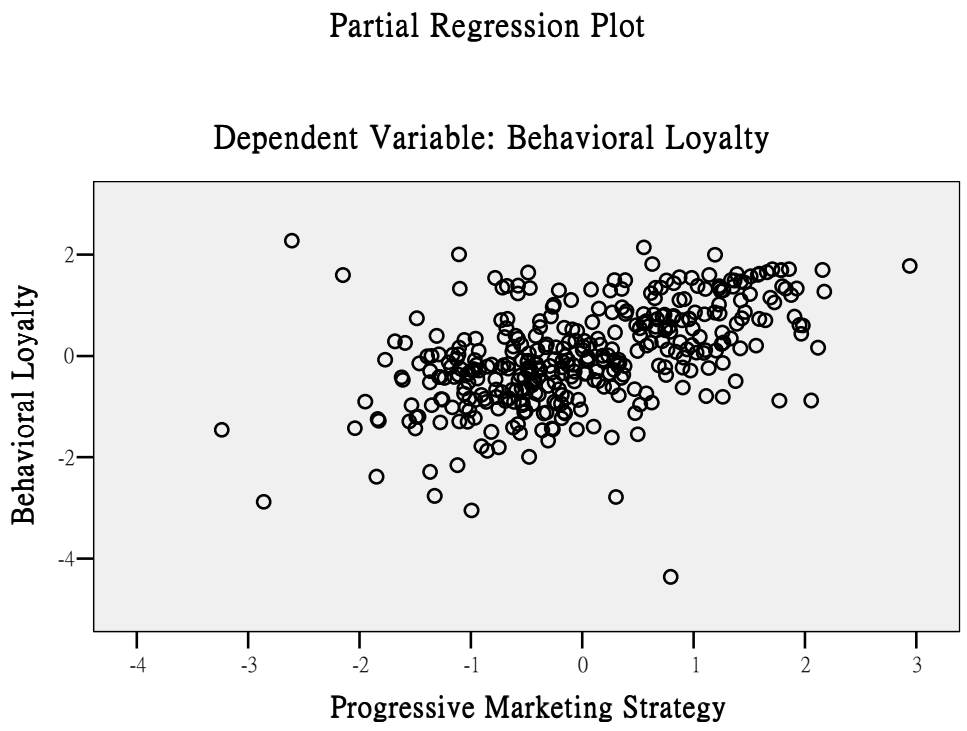


Figure 19 Partial plot of progressive strategy to behavioral loyalty

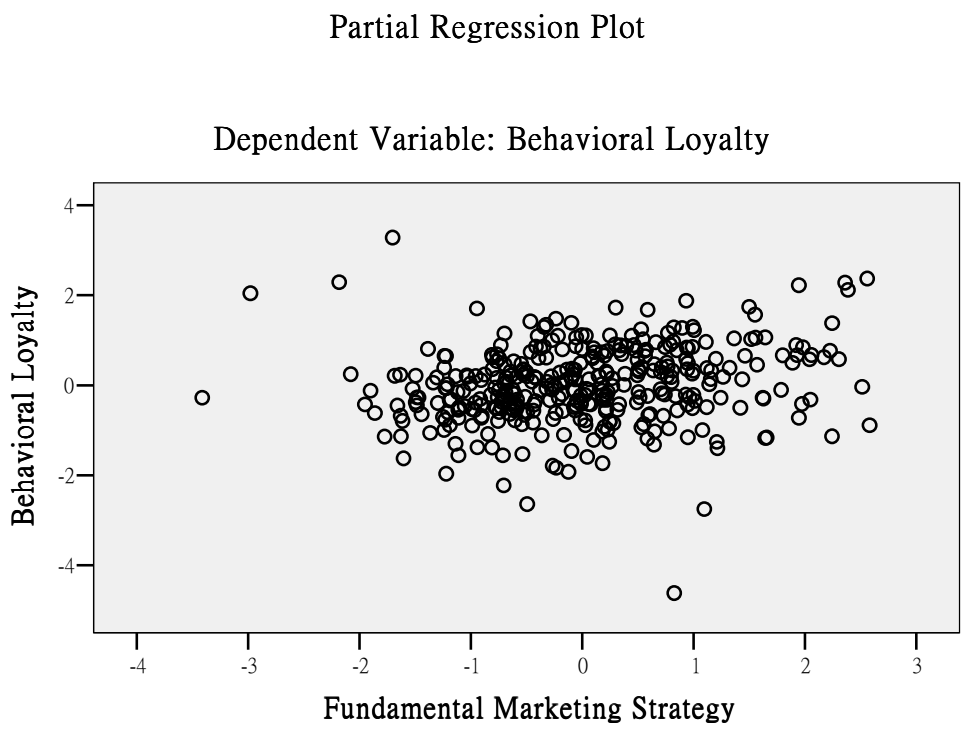


Figure 20 Partial plot of fundamental strategy to behavioral loyalty

Independence of error term.

Both a scatterplot and statistical test were conducted to examine the independence of error term. The scatterplot of residual against the sequence (Figure 21) presented no consistent pattern. It indicated no relationship among adjacent cases. The value for Durbin-Watson statistic test in SPSS was 1.938 was close to 2. These results indicated that the adjacent residual did not correlate.

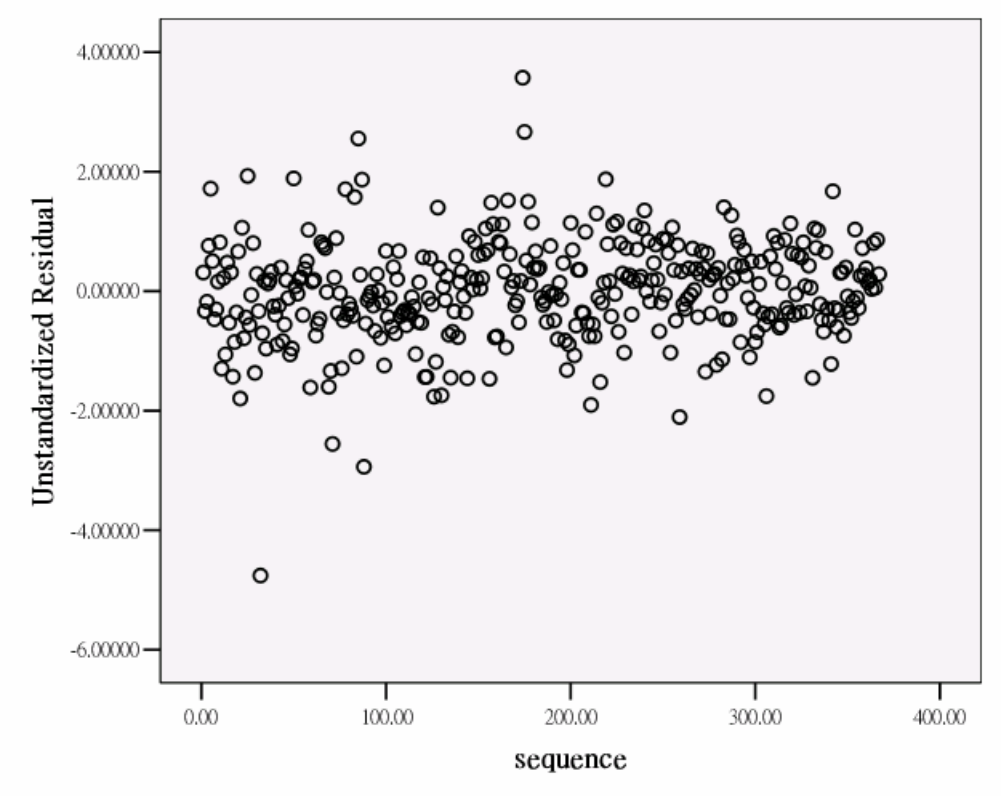


Figure 21 Plot of residual against sequence for behavioral loyalty

Constant variance of the error term (homoscedasticity).

The spread of the standardized residual plots against the standardized predicted value of the dependent variable (Figure 22) appeared as a random pattern. Consequently, the constant variance of the residuals was met.

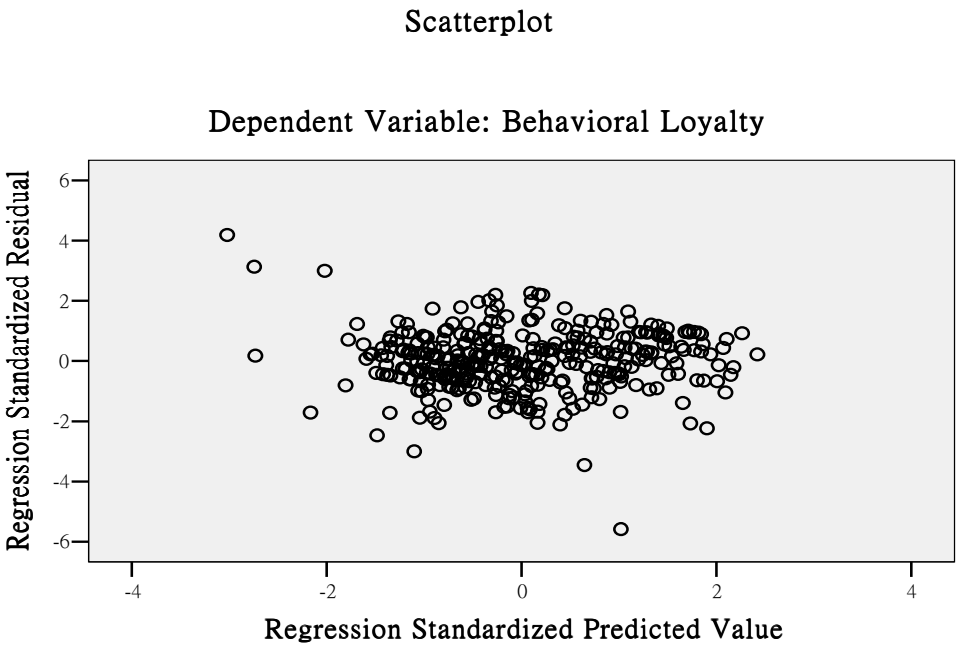


Figure 22 Scatterplot of standardized residual against standardized predicted value for behavioral loyalty.

Lack of collinearity

While there are high intercorrelations among some sets of the predictor variables, the assumption for lack of collinearity was violated. The variance inflation factor (VIF) equal to 1 and the tolerance equal to 1 indicated no multicollinearity in this study. The two independent variables did not correlate.

Outlier Detection and Influential Analysis

The outlier detection for case wise diagnostics in SPSS indicated 18 cases above a critical residual value of 2 (Table 23). The visual inspection for studentized residuals against the standardized predicted values shown as Figure 18 indicated that cases 32, 71, 89, 92, 169, 202, and 203 were potential outliers. The case numbers with the

Mahalanobis Distance /DF above the critical value of 3 were 1, 89, 168, 172, 203, and 602. The case numbers with central leverage over 0.0245 were 1, 89, 168, 172, 203, and 602. The previously identified cases were considered as potential outliers. The potential outlier with Cook's distance over critical value was case 202. The potential outliers with standardized DFFITS over critical value were cases 25, 71, 89, 202, and 203. The potential outliers with standardized DFBETAS of regression coefficients were cases 25, 32, 71, 89, 172, 202, and 203. The seven cases of influential outliers were deleted. The remaining 360 cases were reentered into multiple regressions analysis.

Based on the above discussion, five assumptions for the regression were met in this study. The following section presents and interprets the statistical results of the proposed model assessments.

Table 23 *Critical Value for Diagnostic Analysis of Influential Outliers*

Measure	Formula	Critical Value
Standardized Residuals	P<0.05	±2
Mahalanobis Distance	Mahalanobis Distance/p	3
Central Leverage	3p/n	0.0245
Cook's Distance	F(0.05, p, n-p)	0.9852
Standardized DFBETAS	$\pm 2/\sqrt{n}$	0.1044
Standardized DFFITS	$\pm 2\sqrt{(p/n)}$	0.1808

Note. P is number of the variables; n is the size of sample

Assessing and Interpreting the Regression Variate

Table 24 shows that F (2, 357) =105.700, P=0<0.05 and was statistically significant. The statistical results presented that progressive and fundamental marketing strategies combined to influence attitudinal loyalty. Thus, the null hypothesis 3 was rejected. The adjust R^2 was 0.368, meaning that 36.8% of the variance of behavioral loyalty could be explained by progressive and fundamental marketing strategies. The multiple correlation

coefficients (R) equaled 0.670, meaning large effect size (Cohen, 1988).

The t-value for each independent variable indicated that progressive and fundamental marketing strategies contributed unique relationships to behavioral loyalty. The standardized beta coefficients (Table 24) show that a progressive marketing strategy could impact the proximate double effects on behavioral loyalty when compared with the fundamental marketing strategy. The identified regression equation to determine this relationship was: $Y=-0.07+0.547*X_1+0.231*X_2$, Y=the raw factor score of behavioral loyalty; X_1=the raw factor score of progressive marketing strategy; X_2=the raw factor score of fundamental marketing strategy. The factor sores of fundamental marketing strategy, progressive marketing strategy, and behavioral loyalty are calculated by the size of its factor loadings. The factor scores of fundamental marketing strategy, progressive marketing strategy, and behavioral loyalty are calculated by the regression method of exploratory factor analysis in SPSS program.

Table 24 *Multiple Regression for Behavioral Loyalty in Progressive and Fundamental Marketing Strategy (N=360)*

$H_0$3: There are no significantly positive impacts on behavioral loyalty from the context of importance scale and performance scale of the marketing drivers related to customer equity.

Dependent variable: Behavioral Loyalty (Y)

Independent variable: Progressive marketing strategy (X_1), and Fundamental marketing strategy (X_2)

Equation: $Y=-0.07+0.547*X_1+0.231*X_2$

$R=0.610$, $R^2=0.372$, Adjust $R^2=0.368$; $F(2, 357)=105.700$, $P=0.000$*

Independent Variable	B	Std. Error	Standardized Beta	*t*	*P*
(Constant)	-0.07	0.041		*-0.180*	*0.857*
Progressive Strategy	0.547	0.041	0.566	*13.499*	*0.000* *
Fundamental Strategy	0.231	0.041	0.238	*5.675*	*0.000* *

Note. * represented statistical significance at Alpha=0.05 for each independent variable

Predicted Relationship on Proportion of Visit from Marketing Strategy

$H_0$3.1: There are no significantly positive impacts on proportion of visit from the context (index of marketing drivers) of importance scale and performance scale of the marketing drivers related to customer equity.

In order to examine the null hypothesis 3.1, the simultaneous multiple regression analysis was used to determine impact on the proportion of visits from the combination of

the progressive and fundamental marketing strategies. The progressive marketing drivers and fundamental marketing strategy were entered together into the regression model. The simultaneous multiple regression method was close to real world, since most of the marketing strategy influenced customers. Prior to examining the regression analysis, the assumptions of the data set were analyzed.

Examining Assumptions

Five assumptions were investigated before the regression analysis. These included: (a) normality distribution of error term (the errors were normally distributed), (b) linearity between dependent and independent variables, (c) independence of error terms, (d) constant variance of error term (homoscedasticity), and (e) lack of collinearity.

Normality distribution of error term.

The assumption for normality distribution of error term was examined by the histogram of standardized residual and the normal cumulative probability plot. The histogram of standardized (Figure 23) showed the left tail, indicated no multivariate normality distribution. The plot distribution of the expected cumulative probability of attitudinal loyalty against the observed cumulative probability of attitudinal loyalty, compared with the cumulative distribution of a normal distribution, formed the diagonal line (Figure 24). Figure 24 indicates the violation of the assumption for normality distribution of error term.

Although the multiple regression analysis was robust in violation assumption of multivariate normality in a larger sample size (more than 200 cases), the violation of normality distribution of error term degraded the statistical analysis and its assumptions. Based on the foregoing discussion, data transformation was conducted to remedy the

violations of normality distribution of error term. Data transformation methods such as inverse, square root, square, and logarithm were preceded many times by trial and errors on each independent variable or dependent variable. However, these transformations only made slight changes or improvements to the regression equation.

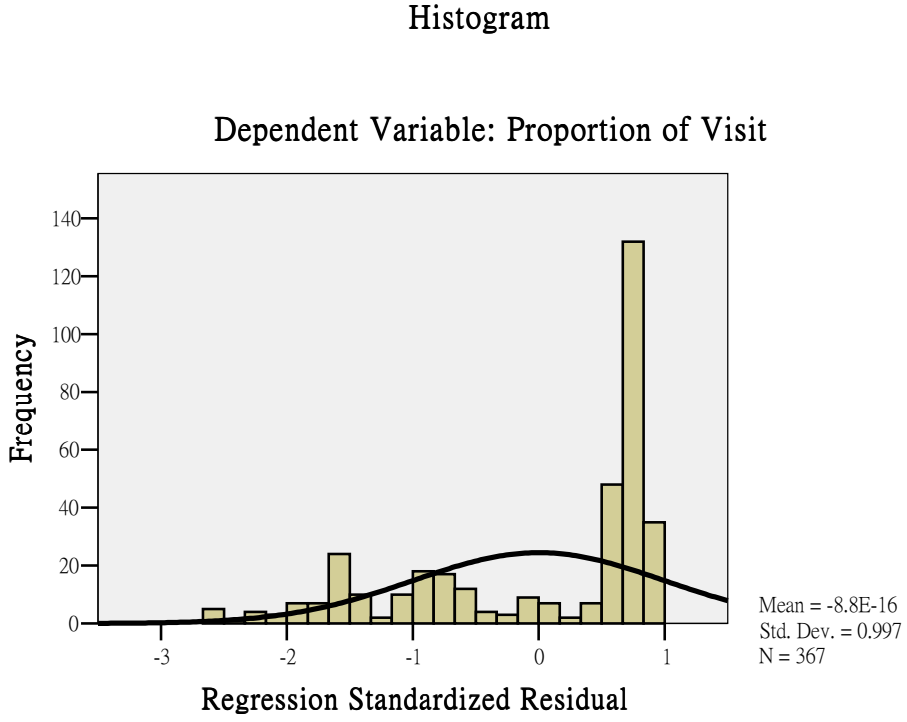


Figure 23 Histogram for the standardized residual of proportion of visit

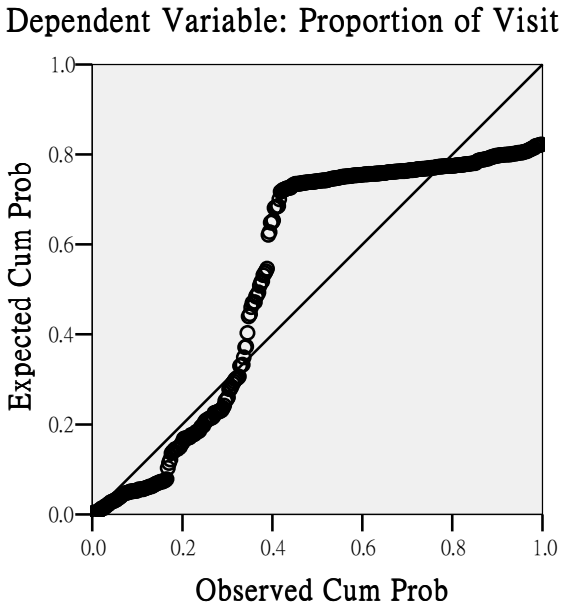


Figure 24 Normal plots for the expected cumulative probability against the observed cumulative probability of proportion of visit

Inspected the linearity phenomena.

The scatterplot of studentized residuals against standardized predicted dependent value (Figure 25) presented no linear relationships between the dependent variable and the two independent variables. The partial regression plots were conducted to examine the unique linear relationship between each single independent variable and the dependent variable. Figure 26 revealed no unique linear relationship between proportion of visit and progressive marketing strategy. Figure 4.27 exposes no unique linear relationship between proportion of visit and fundamental marketing strategy.

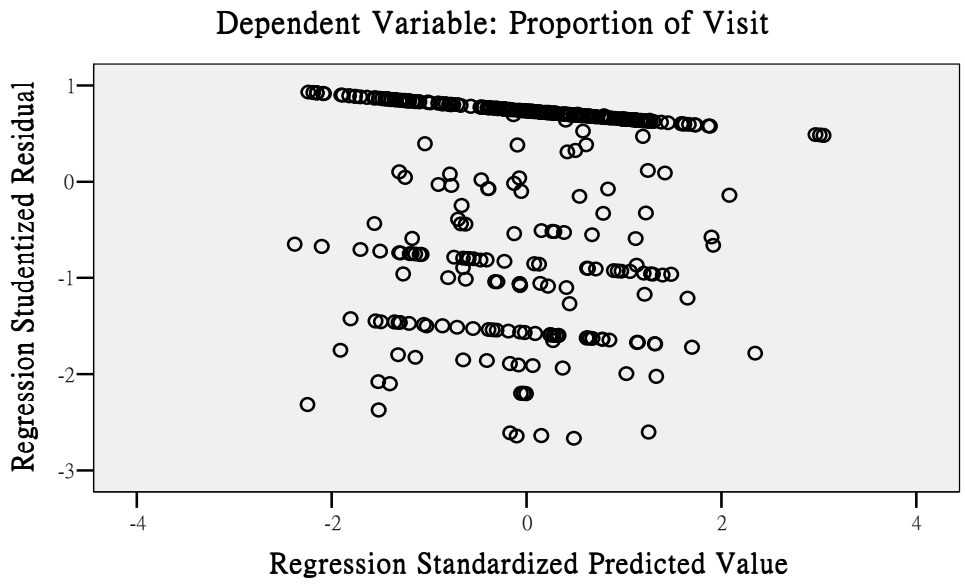


Figure 25 Scatterplot of studentized residual against the proportion of visit

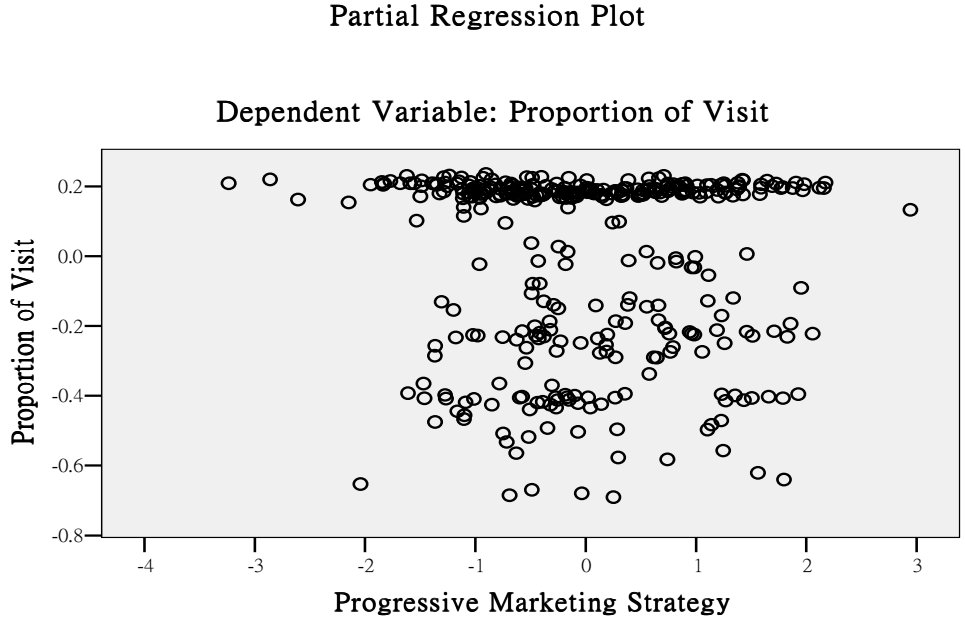


Figure 26 Partial plot of the progressive strategy to the proportion of visit

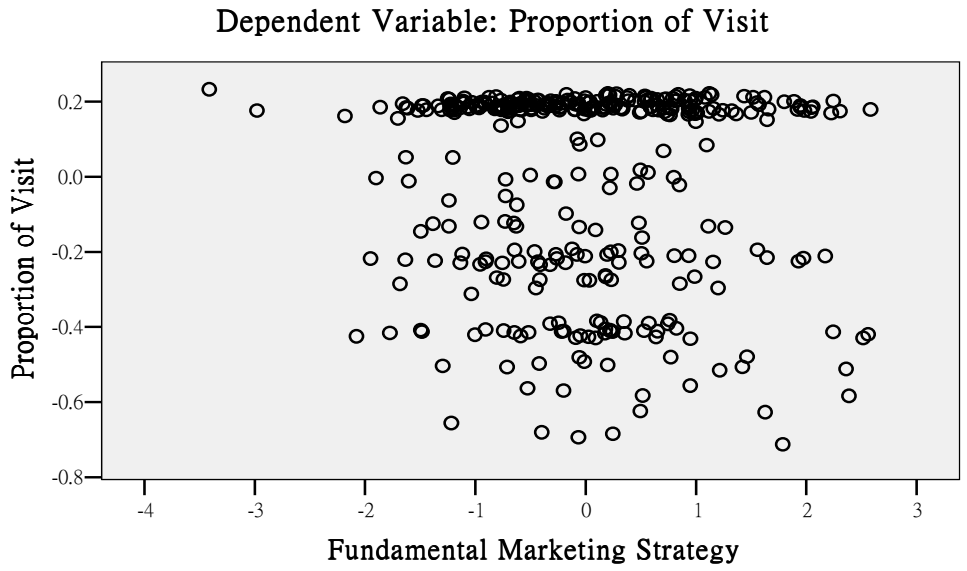


Figure 27 Partial plot of the fundamental strategy to the proportion of visit

Independence of error term.

The scatterplots and statistical methods were used to examine the assumption of the independence of error term. The scatterplots of unstandardized residuals against sequence showed some obvious pattern around 0.2 (Figure 28). The main reason for this pattern diagram was the distribution of dependent variable was non-normality. The value for the Durbin-Watson statistic test in SPSS was 2.221. Although the Durbin-Watson statistic value indicated minor negative correlation among the adjacent residuals (over than 2), it was still located between 1.5 and 2.5 (critical value for independent observation). Thus, the assumption for the independent of error term in this data set was not a big problem.

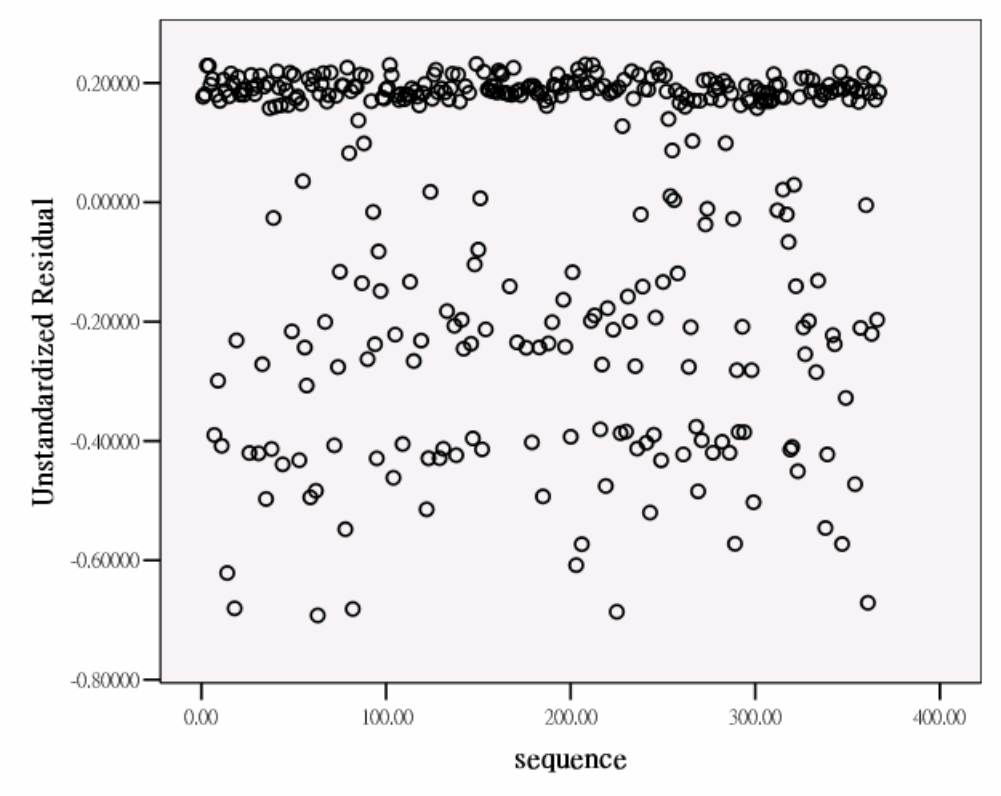


Figure 28 Plot of residual against sequence for proportion of visit

Constant variance of the error term (homoscedasticity).

The scatterplot of standardized residual against standardized predicted value of proportion of visit was used to examine whether the assumption of the constant variance of the error term was violated. The scatterplots of standardized residual against the standardized predicted value of the proportion of visit (Figure 29) did not look like random, so the assumption of the homoscedasticity was likely violated.

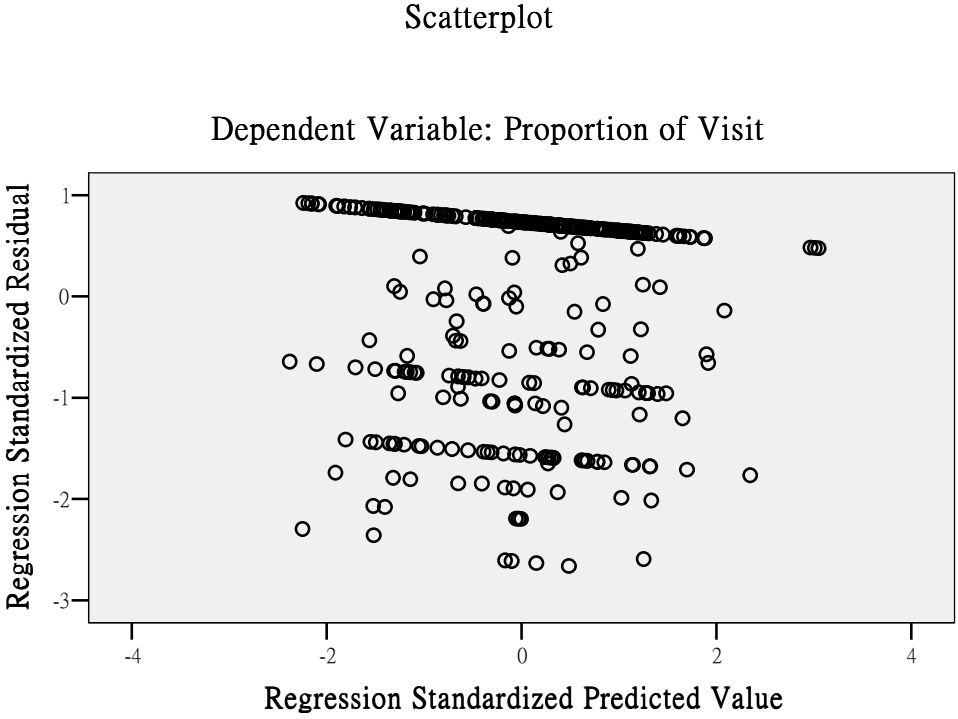


Figure 29 Scatterplots of regression standardized residual against regression standardized predicted value for proportion of visit

Lack of collinearity.

The assumption of non-multicollinearity was examined through statistical methods such as the values of the tolerance and variance inflation factor (VIF). The VIF value was 1 and the Tolerance value also was equal to 1. Both measures of the VIF and tolerance indicated the assumption of collinearity was met.

Based on the scatterplots, the outliers' detection was not necessary to improve the results of regression analysis. Although violation of two assumptions might lead to the abandonment of further regression analysis, these issues were not a major concern. The regression analysis was generally robust in the face of departures from assumptions (Pedhazur, 1973). The assessment of the regression model was conducted to examine the

proposed hypothesis.

Assessing and Interpreting the Regression Variate

The summary of statistical results in Table 25 shows F=1.314 at 0.05 level not to be statistically significant (very small adjust R^2 value 0.02). Thus, the null hypothesis 3.1 was not rejected. So, there were no linear relationships from the combination of the progressive and fundamental marketing drivers predicted on proportion of visit.

Table 25 *Multiple Regression Analysis for Proportion of Visit in Progressive Marketing Strategy and Fundamental Marketing Strategy (N=367)*

$H_0$3.1: There are no significantly positive impacts on proportion of visit from the context of importance scale and performance scale of the marketing drivers related to customer equity.

Dependent variable: Proportion of Visit

Independent variable: Progressive Marketing Strategy, and Fundamental Marketing Strategy

$R=0.085$, $R^2=0.07$, Adjust $R^2=0.02$; $F(2, 364)=1.314$, *P=0.270>0.05*

Predictor Variables	B	Std. Error	Standardized Beta	*t*
(Constant)	0.809	0.014		*59.387**
Progressive Strategy	-0.14	0.014	-0.053	*-1.021*
Fundamental Strategy	-0.17	0.014	-0.066	*-1.259*

Note. * represented statistical significance at Alpha=0.05 for each independent variable

Simple Regression Analysis

Predicted Relationship on Behavioral Loyalty from Attitudinal Loyalty

$H_0$4: There are no significantly positive impacts on behavioral loyalty from attitudinal loyalty.

In order to examine the null hypothesis 4, simple regression was conducted to determine how well attitudinal loyalty impacts on behavioral loyalty compared to attitudinal loyalty. Simple regression was the appropriate choice to distinguish the impacts on the behavioral loyalty from those of attitudinal loyalty. Specifically, behavioral loyalty was the factor scores extracted from 6 attributes (e.g., cooperation, word-of-mouth endorsement) by exploratory factor analysis. Attitudinal loyalty was the factor scores derived from eight attributes (e.g., trust, commitment, and switching cost) by the EFA. Although the Pearson correlation was one choice for examining relationship between two associated continued variables, the Pearson correlation could not distinguish the direction of one given variable from another. Thus, simple regression analysis was the proper choice to determine impacts on the dependent variable from another independent variable.

Examining Assumptions

Four assumptions were investigated before examining the proposed model: (a) normality distribution of the error terms, (b) linearity between dependent variable and predictor variable, (c) independence of error terms, and (d) constant of the error terms.

Normality distribution of the error terms.

The diagnostic residual plots such as a histogram of the standardized residuals and a cumulative normal probability plot were selected to investigate the assumption for

normality distribution of error term. The ideal histogram of the standardized residual should distribute normally in a large sample. The p-p cumulative normal probability plots should lie along the diagonal line while the assumption of normal distribution of error terms was met. The histogram (Figures 30) and the normal plot (Figure31) confirmed the assumption of the normal distribution of error terms.

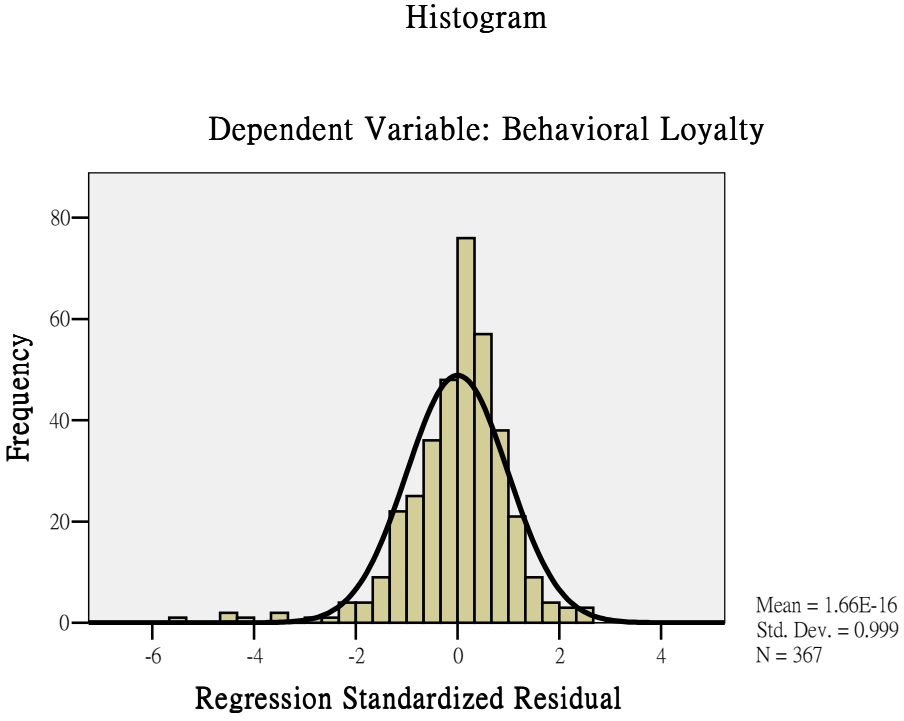


Figure 30 Histogram for the standardized residual of behavioral loyalty from attitudinal loyalty

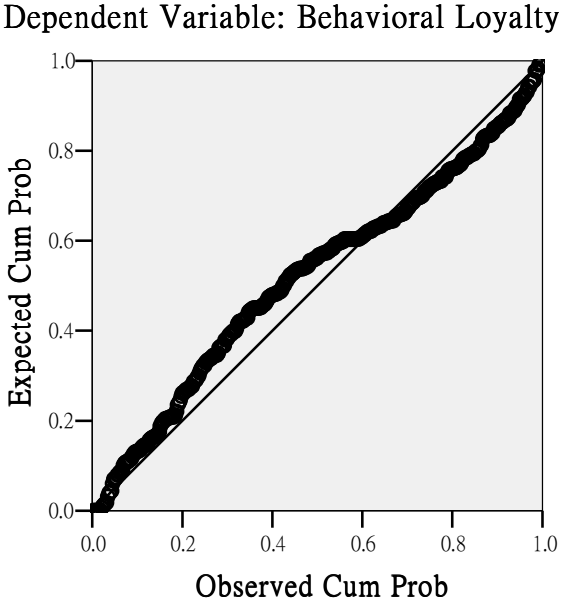


Figure 31 Normal plots for the expected cumulative probability against the observed cumulative probability of behavioral loyalty from attitudinal loyalty

Inspection of linearity phenomena.

The scatterplot of the observed valued of behavioral loyalty against the observed value of attitudinal loyalty was used to investigate the linearity phenomena between dependent variable and independent variable. The plots (Figure 32) indicated the linear relationship between attitudinal and behavioral loyalty. The upward slope of the regression line (Figure 32) confirmed the positive correlation coefficients.

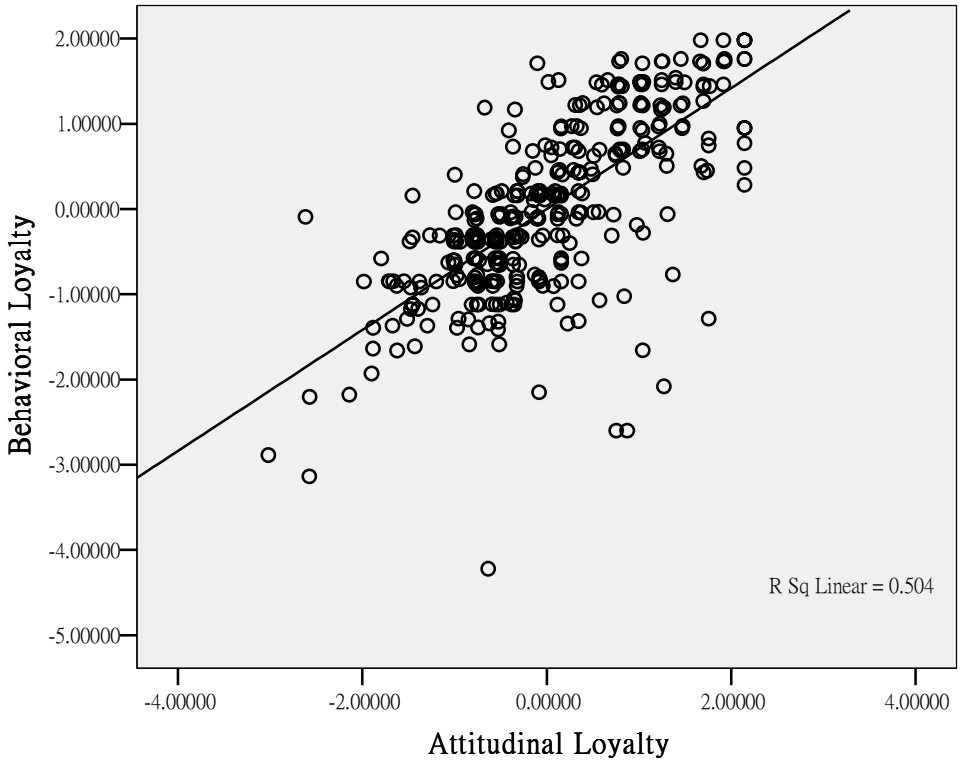


Figure 32 Scatterplot of behavioral loyalty from attitudinal loyalty

Independence of error term.

The scatterplots (Figure 33) reveal no obvious relationships among adjacent cases. Moreover, the measure of the Durbin-Watson statistic test was equal to 1.796 (critical value between 1.5 and 2.5), so independence of error term was not a problem.

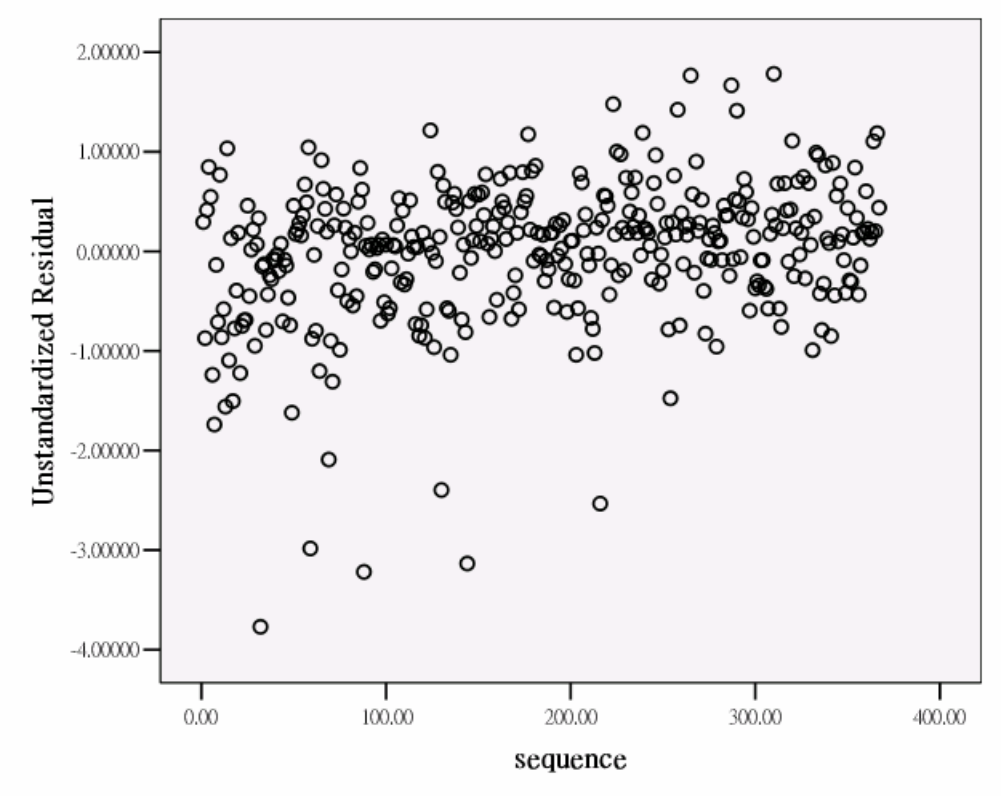


Figure 33 Plot of residual against sequence for behavioral loyalty from attitudinal loyalty

Constant variance of the error term (homoscedasticity).

The scatterplots of regression standardized predicted value against regression standardized residual were used to investigate whether the assumption of constant variance of the error term was met. If the clouds of plots were crescent- or funnel-shaped, the homogeneity was violated. The scatterplots (Figure 34) showed no obvious pattern, thereby supporting the assumption of the constant variance of the residuals.

The assumptions of simple regression such as normal distribution, linearity, independent of error term, homoscedasticity and outlier detection were met.

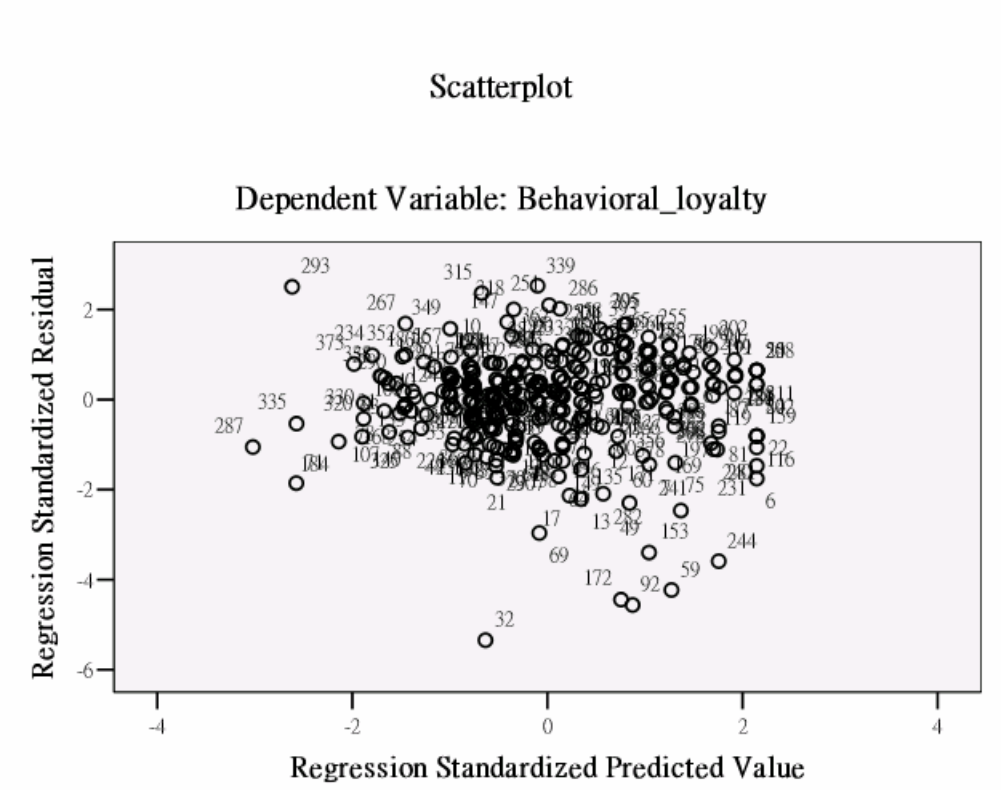


Figure 34 Scatterplot of standardized residual against standardized predicted value for behavioral loyalty from attitudinal loyalty

Outlier Detection and Influential Analysis

Eighteen cases for standardized residuals had a cutoff value of more than 2 (Table 26). The visual inspection for outlier in scatterplot of studentized residual against predicted values (Figure 34) in cases 32, 244, 287, 335, 172, 92, and 59. The case numbers with Mahalanobis distances/df which was greater than critical value 3 were 71, 287, 293, and 335. Case numbers with the central leverage value over critical value 0.01635 were 71, 287, 293, and 335. This indicated potential outliers, but these cases did not mean the influential points in the regression model No case was identified with Cook's distance greater than 0.95123. Potential outliers with standardized DFFITS which

range over the critical value of 0.1476 were 71, 92, 153, 287, 293, 315, and 339. These seven cases which showed influential outliers were deleted. The potential outliers with standardized DFBETAS value of regression coefficients which were greater than 0.1044 were 7, 59, 92, 153, 172, 283, and 287. These seven cases presented influential points which would be deleted. Ten influential outliers were deleted. Three hundred and fifty-seven cases were reentered into the regression analysis. The proposed model was assessed and the statistical results are interpreted in the next section.

Table 26 *Critical Value for Diagnostic Analysis of Influential Outliers*

Measure	Formula	Critical Value
Standardized Residuals	P<0.05	±2
Mahalanobis Distance	Mahalanobis Distance /p	3
Central Leverage	3p/n	0.01635
Cook's Distance	F(0.05, p, n-p)	0.95123
Standardized DFBETAS	±2/√n	0.1044
Standardized DFFITS	±2√(p/n)	0.1476

Note. P is number of the variables in the models; n is the size of sample

Assessing and Interpreting the Regression Variate

The simple regression (Table 4.27) was statistically significant F (1, 355) =466.380, P=0.000<0.05. Thus, the null hypothesis 4 was rejected. The adjust R^2 value was 0.568, meaning that 56.8 % of variance of behavioral loyalty was explained by attitudinal loyalty. Correlation coefficients (R=0.754) indicated a large effect size (Cohen, 1988).

This produced a very accurate prediction. The standardized regression coefficient (Beta) was treated as the correlation between the independent and the dependent variable. The unstandardized regression coefficient (B) was the slope of the best fitted regression line for the scatterplot showing the association between the independent and the dependent variable. The unstandardized regression coefficients would support a regression equation (*Y=0.019+0.740*X, Y*=raw factor score of behavioral loyalty; *X*=raw factor score attitudinal loyalty) to predict the raw scores of the dependent variable from the independent variable. The fact sores of attitudinal loyalty and behavioral loyalty are calculated by the size of its factor loadings. The factors scores of attitudinal and behavioral loyalty are calculated by regression method of exploratory factor analysis in SPSS program.

Table 27 *Simple Regression Analysis for Behavioral Loyalty in Attitudinal Loyalty (N=357)*

$H_0$4: There are no significantly positive impacts on behavioral loyalty from attitudinal loyalty.					
Equation: Y=0.019+0.740*X					
Dependent variable: Behavioral Loyalty (Y)					
Independent variable: Attitudinal Loyalty (X)					
R=0.754, R^2=0.568, Adjust R^2=0.567; F(1, 355)=466.380, *P=0.000* *					
Predictor Variables	B	Std. Error	Standardized Beta	*t*	*P*
(Constant)	0.019	0.033		*0.580*	*0.562*
Attitudinal Loyalty	0.740	0.034	0.754	*21.596*	*0.000**

Note. * represented statistical significance at Alpha=0.05 for each independent variable

Predicted Relationship on Proportion of Visit from Attitudinal Loyalty

$H_0$4.1: There are no significantly positive impacts on proportion of visit from attitudinal loyalty.

In order to determine the null hypothesis 4.1, simple regression was employed to examine how well attitudinal loyalty impacted on proportion of visit. The assumption was investigated before the propose regression model was analyzed.

Examining Assumptions

Four assumptions for simple regression analysis were investigated: (a) normality

distribution of the error term, (b) linearity between dependent and independent variables, (c) Independence of error terms, and (d) constant variance of error term (homoscedasticity).

Normality distribution of error term.

The histogram (Figure 35) and the cumulative normality probability plot (Figure 36) and were inconsistent with the normality distribution. The plot which departed from the normal diagonal line as skewed specified that the error distribution was not normal. Although regression analysis was robust in violation of normality distribution of error terms, especially in a large sample, it would degrade the other statistical analysis. Moreover, while non-normality distribution of error terms was presented, it also affected the other assumptions.

Data transformation was employed to remedy the violated assumption of the normality distribution of error term. Both the independent and the dependent variable were transformed by reciprocal, square, cube, square root, and logarithm. However, few changes or improvements were found in either the independent or the dependent variable.

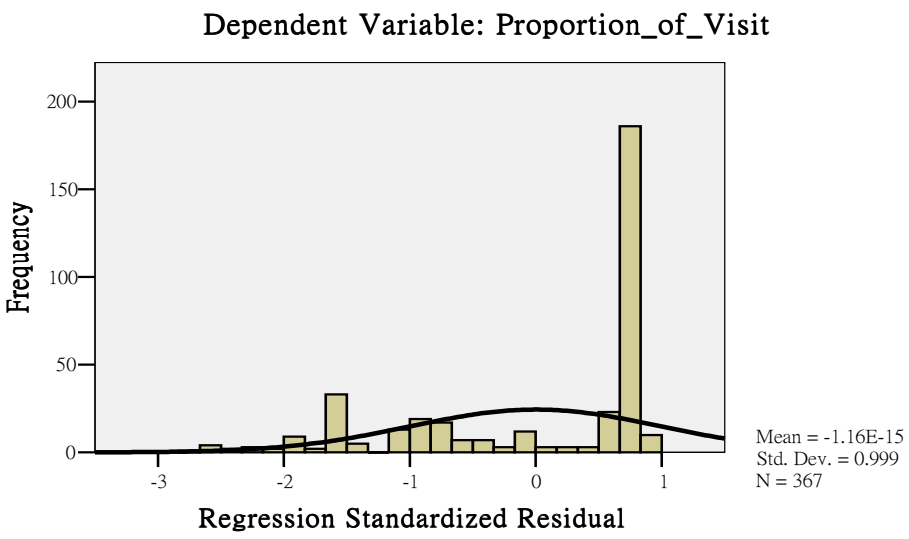


Figure 35 Histogram for the standardized residual of proportion of visit from attitudinal loyalty

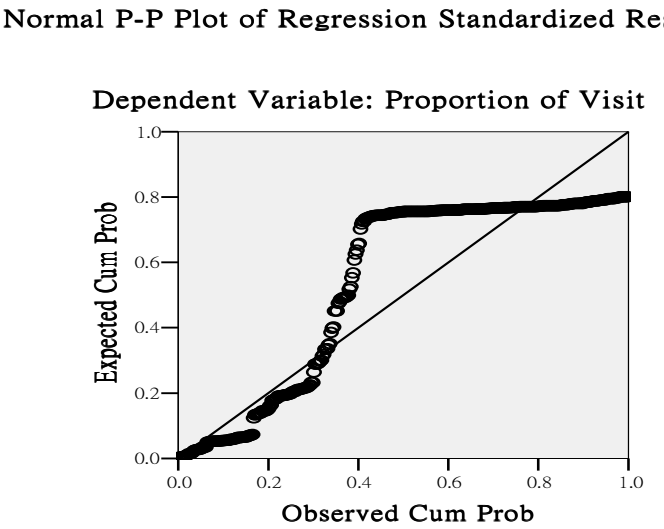


Figure 36 Normal plots for the expected cumulative probability against the observed cumulative probability of proportion of visit from attitudinal loyalty

Inspection of the linearity phenomena.

The scatterplot of studentized residual against standardized predicted value of proportion-of-stay (Figure 37) showed the estimate regression line in R^2=0.003 between attitudinal loyalty and proportion of visit. It found no linearity between attitudinal loyalty and the proportion of visit.

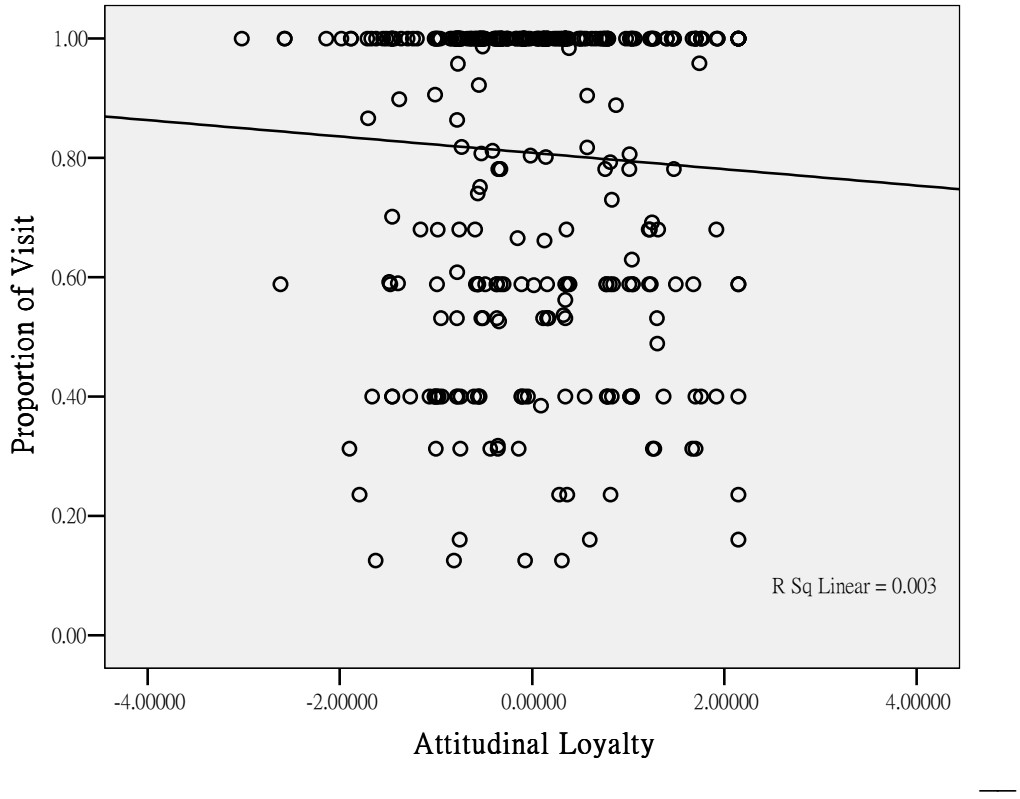


Figure 37 Scatterplot of the proportion of visit from the attitudinal loyalty

Independence of error term.

Both of the scatterplot of residuals and statistic methods were used to investigate the assumption of the independence of the error term. The scatterplot of residuals against the sequence (the case number) (Figure 38) showed some spreads around as the line pattern. (While it spreads randomly, the assumption of the independent of error term was met.) It

indicated a minor violation on the independence of error terms. The reason for this violation was the non-normality distribution on dependent variable. The measure for the Durbin-Watson statistic test in SPSS (statistical package for the social sciences) was 2.220. Although it (over than 2) indicated the minor negative correlation between the adjacent residuals, the Durbin-Watson statistic value still fell between 1.5 and 2.5. Therefore, the assumption of the independence of error term was not a big problem.

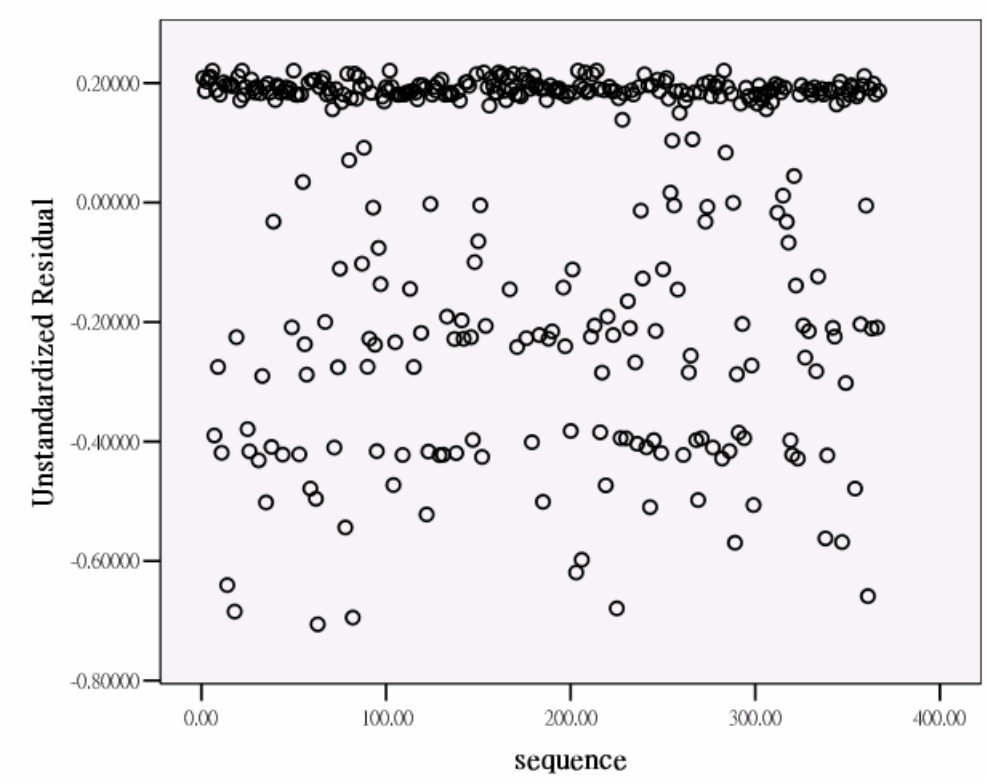


Figure 38 Plot of residual against sequence for proportion of visit

Constant variance of the error term (homoscedasticity).

The scatterplots of standardized residuals against standardized residuals shown as Figure 39 indicated the violation of homoscedasticity.

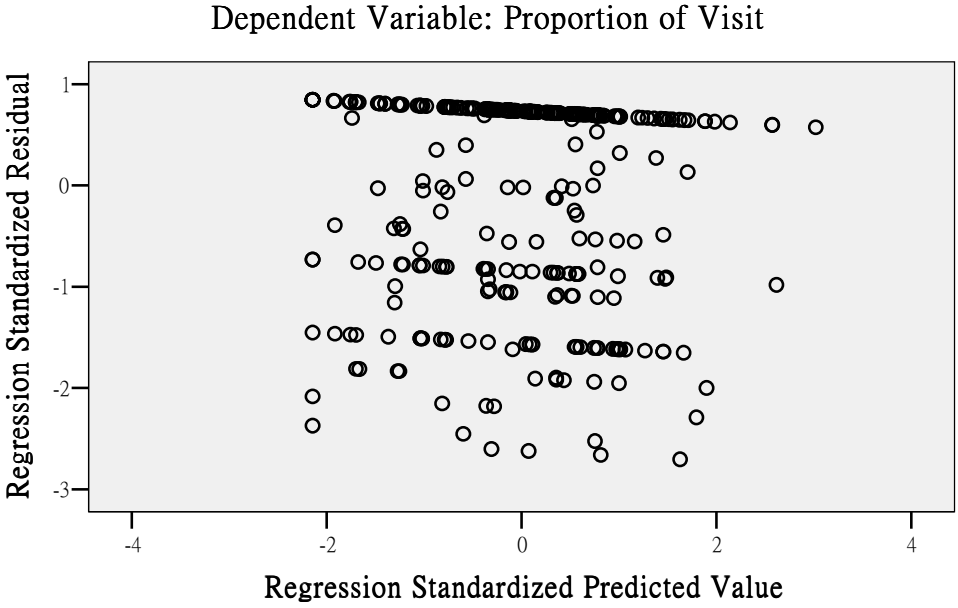


Figure 39 Scatterplot of regression standardized residual against regression standardized predicted value of proportion of visit

In the discussion, three assumptions were violated. Further statistical analysis might be abandoned. Based on the spreads on the scatterplots, further outlier detection was unnecessary to improve the regression analysis. But the regression analysis was robust on the violation of the basic assumption (Pedhazur, 1973). So the statistical assessment on regression model was retained to evaluate the proposed hypothesis.

Assessing and Interpreting the Regression Variate

The results did not appear statistically significant F (1, 365) =1.009, P=0.316>0.05 (Table 28). The null hypothesis 4.1 was not rejected. These results indicated attitudinal loyalty predicted no linear relationship on proportion of visits.

Table 28 *Simple Regression Analysis for Proportion of visit in Attitudinal Loyalty (N=367)*

$H_0$4.1: There are no significantly positive impacts on proportion of visit from attitudinal loyalty.					
Dependent variable: Proportion of Visit					
Independent variable: Attitudinal Loyalty					
R=0.052, R^2=0.003, Adjust R^2=0.000; F(1, 365)=1.009, *P=0.316*					
Predictor Variables	B	Std. Error	Standardized Beta	*t*	*p*
(Constant)	0.809	0.014		*59.377*	*0.000**
Attitudinal Loyalty	-0.14	0.014	-0.053	*-1.004*	*0.316*

Note. * represented statistical significance at Alpha=0.05 for each independent variable

Multivariate Data Analysis

$H_0$5: There are no significant relationships on the four segments of loyalty: true, latent, spurious, and low loyalty from the composites of attitudinal loyalty and behavioral loyalty by distinguishing the T Hotel customers.

Cluster analysis was used to classify the respondents so that each respondent was similar to others in the cluster (segment) according to the standardized summated scales of the variables under the attitudinal loyalty (trust, commitment, switching cost) or behavioral loyalty (proportion of visit, cooperation, WOM endorsement). There was no statistically significant test under the cluster analysis. Therefore, the reliability, validity, and labels of the solution of prior clusters were reconfirmed in the MANOVA used in to

multiple discriminate analysis by the syntax program language in SPSS. The results of multivariate analysis of variance (MANOVA) connected with multiple discriminate analysis were used to evaluate and interpret the distinctive characteristics on each prior cluster (segment) of customers' loyalty.

Cluster Analysis

In order to identify the different segmentations of customer loyalty that were similar to each other but different from respondents in the other loyal groups, hierarchical clustering analysis was conducted. Hierarchical clustering was one of the most straightforward methods to examine solutions with increasing the numbers of clusters in a small data set (beyond 1,000 cases) (Hair et al., 2006). The disadvantage for hierarchical clustering analysis was that it was time-consuming to receive the resolutions by the computation of computers.

Algorithm merging procedure, Ward's method, and squared Euclidean distances were selected in hierarchical cluster procedures (Norusis, 2005). Each respondent in the agglomerative procedures which began within a separate cluster merged with the others that were most similar. Ward's method was selected to calculate the sum of squares within the two jointed clusters summed over all the predictor variables. The squared Euclidean distance measured the similarity of two subjects that represented the sum of the squared distances without taking the square root, fastening the cluster solution. The squared Euclidean distance was appropriate for the continuous variables and recommended by Ward's method (Hair et al., 2006).

The predictor variables with standardized summative scale used in hierarchical clustering procedures included three variables in attitudinal loyalty (trust, commitment,

and switching cost), two variables in behavioral loyalty (word-of-mouth endorsement, and cooperation) and proportion of visit. A four-cluster solution was suggested because it was interpretable and rational while still being supported by prior literature reviews. The membership for each respondent in the four clusters solutions would be saved as the new identification of the associated groups. The frequency of membership and the means of the predictor variables in each cluster appear in Table 29. The further validation and explanation of the underlying connotation for the solution of cluster analysis will be discussed in the next section.

Table 29 *Cluster Analysis for Trust, Commitment, Switching Cost, Cooperation, Word-of-mouth, and Proportion of Visit*

Solutions	Cluster I Means	Cluster II Means	Cluster III Means	Cluster IV Means
Respondents (percentage)	N=99 (27.0%)	N=174 (47.4%)	N=71 (19.3%)	N=23 (6.3%)
Trust	4.421	3.726	3.451	3.073
Commitment	4.542	3.692	3.507	2.493
Switching Cost	4.470	3.605	3.429	3.196
Cooperation	4.360	3.456	3.525	2.652
Word-of-mouth	4.597	3.542	3.507	2.739
Proportion of visit	0.728	0.972	0.474	0.950

Validity and Reliability of Clusters Solution (Segments of Loyalty)

In an effort to cross-validate and interpret the prior cluster solution, the MANOVA

which was connected with multiple discriminate analyses (MDA) was used. MANOVA contributed to determining whether each cluster (each segment of loyalty) would show different characters to present internal validity. Discriminate analysis was used to identify variables that classified members of two or more groups when the group membership was known. The assessment of canonical discriminate function would contribute to the validity and reliability of the cluster solutions (segments of customer loyalty). The cross-validation for the held out sample in the results of classification would examine the internal validity.

MANOVA

Assumptions of Homoscedasticity

Prior to the multivariate analysis of variance (MANOVA) and the multiple discriminant analyses (MDA), the statistic assumption for the equality of variance-covariance matrices across the clusters was examined. The Box's M test which used for the multivariate homogeneity assessments presented statistical significance (Table 30). Due to statistically significant differences in variance-covariance matrices across the four clusters, the determinant of the variance covariance matrix was investigated. If the determinant of the covariance matrix was always larger for the cluster with larger group size, the multivariate statistical test for Box’s M could be conservative (Stevens, 2002). The absolute measure of the log determinants in each cluster with larger size (Table 30) was usually higher than the absolute measure of the log determinants in each cluster with smaller size. This revealed the Box's M test was a conservative test (Stevens, 2002). It indicated that the Box's M test was easy to reject the null hypothesis. So the violation for multivariate homoscedasticity was not a big problem in this study.

Levene's test was more robust in non-normality distribution than traditional tests like Bartlett test of homogeneity of variance (Hair et al., 2006). Levene's test for each dependent variable except cooperation (trust, commitment, switching cost, WOM, and proportion of visit) had a significant value (Table 30). Only the Levene's test for cooperation presented non-significant value (P=0.057>0.05), meaning to satisfy the assumption of homogeneity. The Levene's test indicated a very significant departure from homogeneity of variance in Table 30. This violation can lead to the P-value in the ANOVA being under estimated (the actual P-value is smaller than the estimated P-value). This is something that researcher claim to be significant may really not to be significant. Since P-value in Table 31 are all extremely small (0.000 and smaller). It is convinced that this problem may be ignored and the mean different are in fact significant.

Table 30 *Multivariate and Univariate Measure for Examining Homoscedasticity*

Multivariate Tests for Homoscedasticity				
Box's Test of Equality of Covariance Matrices				
Cluster	Size of Cell	Log Determinants	Box's M test	416.099
I	99	-11.917	F	6.247
II	174	-12.015	df1	63
III	71	-9.922	df2	24260.421
IV	23	-10.955	*P*	*0.000**

Univariate Test for Homoscedasticity				
Levene's Test of Equality of Error Variances				
Dependent Variable	F	df1	df2	*P*
Trust	5.504	3	363	*0.001**
Commitment	3.368	3	363	*0.019**
Switching Cost	3.578	3	363	*0.014**
Cooperation	2.533	3	363	*0.057*
Words of Mouth	6.337	3	363	*0.000**
Proportion of Visit	86.238	3	363	*0.000**

Note. "*" represented statistic significance at alpha=0.05 (P<.05)

Assessment and Interpretation of Statistic Results

The MANOVA for the three multivariate statistics: Pillai's criterion, Wilk's lambda, and Hotelling's Trace (Table 31) indicated that the set of dependent variables (e.g., trust, commitment, switching cost, cooperation, word of mouth, and proportion of visit) had substantially significant statistical differences (P=0.000<0.05) across the four clusters,

suggesting the mean vector across the four sectors was different. The multivariate statistically significant differences did not guarantee the univariate statistically significant differences on each dependent variable (Hair et al., 2006). Therefore, the univariate statistical test was conducted after the multivariate statistical test. Also the univariate test for each dependent variable separately demonstrated significant differences across the four clusters. Consequently, the statistical significances for the both the multivariate and univariate tests indicated the four clusters of customer loyalty had specific antecedents of and behavioral outcomes of customer loyalty. Null hypothesis 5 was rejected. The statistical results supported that the four clusters of customer loyalty showed different characteristics on each variable under the attitudinal or behavioral loyalty.

Table 31 *Multivariate and Univariate Test for Cluster Differences in Trust, Commitment, Switching Cost, Cooperation, Word-of-mouth, and Proportion of Visit*

Multivariate Test					
Statistical Test	Value	F	Hypothesis df	Error df	*p*
Pillai's Criterion	1.369	50.390	18	1080	*0.000**
Hotelling's Trace	4.488	88.923	18	1070	*0.000**
Wilk's Lambda	0.101	70.156	18	1013	*0.000**
Roy's	0.764				

Univariate Test with df (3, 363)				
Dependent Variable	Hypothesis. SS	Error SS	F	*P*
Trust	58.804	72.360	100.005	*0.000**
Commitment	101.924	69.178	178.277	*0.000**
Switching Cost	68.988	122.087	68.373	*0.000**
Cooperation	80.429	107.122	90.849	*0.000**
Words of Mouth	105.924	83.433	153.618	*0.000**
Proportion of Visit	13.721	11.221	147.956	*0.000**

Note. a. * represented statistic significance at alpha=0.05 (P<.05). b. Independent variable: membership of four clusters

Multiple Discriminate Analyses

Multiple discriminate analyses were used to combine the predictor variables (e.g., trust, commitment, switching cost, cooperation, word-of-mouth and proportion of visit) into new variables (each new variate independent of the others). The new variate, which was a discriminate function, was constructed to have the greatest possible separations

among participants in the different memberships of the four clusters.

Wilk's lambda was used to investigate the efficacy of the discriminate function in producing significant differences among target segments of populations. The Wilks' lambda test for multiple discriminate functions was the product of the individual Wilks' lambda for each function within the test (Formula: Wilk's Lambda =1/ $(1+\lambda_1)$* 1/ $(1+\lambda_2)$*…*1/ $(1+\lambda_r)$, r=discriminate function number, λ=eigenvalues). The null hypothesis was that the mean of the population for all of the discriminate function were equal in all four clusters. The results of canonical discriminate functions (Table 32) presented all three discriminate functions with statistical significance ($p<0.05$) comparability to separate the observed subjects to the four clusters (segments) of customer loyalty.

The first discriminate function with eigenvalues 3.245 (Table 32) accounted for 72.3% of the total variances explained by the combination of the three discriminate functions (computed by: 3.245/ (3.245+1.174+0.070)*100%). The second and third discriminate functions separately accounted for 26.2% and 1.6% of the total variances explained by the combination of the three discriminate functions.

The eigenvalues and canonical correlation coefficients revealed how well the discriminate function was correlated to the clusters (segments). The eigenvalues were the sum of square variances among groups divided by sum of square total variances. The canonical correlation coefficient 0.874 was the square root of the variances of total variance among groups to the total variance of sum of squares in the discriminate function 1. It revealed (0.874^2) 76.38 % of the variances in the four clusters (dependant variables) can be explained by the first discriminate function which included six predictor

variables (trust, commitment, switching cost, cooperation, word of mouth endorsement, and proportion of visit). There was also a substantial drop in canonical correlation coefficients between discriminate functions 2 and 3.

The standardized discriminate coefficient was used to identify whether the predictor variables were redundant when compared to the other variables in the function. The standardized measure for discriminate coefficient can be compared to the effect of other predictor variables in the same discriminate function, even with different units. Switching cost in the first discriminate function; commitment, word-of-mouth, cooperation, trust, and switching cost in the second discriminate function; and proportion of visit, trust, cooperation in the third discriminate function was redundant with italic letters (Table 32) (the cut off value was below ±0.30).

The function loading was preferred by researchers that discriminate coefficients (weights), because the function loading was a unique contribution on the associated discriminate function (Stevens, 2002). The function loading for each predictor variable was a partial coefficient, in which the effects of the other variables were partial out already. The structure matrix (function loading) of the predictor variables and the discriminate function were used for substantive interpretation of the discriminate function. The function loading exhibited over ±0.40, considering the substantive meaning value (Hair et al., 2006). According to discriminate loading, the first discriminate function was dominated by the variables of commitment, word-of-mouth, cooperation, and trust. So the first discriminate function was "the dimension of attitudinal loyalty and behavioral loyalty." Secondly, the proportion of visit was significantly associated with the second function. Thus, the second discriminate function was "the dimension of the proportion of

visit.” Finally, the third discriminate function was dominated by switching cost, and commitment. But switching cost with positive correlations respectively indicated different direction with commitment in the third discriminate function. Therefore, the third discriminate function was "the dimension of switching cost.”

Table 32 Summary Results of Canonical Discriminate Functions

$H_0$5: There are no significant relationships on the four segments of loyalty: true, latent, spurious, and low loyalty from the composites of attitudinal loyalty and behavioral loyalty by distinguishing the T Hotel customers.
Dependent Variables: Four clusters of customers loyalty: cluster 1, 2, 3, and 4
Independent Variables: Commitment (X_1), WOM endorsement (X_2), Cooperation (X_3), Trust (X_4), Proportion of Visit (X_5), and Switching Cost (X_6).
Equation:
$Z_1 = 0.427X_1 + 0.373X_2 + 0.397X_3 + 0.370X_4 - 0.362X_5 + 0.101X_6$
$Z_2 = 0.080X_1 + 0.20X_2 - 0.29X_3 + 0.282X_4 + 0.926X_5 + 0.135X_6$
$Z_3 = -0.817X_1 + 0.394X_2 - 0.113X_3 + 0.225X_4 - 0.2X_5 + 0.589X_6$
Z: standardized score of the discriminate function
X: standardized score of the independent variables by pooled within group estimated standard deviation.

Assessment of Canonical Discriminant Functions

Statistics	Discriminant Function 1	Discriminant Function 2	Discriminant Function 3
Eigenvalues	3.245	1.174	0.070
% of Variance	72.3	26.2	1.6
Canonical Correlation Coefficients	0.874	0.735	0.255
Wilks' Lambda	0.101	0.430	0.950
Chi-square	86.440	304.564	24.297
P-value (df)	*0.00 (18) **	*0.00 (10) **	*0.00 (4) **
Entered	*1thorugh 3*	*2 through 3*	*function 3 only*

Interpretation of Canonical Discriminate Functions

Predictor Variables	Discriminate Function 1		Discriminate Function 2		Discriminate Function 3	
	Standardized Discriminate function Coefficients	Discriminate function Loading	Standardized Discriminate function Coefficients	Discriminate function Loading	Standardized Discriminate function Coefficients	Discriminate function Loading
Commitment	0.427	0.647++※	*0.080*	0.270	-0.817	-0.603++
Word-of-mouth	0.373	0.617++※	*0.20*	0.160	0.394	0.276
Cooperation	0.397	0.480++※	*-0.29*	0.057	*-0.113*	-0.017
Trust	0.370	0.467++※	*0.282*	0.316+	*0.225*	0.175
Proportion of Visit	-0.362	-0.253	0.926	0.929++※	*-0.20*	-0.096
Switching Cost	*0.101*	0.390+	*0.135*	0.197	0.589	0.604++※

Note. a. Discriminating variables order by absolute size of correlation within function b. ++ represented absolute discriminate function loading on the associated function from each variable larger than 0.45 (meaning strong discriminating capability). c. +

represented absolute discriminate function loading on the associated function from the discriminating variable larger than 0.3 (meaning enough discriminating capability). d. ※ represented largest absolute correlation between each predictor variable and any discriminate function, meaning to be used for label in this function. e. * represented statistical significance (P<0.05)

Fisher's linear discriminate function coefficients (Table 33) and the means of the predictor variables compared in the new membership of four clusters (Table 34) were marked by the characteristics of each cluster. Cluster I (27.5% of respondents) incorporated the highest trust, commitment, switching cost, cooperation, word-of-mouth and second lowest proportion of visit. Cluster I was therefore renamed “Latent Loyalty Segment.” Cluster II (48.8% of respondents) included second-highest trust, moderate commitment, switching cost, cooperation, moderate word-of-mouth endorsement, and high proportion of visit. Cluster II was renamed "True Loyalty Segment.” Cluster III indicated moderate trust, moderate commitment, low switching cost, moderate cooperation, moderate word-of-mouth and lowest proportion of visit. Cluster III was renamed "Low Loyalty Segment.” Cluster IV integrated with moderate trust, low commitment, moderate switching cost, low cooperation, low word-of-mouth, and high proportion of visit. Cluster IV was renamed "Spurious Loyalty Segment.”

Table 33 *Fisher's Linear Discriminate Function Coefficients*

Predictor Variables	Segments of Customer Loyalty			
	Latent Loyalty (Cluster I)	True Loyalty (Cluster II)	Low Loyalty (Cluster III)	Spurious Loyalty (Cluster IV)
Trust	19.668	16.873	15.580	14.408
Commitment	12.153	9.423	9.419	4.501
Switching Cost	4.953	4.103	3.580	4.416
Cooperation	12.033	9.507	10.095	7.201
Word-of-mouth	10.229	7.211	7.600	5.707
Proportion of visit	15.296	25.249	8.826	26.816
(Constant)	-138.759	-98.448	-84.394	-67.675

Table 34 *Means Comparisons across Four Segments of Loyalty in Each Predictor Variable*

Mean	Segments of Loyalty				
Predictor Variables	Latent Loyalty 27.5% (N=101)	True Loyalty 48.8% (N=179)	Low Loyalty 19.1% (N=70)	Spurious Loyalty 4.6% (N=17)	Total (n=367)
TRUST	4.4290	3.6893	3.4714	3.0000	3.8194
COMMIT	4.5677	3.6462	3.4857	2.3725	3.8102
SWITCH	4.4604	3.5770	3.4571	3.1765	3.7787
COOPER	4.3432	3.4507	3.4905	2.5686	3.6630
WOM	4.5611	3.5345	3.4952	2.6667	3.7693
Proportion of Visit	.7357	.9772	.4418	.9758	.8085

Note. a. The scale for trust, commitment, switching cost, cooperation, and WOM endorsement was 1—5 Likert's scale. b. The scale for the proportion of visit ranged from 0 to 1.

Table 35 shows that 92.9% of the respondents were correctly classified, meaning considerably high discriminate accuracy formed the original sample. It also indicated the reliability of the prior cluster solutions for customer loyalty.

The cross-validation was based on the "leave-one-out" principle. This cross-validation method was used to estimate K-1 sub-sample, eliminating one

observation at a time from a sample of K cases. The predicted group membership of the eliminated observation was employed by the original discriminate function. At last, the percentage of the accurate predicted group membership of the eliminated observation was calculated in the results. The cross-validity sample might confirm the internal validity of the discriminate results. The results for cross-validity samples (Table 35) demonstrated that 91.6% of the cross-validated grouped cases were correctly classified.

Table 35 *Classification Results*

Estimate Sample [a]					
		Predicted Group Membership by Counts (percentage)			
Actual Group	No. of Cases	Latent Loyalty (Cluster I)	True Loyalty (Cluster II)	Low Loyalty (Cluster III)	Spurious Loyalty (Cluster IV)
Cluster I	99	93 (93.9%)	2 (2%)	4 (4%)	0 (0%)
Cluster II	174	4 (2.3%)	168 (96.6%)	1 (0.6%)	1 (0.6%)
Cluster III	71	4 (5.6%)	3 (4.2%)	64 (90.1%)	0 (0%)
Cluster IV	23	0 (0%)	6 (26.1%)	1 (4.3%)	16 (69.6%)
Cross-validated [b]					
		Predicted Group Membership by Count (percentage)			
Actual Group	No. of Cases	Latent Loyalty (Cluster I)	True Loyalty (Cluster II)	Low Loyalty (Cluster III)	Spurious Loyalty (Cluster IV)
Cluster I	99	93 (93.9%)	2 (2%)	4 (4.0%)	0 (0%)
Cluster II	174	5 (2.9%)	166 (95.4%)	1 (0.6%)	2 (1.1%)
Cluster III	71	4 (5.6%)	4 (5.6%)	63 (88.7%)	0 (0%)
Cluster IV	23	0 (0%)	7 (30.4%)	2 (8.7%)	14 (60.9%)

Note. a. Percentage of original grouped cases correctly classified (hit ratio): 92.9%. b. Percentage of cross-validated grouped cases correctly classified: 91.6%.

Graphical display of centroids (means) in each segment would help managers to understand the distribution of plots of customer loyalty and behaviors in the first two

discriminate functions (Figure 40). Table 36 depicts the signs for the standardized means of each group which the patterns of the opposite signs between the groups was distinguished by the associated discriminate function. For example, the latent loyalty segments in Discriminate Function 1 were positive; and the true loyalty, the low loyalty and spurious loyalty in Discriminate Function 1 were negative. Furthermore, the weights for low loyalty and true loyalty in Discriminate Function 1 were similar. So the location for low loyalty and true loyalty in Discriminate Function 1 were close together.

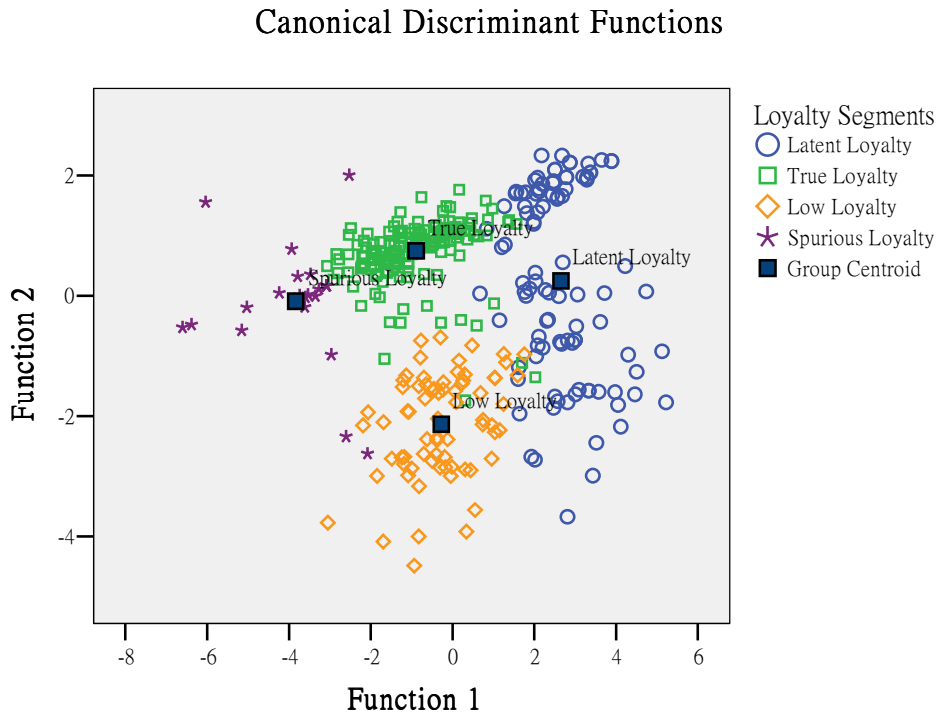
Based on Figure 40 and Table 36, Function 1 distinguished spurious loyalty from latent loyalty and the other two groups of loyalty (true and low loyalty). Function 2 distinguished low loyalty segment from the other three loyalty segments (spurious, low and latent loyalty). Although Function 3 would not present any graphical displays, it had the least effects (low eigenvalues and canonical correlation coefficients in Table 32) in distinguishing spurious from the other three loyalty segments (latent, true, and low loyalty) in the survey sample in Table 36.

According to the discriminate scores of each case in three discriminate functions, the scatterplot presented the clearly visual diagraph for the four segments of customer loyalty in three dimensions diagraph as Figure 41. The Function 1 in Figure 41 displayed to distinguish the latent loyalty, spurious loyalty, and the other two loyalty segments (true and low loyalty). The Function 2 distinguished low loyalty from the other three loyalty segments (true, spurious, and latent loyalty). The function 3 displayed to distinguish spurious loyalty, latent loyalty and the other two loyalty segments (true and low loyalty). The Figure 41 confirmed the statistical results in the visual diagraphs.

Table 36 *Discriminate Functions at Group Centroids*

Segments of Loyalty	Function		
	1	2	3
Latent Loyalty	2.652	.246	.179
True Loyalty	-.888	.743	-.163
Low Loyalty	-.278	-2.135	-.122
Spurious Loyalty	-3.838	-.092	.845

Note. Unstandardized canonical discriminate functions evaluated at group means (Centroids).



Note. All discriminant functions except first two functions were assumed zero

Figure 40 Plots for the four segments of customer loyalty

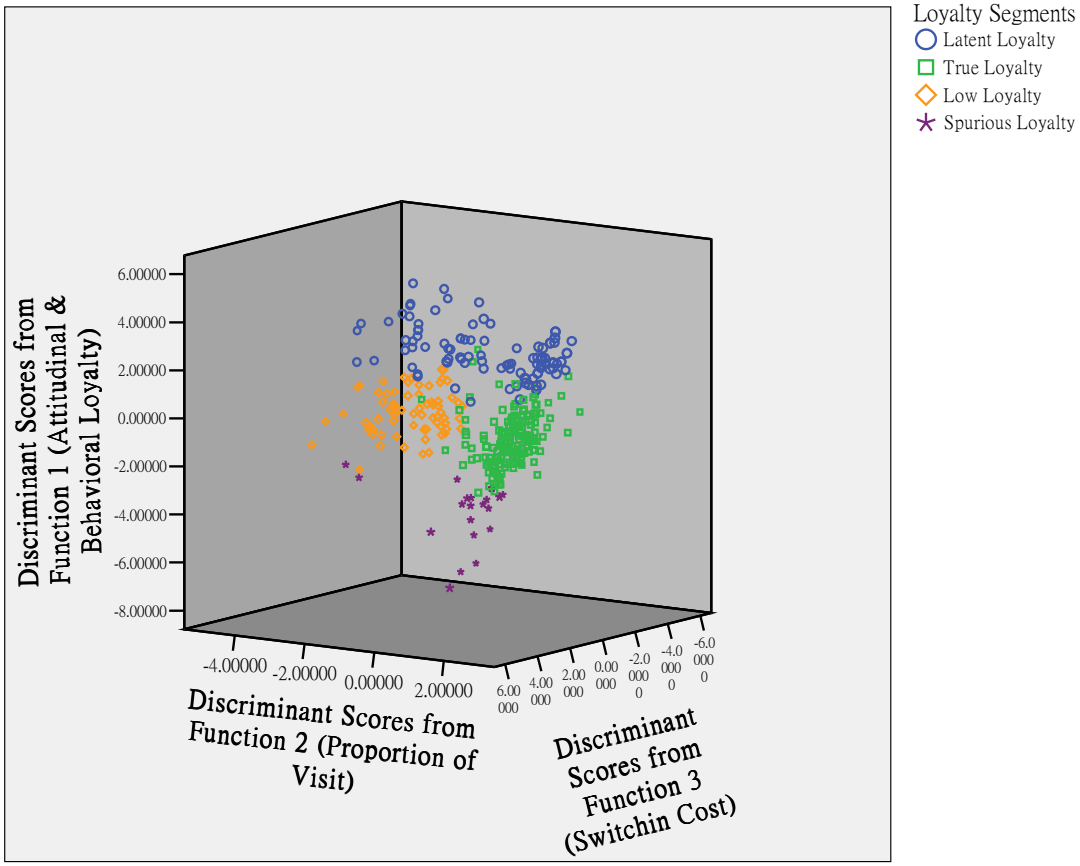


Figure 41 3D Scatterplots of the discriminate scores in 3 discriminate functions among the four segments of customer loyalty

Finally, the new predicted membership of four segments of customer loyalty by three canonical discriminate functions for all cases was saved in the data sets. This new predicted membership of the four segments of customer loyalty was used for later statistical analysis. The following section connects the customers' demographic profiles to the antecedents of customer loyalty (attitudinal loyalty), the behavioral outcomes of customer loyalty (behavioral loyalty), and the new predicted membership of the four segments of customer loyalty.

Chi-square Analysis for Independent Test

$H_0$6: There are no significant differences among each group of customer loyalty (true, spurious, latent, and low loyalty) when compared with customer demographic profiles.

In order to determine whether demographic profiles differed in terms of the four segments of customer loyalty, the Chi-square analysis was used to examine the associated strength of the ten variables of customer demographic profiles (e.g., age, gender, marital status, ethnicity, household size, education, occupation, annual income, traveling goal, and nation of residency) to the new memberships of four segments of customers' loyalty. The null hypothesis 6 was that there were no significant differences among groups of customer loyalty when compared with customer demographic profiles. The Chi-square test was appropriate to determine whether there was a statistical significant relation between two nominal variables. One major assumption for Chi-square analysis was that the expected counted in 80% of cells should be greater than five. While this assumption was violated, the Chi-square analysis was too liberal. The prior cross-tabulation showed all variables except from gender had over 20% of the expected frequencies with less than 5. Thus, the combination of cells with less than five counts between related levels of ten demographic variables was employed to satisfy the assumptions.

The summary as Table 37 for Chi-square analysis showed that the Pearson Chi-square statistic test for different level education was statistically significant differences on the four segments of customer loyalty. Thus, the null hypothesis 6 exception from occupation by new segments of customer loyalty was generally failed to reject. Especially, Chi-square analysis for occupation by four segments of customer loyalty as Table 37, X^2 (6) =3.114 P=0.026<0.05 was statistically significance. The

significant results also indicated that there was an association between the educational levels and the four new segments of customers' loyalty.

Based on this significant result and cross tabulation as Table 4.37, there were four important findings. Firstly, this result reflected the fact that when customers worked in commerce industry, about 17.9% of customers were distinguished to latent loyalty, 59.3% of customers to true loyalty, 17.1% of customers to low loyalty, and 5.7% of customers to spurious loyalty. Secondly, this result indicated that when customers have an occupation in education, government, or service industry, 29.2% of customer was classified to latent loyalty, 49.2% of customers to true loyalty, 19.2% of customer to low loyalty, and 2.5% of customers to spurious loyalty. Thirdly, this result showed that when customers worked as engineer, 31.3% of customers were distinguished to latent loyalty, 35.8% of customers to true loyalty, 25.4% of customers to low loyalty, and 7.5% of customers to spurious loyalty. Lastly, this result presented that when customers was self-employed, or not in the work force, 41.2% of customers was belonged to latent loyalty, 37.3% of customers to true loyalty, 17.6% of customers to low loyalty, and 3.9% of customers to spurious loyalty. So the differences of occupational level in four segments of customer loyalty were bigger than the differences happened by chance.

The symmetric measures between two nominal variables were further conducted to measure the strength of the significant relationships between the occupation and the membership of segments of customers' loyalty. The Cramer's V statistic was appropriate to measure the associated strength especially more than 2 by 2 levels between two nominal variables (Morgan, Leech, Gloeckner, & Barrett, 2007). While the associated relationship was strong, the statistic value should be more than ±0.5 (0.3 medium effect;

0.1 small effects). The Cramer's V 0.229 indicated there was a relationship of small effect between occupation and the membership of segments of customers' loyalty (Cohen, 1988).

In addition, the cross-tabulation in Table 37 also showed true loyalty generally dominated the proximate 50% of respondents in each demographic variable. This pattern implied true loyal customers distributed similarly in each demographic variable. In other words, the distribution of the true loyal customers seemed to be unaffected by demographic factors.

Table 37 *Cross Tabulation and Chi-square Analysis of Customers' Demographic Profiles among the Four Segments of Customers Loyalty*

Demographic Variables / Levels		Segments of Loyalty: Latent Loyalty	True Loyalty	Low Loyalty	Spurious Loyalty	X^2	*P*
Age						*14.975*	*0.092*
Under 35 years old	Count	48	101	32	8		
	% within Age	25.4%	53.4%	16.9%	4.2%		
36-45 years old	Count	27	30	21	1		
	% within Age	34.2%	38.0%	26.6%	1.3%		
46-55 years old	Count	9	24	8	5		
	% within Age	19.6%	52.2%	17.4%	10.9%		
Over 56 years old	Count	17	24	9	3		
	% within Age	32.1%	45.3%	17.0%	5.7%		
Gender						*1.721*	*0.632*
Female	Count	40	77	24	7		
	% within Gender	27.0%	52.0%	16.2%	4.7%		
Male	Count	61	101	46	10		
	% within Gender	28.0%	46.3%	21.1%	4.6%		
Marital						*1.408*	*0.704*
Single	Count	42	77	25	8		
	% within Marital	27.6%	50.7%	16.4%	5.3%		
Married	Count	59	101	45	9		
	% within Marital	27.6%	47.2%	21.0%	4.2%		
Ethnicity						*9.700*	*0.138*
Asian	Count	51	106	40	10		
	% within Ethnicity	24.6%	51.2%	19.3%	4.8%		
Caucasian/white	Count	39	50	19	2		
	% within Ethnicity	35.5%	45.5%	17.3%	1.8%		
Hispanic/Latino, multiracial or others	Count	11	23	11	5		
	% within Ethnicity	22.0%	46.0%	22.0%	10.0%		
Household						*8.267*	*0.219*
1 person & 2 persons	Count	38	80	32	7		
	% within	24.2%	51.0%	20.4%	4.5%		

	Household						
3 persons & 4 persons	Count	37	55	17	2		
	% within Household	33.3%	49.5%	15.3%	1.8%		
5 person and above 5 persons	Count	26	44	21	8		
	% within Household	26.3%	44.4%	21.2%	8.1%		
Education						*7.107*	*0.311*
High School & Two Year College	Count	25	37	20	5		
	% within Education	28.7%	42.5%	23.0%	5.7%		
Four Year College	Count	34	69	30	9		
	% within Education	23.9%	48.6%	21.1%	6.3%		
Post Graduate	Count	39	72	20	3		
	% within Education	29.1%	53.7%	14.9%	2.2%		
Occupation						*18.577*	*0.026**
Commerce	Count	22	73	21	7		
	% within Occupation	17.9%	59.3%	17.1%	5.7%		
Education, Government, Service Industry	Count	35	59	23	3		
	% within Occupation	29.2%	49.2%	19.2%	2.5%		
Engineer	Count	21	24	17	5		
	% within Occupation	31.3%	35.8%	25.4%	7.5%		
Self employed & not in Work Force	Count	21	19	9	2		
	% within Occupation	41.2%	37.3%	17.6%	3.9%		
Income						*4.433*	*0.618*
Less than US$39999	Count	39	58	27	5		
	% within Income	30.2%	45.0%	20.9%	3.9%		
US$40000-59999	Count	41	84	34	7		
	% within Income	24.7%	50.6%	20.5%	4.2%		
Over US$60000	Count	20	36	9	5		
	% within Income	28.6%	51.4%	12.9%	7.1%		
Goal						*7.421*	*0.720*
Business	Count	35	76	24	9		
	% within Goal	24.3%	52.8%	16.7%	6.3%		
Pleasure	Count	15	31	17	1		
	% within Goal	23.4%	48.4%	26.6%	1.6%		
Visiting Friends/Relatives	Count	43	61	25	6		

	% within Goal	31.9%	45.2%	18.5%	4.4%		
Conference/Events	Count	6	8	4	1		
	% within Goal	31.6%	42.1%	21.1%	5.3%		
Residency Nation						*3.114*	*0.794*
Taiwan	Count	31	56	20	8		
	% within Nation	27.0%	48.7%	17.4%	7.0%		
Other Asia Country	Count	32	53	25	5		
	% within Nation	27.8%	46.1%	21.7%	4.3%		
America, Europe, and Others	Count	37	69	25	4		
	% within Nation	27.4%	51.1%	18.5%	3.0%		

Note. a.* represented statistical significance at Alpha=0.05

One-Way Analysis of Variance (ANOVA)

One way ANOVA was employed to identify the statistical differences on attitudinal loyalty, or behavioral loyalty across all groups of the customers' demographic profiles. The main purpose of ANOVA was to examine the differences on attitudinal loyalty or behavioral loyalty across all sub-groups of each demographic variable. The demographic variables could be treated as the effects of moderators between independent variable and dependent variable at the regression model. There were ten demographic variables investigated in the customers' profiles such as age, gender, marital, ethnicity, household size, education, occupation, annual income, traveling goal, and residency nation. All ten variables in customer demographic profiles were treated as independent variables; the attitudinal loyalty or behavioral loyalty was entered as dependant variables in ANOVA.

ANOVA on Attitudinal Loyalty

$H_0$7: There are no significant differences among attitudinal loyalty when compared with customer demographic profiles.

The Levene's test was used to examine the assumptions of the homogeneity of

variance before ANOVA. The results of Levene's test as Table 38 except annual income indicated no significantly different variances on attitudinal loyalty across the sub-groups of each demographic variable, meaning the assumption of homogeneity was met. The Levene's test showed statistically significantly different variances on attitudinal loyalty across sub-groups of annual income. It might reveal unreliable results of ANOVA across sub-groups of annual income on attitudinal loyalty. The ANOVA statistical results summary as Table 38 suggested there was only one statistically significant difference on attitudinal loyalty across sub-groups of demographic variables: educational level. Table 38 showed $F(3, 359) = 3.345$, $P = 0.019 < 0.05$ on attitudinal loyalty among sub groups of educational level, meaning statistically significant differences on attitudinal loyalty among sub groups of educational level. Also its Eta square (η^2)was equal to 0.027, indicating small effect (Cohen, 1988). While the effective size for F statistic test was 0.01, 0.06, and 0.15, it was considered to be small, medium, and large effects (Cohen, 1988).

The post hoc test of Tukey HSD was further employed to identify which sub-groups of education level caused the differences on attitudinal loyalty. The statistic results for the post hoc test of Tukey shown as Table 39 appeared the respondents with educational level of the graduate college showed more strong attitudinal loyalty than respondents with four year college degree.

Table 38 *ANOVA for Demographic Profiles on Attitudinal Loyalty*

Source	*P for Levene's Test*	SS	df	F	*P for ANOVA*
Age	*0.922*				
Between Groups		6.521	5	1.310	*0.259*
Within Groups		359.479	361		
Total		366	366		
Gender	*0.959*				
Between Groups		0.163	1	0.163	*0.687*
Within Groups		365.273	364		
Total		365.436	365		
Marital	*0.805*				
Between Groups		1.130	2	0.562	*0.571*
Within Groups		363.868	363		
Total		365.998	365		
Ethnicity	*0.192*				
Between Groups		12.920	7	1.877	*0.072*
Within Groups		353.080	359		
Total		366.000	366		
Household Size	*0.235*				
Between Groups		2.986	5	0.594	*0.705*
Within Groups		363.014	361		
Total		366.000	366		
Education	*0.407*				
Between Groups		9.873	3	3.345	*0.019**
Within Groups		353.182	359		
Total		363.055	362		
Occupation	*0.130*				
Between Groups		7.363	7	1.089	*0.37*
Within Groups		353.775	353		
Total		361.412	360		
Annual Income	*0.001**				
Between Groups		8.773	7	1.257	*0.271*
Within Groups		355.955	357		
Total		364.728	364		
Travel Goal	*0.221*				
Between Groups		3.268	6	0.537	*0.789*
Within Groups		359.820	355		
Total		363.087	361		
Residency Nation	*0.421*				
Between Groups		6.296	5	1.261	*0.280*
Within Groups		358.432	359		
Total		364.728	364		

Note. a.* Represented statistical significance while alpha=0.05. b. Dependent Variable:

Attitudinal Loyalty. c. Independent Variable: Demographic Variables in Customer Profile

Table 39 *Post Hoc Test for Tukey Multiple Comparison*

(I) Education	(J) Education	Mean Difference (I-J)	Std. Error	*p*
High School	Two Year College	-.24854746	.28939200	*.826*
	Four Year College	-.22948740	.27784748	*.842*
	Post Graduate	-.55005073	.27859081	*.200*
Two Year College	High School	.24854746	.28939200	*.826*
	Four Year College	.01906007	.14284531	*.999*
	Post Graduate	-.30150327	.14428583	*.158*
Four Year College	High School	.22948740	.27784748	*.842*
	Two Year College	-.01906007	.14284531	*.999*
	Post Graduate	-.32056333	.11945665	*.038**
Post Graduate	High School	.55005073	.27859081	*.200*
	Two Year College	.30150327	.14428583	*.158*
	Four Year College	.32056333	.11945665	*.038**

Note. a. * represented that the mean difference is significant at the .05 level. b. Dependent Variable: Attitudinal Loyalty. c. Independent Variable: Education.

ANOVA on Behavioral Loyalty

$H_0$8: There are no significant differences among behavioral loyalty when compared with customer demographic profiles.

The column in Table 40 for p-value of Levene's test show no statistical significant

differences of variances across sub-groups of customers' demographic profiles on behavioral loyalty. It suggested the assumption of homogeneity was met. The summary of the statistic results for ANOVA comparing customer demographic variables on behavioral loyalty as Table 40 showed no statistical significance. It indicated no statistical differences on behavioral loyalty across sub-groups of customer demographical profiles.

Table 40 *ANOVA for Demographic Profiles on Behavioral Loyalty*

Source	*P for Levene's Test*	SS	df	F	*P for ANOVA*
Age	*0.972*				
Between Groups		5.698	5	1.142	*0.338*
Within Groups		360.302	361		
Total		366	366		
Gender	*0.873*				
Between Groups		0.317	1	0.315	*0.575*
Within Groups		365.285	364		
Total		365.602	365		
Marital	*0.264*				
Between Groups		4.136	2	0.562	*0.571*
Within Groups		361.465	363		
Total		365.602	365		
Ethnicity	*0.434*				
Between Groups		12.356	7	1.792	*0.088*
Within Groups		353.644	359		
Total		366.000	366		
Household Size	*0.798*				
Between Groups		2.986	5	1.582	*0.164*
Within Groups		363.014	361		
Total		366.000	366		
Education	*0.956*				
Between Groups		4.207	3	1.414	*0.238*
Within Groups		356.086	359		
Total		360.294	362		
Occupation	*0.222*				
Between Groups		13.373	7	1.943	*0.062*
Within Groups		347.112	353		
Total		360.486	360		
Annual Income	*0.546*				
Between Groups		2.493	7	0.352	*0.929*
Within Groups		360.787	357		
Total		363.280	364		
Travel Goal	*0.386*				
Between Groups		7.281	6	1.216	*0.297*
Within Groups		354.195	355		
Total		361.476	361		
Residency Nation	*0.819*				
Between Groups		5.395	5	1.082	*0.370*
Within Groups		357.866	359		
Total		363.280	364		

Note. a. "*" represented statistical significance while Alpha=0.05. b. Dependent Variable: Behavioral Loyalty. c. Independent Variable: Demographic Variable.

Summary

The minimum valid sample size (after deleted the outlier in simple regression analysis) which used in this study was 355 (over critical value: 296). The sample size was sufficient to examine all of the proposed research hypotheses with Alpha=0.05, power=0.8, and medium effective size. The reliability coefficients for the extracted factors of index of marketing drivers were as follows: (a) fundamental marketing strategy (0.847), and (b) progressive marketing strategy (0.898). The reliability coefficients for the predictor variables to separate segments of customers loyalty was as follows: (a) trust (0.73), (b) commitment (0.79), (c) switching cost (0.67), (d) WOM endorsement (0.82), and (e) cooperation (0.77). The reliability coefficients of the attitudinal loyalty (the extracted factor for three attributes of trust, three attributes of commitments, two attributes of switching cost) were 0.850. The reliability coefficient of the behavioral loyalty (the extracted factor for three attributes of WOM endorsement and three attributes of cooperation) were 0.851. Once that all reliability coefficients for all scales used in related statistic analysis was over 0.6, the scales were stable and acceptable in this study (Hair et al., 2006).

The results of null hypotheses test were summarized as follows: $H_0$1: There are no significant differences between the importance ranking of marketing drivers and the delivery performance of marketing drivers as perceived by the hotel customers was rejected. $H_0$2: There are no significantly positive impacts on attitudinal loyalty from the context of importance scale and performance scale of the marketing drivers related to customer equity was rejected. $H_0$3: There are no significantly positive impacts on behavioral loyalty from the context of importance scale and performance scale of the

marketing drivers related to customer equity were rejected. $H_0$3.1: There are no significantly positive impacts on proportion of visit from the context of importance scale and performance scale of the marketing drivers related to customer equity were accepted. $H_0$4: There are no significantly positive impacts on behavioral loyalty from attitudinal loyalty were rejected. $H_0$4.1: There are no significantly positive impacts on proportion of visit from attitudinal loyalty were accepted. $H_0$5: There are no significantly relationships on the four segments of loyalty: true, latent, spurious, and low loyalty from the composites of attitudinal loyalty and behavioral loyalty by distinguishing the T Hotel customers. $H_0$6: There are no significant differences among each group of customer loyalty (true, spurious, latent, and low loyalty) when compared with customer demographic profiles was accepted. $H_0$7: There are no significant differences among each variable of attitudinal loyalty when compared with customer demographic profiles was accepted. $H_0$8: There are no significant differences among each variable of behavioral loyalty when compared with customer demographic profiles was accepted.

The customer equity theory was partly supported in this study by the regression analysis. Especially, the direct customer equity (proportion of visit) was not confirmed to be regressed from the marketing strategy. There were no linear relationships between the marketing strategy and the proportion of visit. The solutions for distinguishing the four segments of customer loyalty were supported with reliability, internal validity, and cross-validity by MANOVA, multiple discriminate analysis, and ANOVA. The association between the segments of customer loyalty and customers' demographic profiles was rejected. Only significant association with four segments of customer loyalty was occupation. The differences on attitudinal loyalty and behavioral loyalty across

sub-groups of the demographic profiles were not found except from education by the attitudinal loyalty.

The next chapter discusses the findings, conclusion, managerial and theoretical implication, and makes recommendations for future research.

CHAPTER V

CONCLUSIONS

The purpose of this chapter was to summarize the findings of the study, to discuss its implications, and to suggest directions for future study. The first section presents the empirical findings. The second section compares the statistical results with the conclusions from the literature review. The third section answers the research questions. The fourth section discusses the managerial, methodological and theoretical implications. The last section describes the limitations of the study and explores opportunities for future research.

Empirical Findings

The purpose of the study was to validate customer equity theory by relating the marketing drivers to the generation of true customer loyalty among the patrons of a five-star hotel in Taipei, Taiwan. The study was guided by three objectives: (a) to determine the relationship between marketing drivers related to customer equity theory and customer loyalty, (b) to determine the profiles of customers according to the antecedents and behavioral outcomes of customer loyalty, and (c) to determine the association between the customer loyalty and the customer demographic profiles.

In order to meet the objectives of the study, the prior literature information by the traditional approach was reviewed and the gaps in the scholarship were identified. Based

on the results of literature review, a conceptual model was developed to examine the relationship between marketing drivers proposed by customer equity and customer loyalty in T Hotel, Taiwan. The conceptual model included the major three antecedents (attitudinal loyalty) and three behavioral outcomes (behavioral loyalty) of customer loyalty. Ten empirical research hypotheses which highlighted the relationship among the conceptual models were developed. These ten null research hypotheses were empirically examined by ten statistical analyses methods (e. g., exploratory factor analysis, t-test, important-performance analysis, simultaneous multiple regression analysis, simple regression analysis, cluster analysis, MANOVA, simultaneous multiple discriminate analysis, ANOVA, and Chi-square analysis). Table 41 summarizes the results of the ten research hypotheses. Five null hypotheses (e.g., H_01, H_02, H_03, H_04, and H_05) were rejected, and the other five null hypotheses (e.g., $H_03.1$, $H_04.1$, H_06, H_07, and H_08) were not rejected. The next compares the results of the statistical analyses with previous research.

Table 41 *Summary Results of Null Research Hypotheses Testing*

Null Hypotheses	Results	Exception or Findings
$H_0$1: There are no significant differences between the importance ranking of marketing drivers and the delivery performance of marketing drivers as perceived by the hotel customers.	Rejected	The importance ranking of marketing drivers was significantly different from the delivery performance of marketing drivers as perceived by the hotel customers.
$H_0$2: There are no significantly positive impacts on attitudinal loyalty from the context of importance scale and performance scale of the marketing drivers related to customer equity.	Rejected	The progressive marketing strategy and fundamental marketing strategy simultaneously predicted positive impacts on attitudinal loyalty
$H_0$3: There are no significantly positive impacts on behavioral loyalty from the context of importance scale and performance scale of the marketing drivers related to customer equity.	Rejected	Higher on progressive marketing strategy or fundamental marketing strategy led to stronger behavioral loyalty.
$H_0$3.1: There are no significantly positive impacts on proportion of visits from the context of importance scale and performance scale of the marketing drivers related to customer equity.	Failed to reject	There was no linear relationship on behavioral loyalty from the progressive and fundamental marketing strategies.
$H_0$4: There are no significantly positive impacts on behavioral loyalty from attitudinal loyalty.	Rejected	Stronger attitudinal loyalty led to stronger behavioral loyalty for the customers in T Hotel
$H_0$4.1: There are no significantly positive impacts on proportion of visit from attitudinal loyalty.	Failed to reject	There was no linear relationship between attitudinal loyalty and proportion of visit.
$H_0$5: There are no significantly relationships on the four segments of loyalty: true, latent, spurious, and low loyalty from the composites of attitudinal loyalty and behavioral loyalty by distinguishing the T Hotel customers.	Rejected	The composites of attitudinal and behavioral loyalty presented a significant power to classify each customer of T Hotel into the four segments of customer loyalty.
$H_0$6: There are no significant differences among each group of	Failed to reject	There were small effect associations between the

customer loyalty (true, spurious, latent, and low) when compared with customer demographic profiles.		occupation and the four segments of customers' loyalty (exception).
$H_0$7: There are no significant differences among attitudinal loyalty when compared with customer demographic profiles.	Failed to reject	There were statistically significant differences in attitudinal loyalty across educational levels, especially comparison among respondents with post graduate degree by the respondents with the four years college degree (exception).
$H_0$8: There are no significant differences among behavioral loyalty when compared to customer demographic profiles.	Failed to reject	Demographic variables in customer profiles could not predict significant differences in behavioral loyalty.

Comparisons of Statistical Results with Previous Research

Description Analysis for Demographic Profiles

The results of the description analysis for the demographic profiles indicated that the majority of respondents (367) were male (60%), married (60%), 26-35 years old (39%), Asian (56%), lived in a two-person household (23%), had a four-year college degree (39%), worked in commerce (34%), earned between US$40,000-$49,999 a year, were traveling on business (40%), lived in Taiwan (32%), stayed in T Hotel for 4-6 nights (34%), spend more than 15 nights in Taipei (31%), and percentage of visits in T Hotel ranged from 81% to 100% (63%). Judging from these results, T Hotel was a business hotel because 59% of respondents were traveling for business or meetings.

Respondents stayed in T Hotel for an average of 7.5 nights. Respondents spent an average of 9.4 nights in Taipei. Fifty-nine percents of respondents stated that they always stayed in T Hotel when they visited Taipei in the past five years. The largest percentage

of respondents (25%) had had a 2-3 year relationship (length) with T Hotel. Eighty-seven percent of respondents have had a relationship with T Hotel that was longer than one year. This result indicated that the proximate 87% of the respondents were the returning customers in the T Hotel. The largest percentage of the international respondents lived in Japan (25% of respondents), and second largest percentage lived in North America (20%). This result indicated that managers in T Hotel should not just focus on the North American market, but also paid attention to the international market in Japanese one.

Exploratory Factor Analysis

The marketing drivers proposed by customer equity theory were originally grouped to three categories: value, brand, and relationship strategy by the managers' views. The drivers in the three original strategic categories do not correlate highly on the same facts by the customer's ranking. Two common factors extracted from 16 indexes of marketing drivers: fundamental and progressive marketing strategies. The data deduction for the indexes of marketing drivers was different from previous literature reviews (Rust et al., 2004).

The T Hotel was belonged to the member of the Leading Hotel Association; meaning T Hotel did not associate with any famous chain of the hotel in the world. Especially, the indexes of marketing drivers in brand and relationship original strategic categories were regrouped into the different common category by the customer's mind through exploratory factor analysis (EFA). The 10 marketing drives grouped in the progressive marketing strategy was ordered by the weight as follows: an active sponsor of community events, an active sponsor of destination meeting events, related mailing information, reward the preferential treatment for loyalty program, worthy of the loyalty

program, participate in related activity, an excellent corporate citizen, the image of the hotel fit customer's personality, the media advertisement, and know a lot of information about customers. The six marketing drivers grouped in the fundamental marketing strategy were ordered by weight as the follows: original value strategy (convenient location, physical surrounding, superior service, and price), high ethical standards to its customers, and personal services treatment. The results of reliability analyses agreed with the beliefs that both fundamental marketing strategy and progressive marketing strategy were very stable. The check of unidimensionality and convergent validity for both fundamental and progressive marketing strategy was satisfactory.

Data deduction extracted from eight attributes related to three variables (trust, commitment, and switching cost) produced only one common component: attitudinal loyalty. The data deduction supported with previous literature review. The reliability analysis confirmed the measurement of attitudinal loyalty stable for related statistical analysis. In addition, the check for unidimensionality and convergent validity was satisfactory.

Because the measures for the proportion of visit was a percentage scale different from the other two variables (cooperation and word-of-mouth endorsement (WOM) using a Likert type scale), proportion of visit was not grouped together with WOM and cooperation. Data deduction extracted from 6 attributes related to cooperation and WOM endorsement formed only one common factor: behavioral loyalty. The data deduction explained the previous literature reviews. The reliability test indicated that the measurement of behavioral loyalty stable for related statistical analysis. Also the check for unidimensionality, and convergent validity was satisfactory.

T-test and Important-Performance Analyses

The 16 positive results in the gap analysis (performance exceeding importance) revealed that each marketing driver of the T Hotel performed better than the degree which the customers would expect it to deliver based on the importance rating. A positive gap reflected that respondents reported that T Hotel was performing better in related marketing drivers than respondents' expectation. Alternatively, a negative gap believed that respondents believed the T Hotel's performances did not meet to customer' wants in the associated marketing drivers. The results were contrary to the previous related study (Bowen & Shoemaker, 1998; Tideswell & Fredline, 2004). The Bowen's (1998) and Tideswell's (2004) researches did not identify the obvious differences among gap analysis. The three first largest positive gaps performance exceeding importance ranking of the marketing drivers in current study were ordered as follows: "comfortable of hotel physical surrounding," "location of the hotel," and "good value of the room rate." The first three importance ranking of marketing drivers were ordered as follows: "superior service quality," "recognized customer's," and "worthy of the loyalty program." Above three most important ranking on the marketing drivers indicates priority of needs perceived by the customers in T Hotel.

Null hypothesis 1 was that there were no significant differences between the importance ranking of marketing drivers and the delivery performance of marketing drivers as perceived by the hotel customers. The paired samples t-test was performed to determine the differences between the delivered performance of marketing drivers and the perceived importance of marketing drives related to customers equity (value, brand and relationship marketing strategy) perceived by the hotel's customers. The obvious

evidence of the differences between the delivered performance of marketing drivers and the perceived importance of marketing drivers related to customer equity was supported. Thus, null hypotheses 1 was rejected. The results were contrary to previous study (Tideswell & Fredline, 2004). Tideswell and Fredline's (2004) study did not identify any empirical significant difference in all major gaps.

The results of the important performance analysis (IPA) had found 8 marketing drivers located in the segments of "keep up good work" marketing efforts, 3 marketing drivers located in the segments of "concentrate" marketing efforts, and 5 marketing drivers located in the segments of "low priority" marketing effort as Table 42 No marketing driver plotted into the quadrant IV—possible overkill. The results supported to the previous IPA (important-performance analysis) study (Martilla & James, 1997).

Table 42 *Marketing Drivers in the Quadrants of Marketing Efforts*

Quadrant II: Concentrate Here	Quadrant I: Keep up Good Work
7. The media advertisement of the hotel 8. Know a lot of information about customer 11.The preferential treatment from loyalty program	1. Superior Service. 2. Personal service treatment 3. Worthy of the loyalty program 4. Good value of the room rate 5. High ethical standards to its customers 6. Comfortable of physical surrounding 9. Location of the hotel 10. The image of the hotel fit customer's personality
Quadrant III: Low Priority	Quadrant IV: Possible Overkill
12. An excellent corporate citizen 13. Related mailing information engage me 14. An active sponsor of community events 15. An active sponsor of destination meeting events 16. Participate in related activity	

Regression Analysis

Null hypothesis 2 was that there were no significantly positive impacts on attitudinal loyalty from the context of importance scale and performance scale of the marketing drivers related to customer equity (e.g., value strategy, brand strategy, and relationship strategy). The multiple regression analysis was conducted to determine the positive impacts on attitudinal loyalty from fundamental marketing strategy and progressive marketing strategy (data deduction from marketing drives linked to customer equity). The evidence of multiple regression analysis indicated the combination of the fundamental marketing strategy and the progressive marketing strategy had strong positive impacts on attitudinal loyalty. Hence, the null hypothesis 2 was rejected. If the fundamental marketing strategy was increased by 1 unit, then the attitudinal loyalty would improve 0.455 units shown as Table 22. If the progressive marketing strategy was augmented by 1unit, then the attitudinal loyalty would improve 0.498 units presented as Table 22. The results supported with the customer equity theory and the related study (Ekinci & Riley, 1999; Petrick, 2002; Rust et al., 2005; Rust et al., 2004).

Null hypothesis 3 was that there were no significantly positive impacts on behavioral loyalty from the context of importance scale and performance scale of the marketing drivers related to customer equity. The simultaneous multiple regression analysis was employed to determine the positive impact on behavioral loyalty from the fundamental marketing strategy and progressive marketing strategy. The considerable evidence of empirical tests showed the combination of the fundamental marketing strategy and the progressive marketing strategy predicted the strong positive impacts on behavioral loyalty. Therefore, the null hypothesis 3 was rejected. If the fundamental

marketing strategy was increased by 1 unit, the behavioral loyalty would improve 0.231units shown as Table 24. If the progressive marketing strategy was augmented by 1 unit, then the behavioral loyalty would get better 0.547 units shown as Table 24. The results agreed with the customer equity theory and the previous related study (Gursoy, Spangenberg, & Rutherford, 2006; Mattila, 2001; Rust et al., 2005; Rust et al., 2004).

The null hypothesis 3.1 presented that there was no significant positive impact on the proportion of visit from the context of importance scale and performance scale of the marketing drivers related to customer equity. The multiple regression analysis was performed to determine the positive impacts on proportion of visit from fundamental marketing strategy and progressive marketing strategy. The results could not find the combination of fundamental marketing strategy and progressive marketing strategy positively impacted on the proportion of visit. The results could not completely support to the customer equity theory (Rust et al., 2005; Rust et al., 2004) and the other previous study (Gursoy et al., 2006; Scanlan & McPhail, 2000). The results were consistent with some other previous study (Back & Parks, 2003). The proportion of visit was an indication for direct profits (as direct equity in customer equity theory) by the marketing efforts in the current research design. The WOM endorsement and cooperation was assumed a measure for benefits that affected the other customers' purchasing or profits transferring to the hotel (indirect equity in customer equity theory) in the current study. The results failed to support significantly positive impacts on direct equity, but supported significantly positive impacts on indirect equity by the marketing drivers derived from customer equity theory.

Although, the null hypothesis 3.1 was not rejected, it did not expose that the

fundamental marketing strategy and progressive marketing strategy had no contribution on the proportion of visit. In other words, the results revealed no linear relationship on proportion of visit from fundamental marketing strategy and progressive marketing strategy. The results were contrary to the customer equity theory (Rust et al., 2005; Rust et al., 2004). In real world, the business customers might not select or pay for their hotels, because of the companies lodging policy or the host's complimentary. Moreover, the international business men or tourists might not return to the same location or city, even that the customers wanted strongly to repurchase again. All above might lead that marketing strategy was identified none significantly positive impacts on proportion of visit, or share in the market.

Null hypothesis 4 was that there were no significantly positive impacts on behavioral loyalty from attitudinal loyalty. In order to examine the null hypothesis 4, the simple regression analysis was conducted to determine the positive impacts on behavioral loyalty from attitudinal loyalty. The results indicated attitudinal loyalty predicted strong a positive relationship with behavioral loyalty. The results supported: while attitudinal loyalty was increased one unit, then behavioral loyalty would be increased 0.74 units shown as Table 27. Therefore, the null hypothesis 4 was rejected. The results consistently supported with the customer equity theory (Rust et al., 2005; Rust et al., 2004), cognitive dissonance theory (Insko, 1967; McGuire, 1966), planned action theory (Ajzen & Fishbein, 1980; Oh, 2002)and the previous related study (Baldinger & Rubinson, 1996; Dick & Basu, 1994; Mattila, 2001).

Null hypothesis 4.1 was that there are no significantly positive impacts on proportion of visit from attitudinal loyalty. In order to examine the null hypothesis 4.1,

the simple regression was performed to determine the positive impacts on proportion of visit from attitudinal loyalty. The results found no linear relationships on the proportion of visit from the attitudinal loyalty. Therefore, the results was failed to reject null hypothesis 4.1. The results seemed to explain the cognitive dissonance theory (Insko, 1967) and was contrary to the previous study (Bennett & Rundle-Thiele, 2002; Dick & Basu, 1994). Bennett's (2002) study surveyed the owner's attitudes to the salesmen of advertisement agency. The results were contrary to Baldinger and Rubinsons' (1996) study in attitudinal loyal leading behavioral purchasing on goods. Customers in the hotel industry which presented high attitudinal loyalty did not cultivate repurchasing loyalty.

Multivariate Data Analysis

Null hypothesis 5 was that the composites of attitudinal and behavioral Loyalty would not be used to separate T Hotel customer into the four segments of loyalties: true, latent, spurious, and low loyalty. Cluster analysis was used to classified respondents so that each respondent was similar to others in the cluster based on a set of variables under the attitudinal loyalty (trust, commitment, and switching cost) and behavioral loyalty (proportion of visit, cooperation, and WOM endorsement). The results of MANOVA connected with multiple discriminate analysis were used to identify, label, and interpret the distinctive characteristics of the four segments of customer loyalty: true, latent, spurious, and latent loyalty.

Cluster Analysis

Based on similar or different measures among a set of variables under the attitudinal loyalty (e.g., trust, commitment, and switching cost) or behavioral loyalty (e.g., cooperation, WOM endorsement, and proportion of visit) the solutions of four clusters

was classified through hierarchical cluster analysis. The statistic results presented that of 27% of respondents were grouped into Cluster I, 47.4% of respondents were grouped into Cluster II; 19.3% of respondents were grouped into Cluster III, and 6.3% of respondents were grouped into Cluster IV.

MANOVA Connected to Discriminate Analysis

The statistical results of multivariate analysis of variance (MANOVA) indicated that each clusters showed distinctive differences on all set of trust, commitment, switching cost, cooperation, word-of-mouth endorsement, and proportion of visit. Also the statistical results of univariate analysis of variance (ANOVA) presented that each cluster reflected separately the distinctive differences on each antecedent and outcome of customer loyalty (e.g., trust, commitment, switching cost, cooperation, word-of-mouth endorsement, and proportion of visit). Thus, the statistical significances for both MANOVA and ANOVA revealed each clusters for the four clusters of customers' loyalty showed the distinctive characteristics in terms of trust, commitment, switching cost, cooperation, WOM endorsement, and proportion of visit. These statistical results did not just denote the practical significance for hotel managers but also exposed the internal validity for the previous cluster solutions. The results were consistent with the previous related study (Baloglu, 2002; Tideswell & Fredline, 2004).

Based on the statistic results of the multiple discriminate analyses, three discriminate functions were computed to distinguish the four clusters. Three discriminate functions all presented the statistic significant power to distinguish the four clusters of customers' loyalty. Thus, the null hypothesis 5 that there were no significant relationships on the four segments of loyalty: true, latent, spurious, and low loyalty from the composites of

attitudinal loyalty and behavioral loyalty by distinguishing the T Hotel customers was fully rejected. Based on the loading on discriminate function from each predictor variable (trust, commitment, switching cost, cooperation, WOM endorsement, and proportion of visit), the three discriminate functions was labeled to "the dimension of attitudinal (trust & commitment) and behavioral loyalty (cooperation and word-of-mouth) - discriminate function 1," "the dimension of proportion of visit - discriminate function 2," and "the dimension of switching cost - discriminate function 3."

The results of classification showed 92.9% of the respondents were correctly classified. It indicated high reliability for the prior cluster solutions. The results of cross-validity sample presented 91.6% of the respondents were correctly classification. It indicated the internal validity of the discriminate results.

Based on mean of each predictor (trust, commitment, switching cost, cooperation, word-of-mouth endorsement, and proportion of visit) in the four clusters, the new membership of four clusters was renamed to four segments of customers' loyalty. More than one-fourth (27.5%) of respondents were classified into latent loyalty, 48.8% of respondents were classified into true loyalty, 19.1% of respondents were classified into low loyalty, and 4.6% of respondents were classified into spurious loyalty. This result (shown in Figure 42) was consistent with those of the previous study (Dick & Basu, 1994), similar to Tideswell's study (Tideswell & Fredline, 2004) ,but opposite to the previous research in casino study (Baloglu, 2002). The Baloglu's study indicated only three segments of customer loyalty were identified: true loyalty (34%), spurious loyalty (44%), and low loyalty (22%). The T Hotel had higher percentages in latent loyalty and lower percentages in spurious loyalty when compared with Baloglu's (2002) casino study.

Baloglu's (2002) study did not succeed to identify any latent loyal segment in the casino case.

Tideswell's (2004) surveyed with 2,000 guests at two five-star resorts on the Gold Coast, Australia perceived the current effectiveness of the marketing strategies used to develop the customer loyalty. Tideswell's (2004) study only presented four different level customer loyalty from low to extremely loyalty: I (extremely loyalty), II (high loyalty), III (moderate loyalty), and IV (low loyalty). No spurious loyalty and latent loyalty was found in Tideswell's study. Tideswell's (2004) indicated attitudinal and behavioral loyalty jointly strongly corrected together. The behavioral loyalty in Tideswell's (2004) study was measured by likelihood of return, length of stay, or times for visiting hotel. Likelihood of return was different from actual repurchasing.

The different percentages of segment of customer loyalty among the Wang's, Baloglu's and Tideswell's may base on the different characteristics of the target property such as hotel, resort, or casino. Although there are the similar statistic procedures among three researchers, the marketing positions for the target properties in these three studies are also different. The different underlying of customer loyalty perceived by the customers' ethnicity or culture may lead the variety results in the study. According to this finding and the other two scholar's results, the lodging industry may regularly survey the segment of customer loyalty depending on the characteristics of the property, the diversity customers, and the definition of customer loyalty for the instruments. Thus, the generalization of the finding for the segments of customer loyalty should be carefully fitted into the other lodging properties.

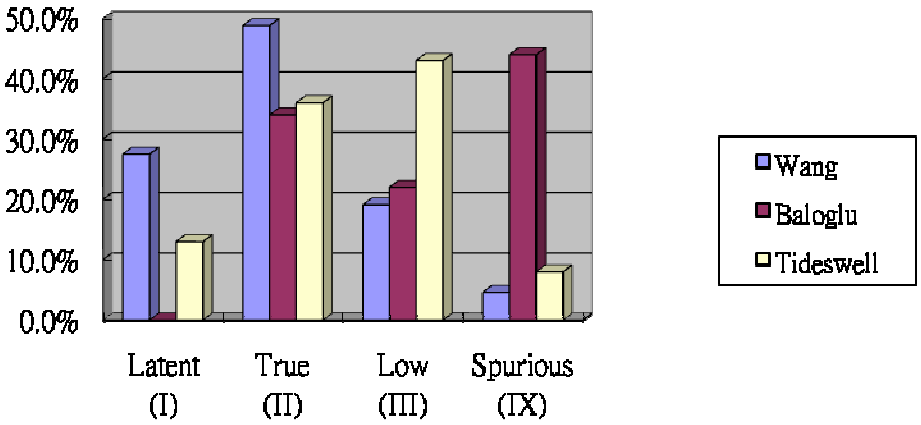


Figure 42 Percentage of four segments of loyalty compared with previous study

Chi-square Analysis for Independent test

Null hypothesis 6 was that there were no significant differences among each group of customer loyalty (true, spurious, latent, and low loyalty) when compared with customer demographic profiles. Chi-square analysis was conducted to determine whether there was significant association between two nominal variables (new predicted membership of four segments of customers' loyalty and demographic variables in customers' profiles). Null hypothesis 6 was generally failed to reject. There were generally no significant associations between new membership of four segments of customers' loyalty and demographic variables exception from occupation. The results exceptions from above were fund that there were significant associations between the occupation and the new predicted membership of four segments of customer's loyalty. This seemed to represent the facts there was a small effect association between occupation and the new predicted membership of the four segments of customers' loyalty. The results was the opposite of findings to the previous study (Tideswell & Fredline,

2004). Tideswell's (2004) study found significant relations between the membership of segments of customer loyalty and age, gender, income, children in house, and normal place of residence.

One-way Analysis of Variance

Null hypothesis 7 was that there were no significant differences among attitudinal loyalty when compared with customer demographic profiles. One-way analysis of variance (ANOVA) was performed to identify the differences among sub-groups of customer demographic profiles on attitudinal loyalty. The statistical results indicated that sub-groups of customer demographic profiles except from education could not generally reflect the significant differences on attitudinal loyalty. It indicated that demographic variables in customer profiles could not generally predicted any difference on attitudinal loyalty. The results were consistent to the previous study for the surveying representative sample in the USA (Peterson & Lyer, 2005). Except from the above rules were that the customers with different educational level could have the significantly different attitudinal loyalty. Particularly, the empirical test supported the belief that customers with post graduate degrees showed stronger attitudinal loyalty than did customers with four year college degrees. It revealed that the post graduate respondents with high research capabilities could find out the information about T Hotel that led them to trust that hotel and make a commitment to there.

Null hypothesis 8 was that there were no significant differences among behavioral loyalty when compared with customer demographic profiles. One-way analysis of variance (ANOVA) was used to identify the differences among sub-groups of customer demographic profiles on behavioral loyalty. The empirical evidence showed that there

were no statistically significant differences among demographic sub-groups on behavioral loyalty. The results were in contrary to the previous related study (Fu & Parks, 2001; Skogland & Siguaw, 2004; Tideswell & Fredline, 2004). T Hotel was one of international business hotel. The other previous related study likely focused more on the casino, resort, or local restaurant. The international business hotel might difficultly form the specific pattern on behavioral loyalty by the demographic profiles.

Conclusions on Research Questions

The purpose of the study was to validate customer equity theory by relating the marketing drivers to the generation of true customer loyalty among the patrons of a five-star hotel in Taipei, Taiwan. The study was guided by three objectives: (a) to determine the relationship between marketing drivers related to customer equity theory and customer loyalty, (b) to determine the profiles of customers according to the antecedents and behavioral outcomes of customer loyalty, and (c) to determine the association between the customer loyalty and the customer demographic profiles.

Objective 1**:** To determine the relationship between marketing drivers related to customer equity theory and customer loyalty.

Operational Research Questions (Demographic)

1. What are the customer demographic profiles of the target hotel in terms of patrons' age, gender, marital status, ethnicity, household size, education, occupation, income, travel goal, citizenship, or resident nation?

The majority of customers in T Hotel were male, married, about 26-35 years old, Asia ethnicity, holding two persons in household size, with four year college degree. Also the majority of customers in T Hotel worked in commerce industry, had annual income US$

40,000-49,999, traveled for business goals, and mostly came from Taiwan.

2. What are the customer repurchase behaviors in the target hotel?

Majority of customers in T Hotel traveled for business goals, and second majority of customers for pleasure. They averagely stayed for 7.5 nights in T Hotel when they visited for 9.4 nights at the Taipei. Eighty-seven percents of customers were returned customers conservatively estimated by returning over one year. Average proportion of visits at the T Hotel when compared to stay in Taipei was 80%. The majority of the international customers came from the Japan, and second from North America.

Operation Research Questions (Marketing Drivers)

3. What are the differences between the delivery performance of value strategy, brand strategy, and relationship strategy perceived by the hotel customers and the importance of value strategy, brand strategy, and relationship strategy ranked by hotel customers?

The results of empirical test supported there were significant differences between the delivery performance of marketing drivers and the importance of marketing drivers ranked by the hotel customers. The gap analyses performance exceeding importance were all positive. Three largest positive gaps for the performance exceeding importance were "comfortable of hotel physical surrounding," "location of the hotel," and "good value of the room rate."

4. Do the marketing drives related to customer equity theory predict a positive relationship with attitudinal loyalty?

The empirical evidence supported that both fundamental marketing strategy and progressive marketing strategy related to customer equity had simultaneously significant positive impacts on attitudinal loyalty. All above led to the following conclusion: the

higher the fundamental marketing strategy or progressive marketing strategy, the stronger the attitudinal loyalty of customers.

5. Do the marketing drivers related to customer equity theory predict a positive relationship with behavioral loyalty?

The results of the empirical test supported with the beliefs that both fundamental marketing strategy and progressive marketing strategy impacted a positive relationship on behavioral loyalty. Exception from above was that fundamental marketing strategy and progressive marketing strategy had no significantly positive impacts on proportion of visits. There was not sufficient evidence to say that the fundamental marketing strategy and progressive marketing strategy had no contributions on the proportion of visits. The appropriated conclusions were that the fundamental marketing strategy and progressive marketing strategy presented no linear relationships on proportion of visits. Also the current study did not support fully with customer equity theory in hotel industry. Especially, the marketing drivers proposed by customer equity theory did not predict a positive relationship with direct equity (proportion of stay), but did predict a positive relationship with indirect equity (behavioral loyalty)

6. Does attitudinal loyalty predict a positive relationship with behavioral loyalty?

The obvious empirical evidence supported the belief that attitudinal loyalty had a significantly positive impact on behavioral loyalty. In other words, attitudinal loyalty predicted substantially a positive relationship with behavioral loyalty. Exception from above was that attitudinal loyalty reflected no significantly positive relationships on proportion of visits. The visual inspection on diagraphs showed that there was no linear relationship between attitudinal loyalty and proportion of visits.

Objective 2: To determine the profiles of customers according to the antecedents and behavioral outcomes of customer loyalty.

Operational Question (Customer loyalty)

7. What are the attributes in each dimension of customer loyalty?

Literature reviews supported with the beliefs that the assessments of customer loyalty was divided by two dimensions: attitudinal loyalty (antecedent) and behavioral loyalty (behavioral outcome) (e. g. Back & Parks, 2003; Backman & Crompton, 1991; Baloglu, 2002; Day, 1969; Dick & Basu, 1994; Oliver, 1997; Tideswell & Fredline, 2004). Based on measurement by attitudinal and behavioral loyalty, the nature of customer loyalty was classified into four segments of customer loyalty: true, latent, spurious, and low loyalty.

This study adopted Oliver's (1999) three phases of attitudinal loyalty: cognition, affection, and conation. The central drivers in each phase dimension were operated as: trust as the key measurement of the affective component, commitment as the key measurement of the affective component, switching cost as the key measurement of the conative measurement. Eight attributes related to trust, commitment and switching cost was deducted into only one common component: attitudinal loyalty.

Behavioral loyalty was divided into cooperation, WOM endorsement, and proportion of visits (Baloglu, 2002; Bendapudi & Berry, 1997; Bowen & Shoemaker, 1998; Dick & Basu, 1994; Kim et al., 2001; Riechheld & Sasser, 1990 ; Tideswell & Fredline, 2004). Proportion of visits was treated as the key measures of loyal actual purchasing behaviors (direct equity in the customer equity theory). WOM endorsement was treated as the key operational measures for affecting the other purchasing (indirect equity in the customer equity theory). Cooperation was treated as key operational measures for company

benefits contributed by customers (indirect equity in the customer equity theory). Six attributes related to cooperation and word-of-mouth endorsement was deducted into one common component: behavioral loyalty by customers' mind. Regression results seemed to imply there were two dimensions: one was proportion of visits, and the others were behavioral loyalty (cooperation and word-of-mouth).

Operation Research Questions (classify customer loyalty)

8. Are the composites of attitudinal and behavioral loyalty classified into the four segments of customer loyalty: True, Latent, Spurious, and Low?

Obvious empirical evidence supported that the composites of attitudinal and behavioral loyalty had statistically significant power to distinguish each customer into the four segments of customer loyalty: True, Latent, Spurious, and Low. Each segment of customers appears distinctive characters in terms of trust, commitment, switching cost, cooperation, word-of-mouth endorsement, and proportion of visit.

Objective 3: To determine the association between the customer loyalty and the customer demographic profiles.

Operation Research Questions (Customer loyalty on customers' profiles)

9. Are Customer demographic profiles independent of the segments of customer loyalty?

Empirical tests supported the beliefs that the sub-groups of customer demographic profiles exception from occupation were significantly independent with each segment of customers' loyalty. Customers with different occupation showed a small effect association with four segments of customers' loyalty (true, latent, spurious, and low loyalty).

10. Will there be any difference among demographic sub-group variable of the customer profiles on attitudinal loyalty?

The results of empirical tests agreed with that there were generally non significant differences among demographic sub-groups of the customer demographic profiles on attitudinal loyalty except from education. The obvious evidence supported the beliefs that customers with different educational level showed significant different attitudinal loyalty. Especially, the customers with post graduate degree might demonstrate stronger attitudinal loyalty than customers with four years college degree.

11. Will there be any difference among demographic sub-groups of the hotel's customer profiles on behavioral loyalty?

The empirical tests agreed with the beliefs that the different levels of demographic variables in the customer profiles could not reflect significant differences on behavioral loyalty. It pointed out that the demographic variables could not likely predict any behavioral outcomes of customers' loyalty in current study.

This study accomplished to answer all of research questions related to three research objectives listed above. The scale for each variables used in statistical analysis was checked in reliability, unidimensionality, and convergent validity. According to the characters of each respondent in attitudinal loyalty and behavioral loyalty, the respondents were succeed to be distinguished into the four segments of customer loyalty (true, latent, spurious, and low loyalty). The internal validity, cross-validity, and reliability of the results of the classification of four segments of customers were confirmed.

The obvious positive results in the empirical test (performance exceeding importance) supported that each marketing driver of the T Hotel performed better than the degree which the customers would expect it to deliver based on the importance rating.

Fundamental and progressive marketing drivers had positive impacts on attitudinal loyalty and behavioral loyalty. Progressive marketing strategy when compared with fundamental marketing strategy reflected double strong impacts on behavioral loyalty than on attitudinal loyalty. Attitudinal loyalty was confirmed as mediator role between marketing strategy and behavioral loyalty. Empirical results supported attitudinal loyalty had strong positive impacts on behavioral loyalty. The impacts on proportion of visits from marketing drives or attitudinal loyalty could not be identified in this study. The assumption of customer equity theory for marketing drivers predicting positive impacts on customer loyalty was not fully consistent with the supporting evidence.

The confounding variables (demographic variables) effects on dependent variables (segments of loyalty, attitudinal loyalty and behavioral loyalty) were examined in the proposal conceptual model. Demographic variables in customer profiles with the exception of occupation did not present significant associations with four segments of customers' loyalty. The sub groups of customers' demographic profiles could not identify significant differences on behavioral loyalty. Also the subgroups of customers' profiles exception education could not show significant differences on attitudinal loyalty. The exception was that customers with post graduate degrees had stronger attitudinal loyalty than did customers with four year college degrees. In general, the purpose of the study was accomplished.

Implications

This research has three implications: theoretical, managerial, and methodological.

Theoretical Implications

There were at least two theoretical implications in this study: (a) this research

derived the customer equity theory from the hotel case, (b) this research framework interpreted the phenomenon in terms of attitudinal and behavioral loyalty existed inconsistence among customers and how customers between attitudinal and behavioral loyalty could reach consistency (the theory of cognitive dissonance).

Firstly, the results of the empirical test could not completely support the beliefs that customer equity theory might apply in the hotel industry. The progressive and fundamental marketing strategies related to customer equity could predict positive impacts on attitudinal loyalty. Also, the progressive and fundamental marketing strategy related to customer equity could predict positive impacts on behavioral loyalty. The exceptions from above were the progressive and fundamental marketing strategies that related to customer equity could not identify the significant prediction of proportion of visits. It might indicate the marketing drivers proposed by customer equity did not predict direct equity (proportion of visits) in T Hotel. Thus, the current study did not completely support the belief that the customer equity theory applied to the hotel industry.

Secondly, 32.1% of respondents reported spurious or latent loyalty, meaning inconsistent linkage between attitudinal and behavioral loyalty. It also found that 4.6% of respondents fell into the category of spurious loyalty, meaning high ratios in proportion of visits and low scores in trust and commitment. For example, spuriously loyal customers might be forced to stay in this hotel because of their employer's lodging policy, hosts' complimentary, or because of the risk or expense of switching to another hotel. The spuriously loyal customers might claim that their stay had just been required for their job and the costs of lodging were paid by the employer; this lessened their dissonances.

Furthermore, the latently loyal customers (27.5% of respondents) might strongly

want to return to the target hotel or send good comments to their friends. But some other days, latently loyal customers might discover that the quality of their favorite hotel did not match their expectation, or the policy of the companies did not allow them to stay there. They might reduce their trust and commitment to this hotel or lesson their dissonances by the rationalizing that their stays were paid by their companies or hosts. Scholars in marketing should carefully scan the data set on attitudinal and behavioral loyalty, and on likely or actual purchasing. There are many inconsistencies among attitudinal loyalty, behavioral loyalty, and real purchasing which customers would like to act differently away from their attitudes. Furthermore, the differences among confidence to purchase (trust), would like to purchase (commitment), actual purchasing (retention) which leading to misjudge the research results according to the cognitive dissonance theory and the planning action theories.

Managerial Implications

Several managerial implications were drawn based on the findings of this study. First, the performance of each marketing driver related to customer equity in T Hotel was different from the perceived importance of each marketing driver. Managers in the hospitality industry should listen to their customers and understand their expectations, while designing their marketing strategy to win their customers' loyalty. Although managers in the T Hotel might be pleased about the results of all positive gaps: the delivered performance exceeding the importance ranking of the marketing drivers, it is important for managers to understand and satisfy customers' expectations. Regularly surveying customers, noting their preferences, collecting their information, delivering unique services and empowering front-line employees were used to create customer

information systems (CIS). A customer information system would definitely help to deliver services that exceed customers' expectations and enrich the hotel's relationships with customers.

Second, managers in T Hotel should allocate additional marketing resources as follows: (a) the media advertising, (b) eliciting information about customers, (c) using customer information systems to offer preferential treatment to loyal customers. T Hotel might keep up good work on its eight marketing drivers (e.g. value, convenience, surrounding facility, superior service, special personal treatment, worthy of the loyalty program, high ethical stands, and the image of the hotel). Moreover, if managers in the T Hotel would like to increase the advantages of marketing drivers, managers need to improve the following four marketing drivers: special personal treatment, worthy of the loyalty program, high ethical standards and the image of the hotel. Managers in T Hotel might sustain the operation but without allocating additional resources for excellent corporate citizenship, related mailing information, active sponsorship of community events, active sponsorship of destination meeting events, and participation in related activities.

The managers in T Hotel need to allocate extra resources to three areas: (a) advertisement for the T Hotel linked to its target market without franchisors or the famous chain back up on it, (b) rewards for loyalty programs met to customers' preferential wants and (c) creation and empowerment of the customer information system in order to enrich customer relationships.

Third, the four segments of customers' loyalty were distinguished by the attitudinal and behavioral loyalty, the proportion of visit, and switching cost. Profiling the four

segments of customers' loyalty on these three dimension and six predictor variables (e.g., trust, commitment, switching cost, cooperation, WOM endorsement, and proportion of visits) associated with each dimension allowed managers to understand their different characteristics. In addition, profiling the four segments of customers' loyalty would allow managers to identify market segments and to develop a related tactical plan and marketing strategy. Hotel managers should frequently survey their customers to evaluate or track the sizes and characteristics of each segment of customer loyalty. This analysis could identify the changes among loyal segments by adopting an innovative marketing strategy, a progressive marketing strategy or a loyalty program.

Latent Loyalty Segment

Customers in latent loyalty segments had the strongest trust, commitment, cooperation, word-of mouth (WOM) endorsement and higher switching cost among the four segments of customer loyalty. But the customers in latent loyalty segments presented slightly stronger trust, commitment, cooperation, WOM endorsement and higher switching cost than true loyalty segments. In contrast, customers in latent loyalty segments were substantially fewer in proportion of visit than were customers in the true and spurious loyalty segments. The number of the patrons in the latent loyal segment (approximately 27%) was second to the number of the patrons in the true loyalty segment.

True Loyalty Segment

Customers in the true loyalty segment had the second highest trust, commitment, switching cost, cooperation, and WOM endorsement. Truly loyal customers also had as many proportion of visit as spuriously loyal customers. The true loyal segment

(approximate 50 % of respondents) was the largest segment in customer loyalty.

Low Loyalty Segment

Low loyalty customers who has predictor variables as trust, commitment, switching cost, cooperation, WOM endorsement had lower scores than true loyal customers did, but their scores were higher than those of spuriously loyal customers. Low loyalty customers hold the lowest proportion of visit among the four segments. The patrons in low loyalty segment (approximately 19% of respondents) were second lowest to the patrons in the spurious loyalty segment.

Spurious Loyalty Segment

Spuriously loyal customers for predictor variables such as trust, commitment, switching cost, cooperation, and WOM endorsement had the lowest scores. Spurious loyal customers had a comparable proportion of visits to truly loyal customers. The number of patrons in spuriously loyal segment (approximately 5% of respondents) was lowest patrons among the segment of customer loyalty.

Fourth, managers in the hotel industry might use the four segments of customers' loyalty to develop a tactical or marketing plan. Then the marketing strategy could transfer the customers among the four segments of customer loyalty (Figure 43). For example, in order to target the spuriously loyal customers, managers might need to intensify both their fundamental and progressive marketing strategies to increase customers' attitudinal and behavioral loyalty. Thus, the spuriously loyal customers would be transferred to the truly loyal customers. In order to target the low loyal customers, managers might raise the switching cost to transfer the low loyalty customers to spuriously loyal customers. This tactical plan would substantially increase room sales and profits. At the same time, this

plan might reveal the high cost of switching the low loyalty customers to spuriously loyal ones. In order to target the latently loyal customers, if managers could identify what influence the proportion of visits, the managers would strengthen the marketing strategy on the proportion of visits. Thus, the latently loyal customers could be transformed into truly loyal customers. Since the second largest proportion of customers was latently loyal, managers should find ways to increase the return visits.

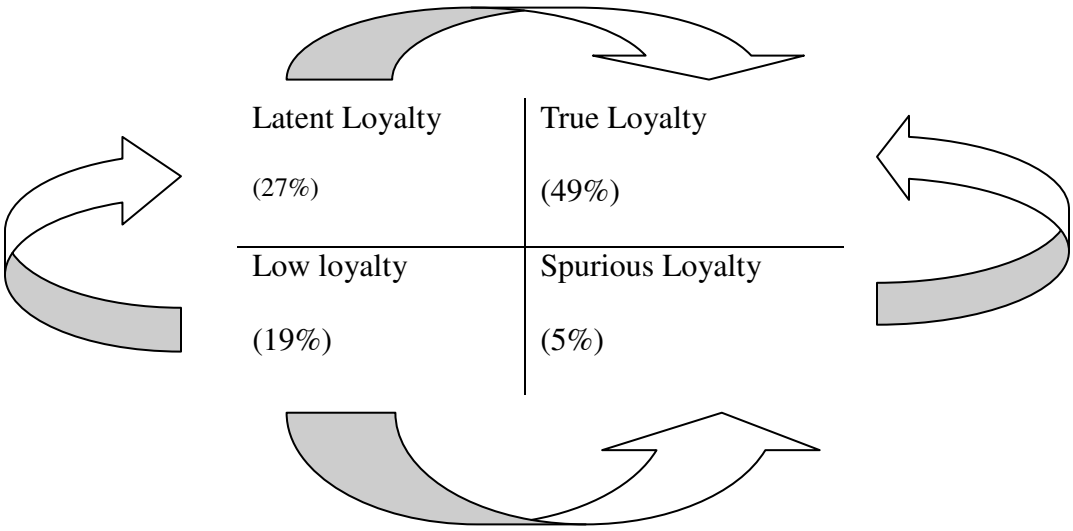


Figure 43 Transformation for the segments of customer loyalty by marketing strategy

Fifth, both the progressive and fundamental marketing strategies could strengthen attitudinal and behavioral loyalty. Furthermore, the behavioral loyalty was affected twice as much by the progressive marketing strategy as attitudinal loyalty was. Hotel managers might intensify their progressive marketing strategy in order to increase their customers' behavioral loyalty. Even that attitudinal loyal was identified as a mediator between marketing strategy and behavioral loyalty. Based on the proportion of segments of loyalty, managers in international hotels should focus on behavioral loyalty. This tactic, especially as part of a progressive marketing strategy would enrich relationships between customers and hotels. Maintaining good relationships with customers would increase customers' behavioral loyalty; customer would recommend the hotel to others.

Sixth, hotel managers might create switching boundaries to reward loyal customers.

The rewards of loyalty programs should not just focus on behavioral loyalty but also on attitudinal loyalty. Attitudinal loyalty has a strong impact on behavior. In this study, managers in the hotel should reward behavioral loyalty. The rewards of loyalty program should understand customer preferences, worthy for pursuing the rewards of the loyal program and make it easy to receive benefits. The mystery of effects on loyalty program was that rewards on loyalty program could not direct stronger customers' attitudes than customers' behaviors according to the results of empirical tests. Managers who want to strengthen their customers' attitudinal loyalty might emphasize fundamental marketing strategies, meaning to focus on the basic service.

Finally, customers' demographic information is usually available to hotel managers, so the managers often use the demographic variables to distinguish the segments of market for advertising and promotion programs. Based on this research, hotel managers might find that the demographic information would not be the useful predictor variables for customer loyalty. Moreover, the results of this study have found that demographic variables are not a good tool for determining purchase behaviors (behavioral loyalty) or attitudes (attitudinal loyalty).

Especially, if the managers in T Hotel followed the traditional methods of predicting the demographic variables to the segments of markets, some findings in this study might assist managers to make better predictions. The managers in T Hotel might find that the educational level of the customers is the only one that affects their purchasing attitudes (attitudinal loyalty). Also the occupation of customers would be worthwhile for managers in T Hotel to study in order to determine their effects on the association with the four segments of customers' loyalty.

Methodological Implications

This study derived several methodological implications. First, this research clearly demonstrated the performance-importance analysis (IPA) of the marketing drivers and cluster analyses (CA) for customer loyalty in conjunction with multiple discriminate analysis (MDA). IPA assessed how customers perceived the performance of the marketing drivers and ranked the importance of those marketing drivers on a two-dimensional grid. Cluster analysis (CA), in conjunction with multiple discriminate analysis classified each customer into the segments predicted by antecedents and outcomes of customer loyalty. Both IPA and CA connected with MDA were used to assist the manager in making decisions. IPA was used to evaluate the relative efforts of the marketing drivers perceived by the customers, especially fitted on stimulations for the decision framework. CA and MDA presented the marketing decisions which were empirically tested by consumers' attitudes and behavioral outcomes, not just traditionally predicted by demographic variables. CA and MDA were appropriate for analysis and decision-making according to the outcomes reported by respondents.

Second, this study used empirical testing results to support the marketing drivers that could predict transformation among segments of customer loyalty. The other studies for the segments of customer loyalty did not employ the regression analysis to predict marketing drivers of consumers' attitudes and behaviors. The conceptual research model offered the concepts or procedures how to decide which customers belonged to which segments of loyalty and developed valid strategies and stimulated management decisions based on the empirical results.

Third, the following statistical procedures may benefit the future research: (a)

statistically adjusting data (weighting, consistent check, outlier diagnostic analysis, missing data imputation) to purify the measurement items, (b) estimating effective size and significant statistical power to precisely examine the empirical hypothesis, (c) using reliability analysis, unidimensionality and convergent validity to support a construct underlying a set of items in both pilot study and post test, and (d) checking internal validity, cross validity, and reliability of the profiles of segments of loyalty. Therefore, future marketing research may benefit from the use of this procedure.

Limitations and Future Research

There were several limitations to this study. Based on these limitations, this study revealed several opportunities for further research.

First, this study was limited to one five-star business hotel in Taipei, Taiwan. In order to understand the complex relationships between customer loyalty and marketing strategy, the external validity was limited. The implication might not be generalized to the other five-star hotels. More efforts related to this research framework could improve the validity to generalize these findings to the hotel industry. Second, based on the literature, this study was restricted to measuring the impacts of marketing drivers on customers' behavioral or attitudinal loyalty. The results seemed to reveal three dimensions of customer loyalty in the hotel industry (Figure 43): attitudinal (trust, commitment, switching cost), behavioral (WOM endorsement, cooperation), and repurchasing (proportion of visits, share of wallet, frequency of purchasing, or duration of relationship). Since the large proportion of segments of loyalty was latent loyal customers, future researchers might be interested in how to increase real purchasing loyalty in the international business hotel. Investigation of longer periods for repurchasing behaviors in

the hotel industry was too costly. Longitudinal studies of the relationship between marketing strategy and the actual repurchasing behaviors in the hotel industry are still rare. Third, this study examined only a few marketing drivers related to customer equity. Many other marketing drivers or related variables affected attitudinal and behavioral loyalty in the hotel industry (host's invitation, food and beverage quality, the lodging policy of the company, personal references). Inserting these marketing drivers into the research framework would reveal the different results of the impacts on customer's performance behaviors or attitudes. In future studies, the structural equation model method might identify the complex relationships of many variables and their measure errors within one proposed model. Finally, the research model adopted the previous study in the marketing drivers, behavioral outcome, or antecedents of customer loyalty. If researchers changed the attributes or variables in the proposed model, the results of empirical tests might be different. Many important attributes are related to attitudinal loyalty and behavioral loyalty (e.g. social influence, customer satisfaction, emotional influence, service recovery, frequency purchasing, duration of stays, and share of wallet) and await research in the hotel marketing.

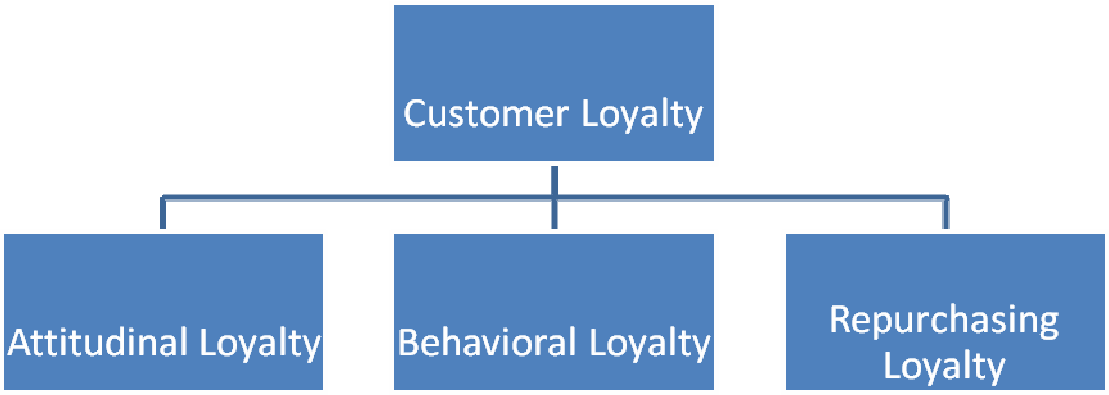


Figure 44 Three dimensions of customer loyalty.

REFERENCES

Aaker, D. A. (1996). Measuring brand equity across products and markets. *California Management Review, 38*(3), 102-122.

Ajzen, I. (1991). The theory of planned behavior. *Theories of Cognitive Self-Regulation, 50*(2), 179-211.

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting behavior*. Englewood Cliffs, NJ: Prentice Hall.

Albarracin, D., Fishbein, M., Johson, B. T., & Muellerleile, P. A. (2001). Theories of Reasoned Action and Planned Behavior as Models of Condom Use: A Meta-Analysis. *Psychological Bulletin, 127*(1), 142.

Ambler, T., Bhattacharya, C. B., Edell, J., Keller, K. L., Lemon, K. N., & Mittal, V. (2002). Relating Brand and Customer Perspectives on Marketing Management. *Journal of Service Research, 5*(1), 13.

Anderson, J. C., & Narus, J. A. (1990). A model of distributor firm and manufacturer firm working partnerships. *Journal of Marketing, 54*, 42-58.

Anonymous. (1993). Extra life for airlines. *Asia Business,* 44-66.

Arndt, J. (1967). Role of product-related conversations in the diffusion of a new product. *Journal of Marketing Research, 4*, 291-295.

Back, K.-J. (2001). *The effects of image congruence on customer satisfaction and brand loyalty in the lodging industry.* Unpublished Ph.D dissertation, The Pennsylvania State University, Pennsylvania, United States.

Back, K.-J., & Parks, S. C. (2003). A Brand Loyalty Model Involving Cognitive, Affective, and Conative Brand Loyalty and Customer Satisfaction. *Journal of Hospitality Tourism Research, 27*(4), 419-435.

Backman, S. J., & Crompton, J. L. (1991). Differencing between high, spurious, latent, and low loyalty participants in two leisure activities. *Journal of Park and Recreation Administration, 9*(2), 1-17.

Baldinger, A. L., & Rubinson, J. (1996). Brand loyalty: the link betweeb attittue and behavior. *Journal of Advertising Research, 36*(6), 22-34.

Baloglu, S. (2002). Dimensions of Customer Loyalty: Separating Friends from Well Wishers. *Cornell Hotel and Restaurant Administration Quarterly, 43*(1), 47-59.

Bansal, H. S., Irving, P. G., & Taylor, S. F. (2004). A Three-Component Model of Customer Commitment to Service Providers. *Journal of the Academy of Marketing Science, 32*(3), 234-250.

Baron, R. M., & Kenny, D. A. (1986). The Moderator-Mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Barsky, J., & Nash, L. (2002). Evoking Emotion: Affective Keys to Hotel Loyalty. *Cornell Hotel and Restaurant Administration Quarterly, 43*(1), 39-46.

Bell, D., Deighton, J., Reinartz, W. J., Rust, R. T., & Swartz, G. (2002). Seven Barriers to Customer Equity Management. *Journal of Service Research, 5*(1), 77-85.

Bendapudi, N., & Berry, L. L. (1997). Customers' motivations for maintaining relationships with service providers. *Journal of Retailing, 73*(1), 15-37.

Bennett, R., & Rundle-Thiele, S. (2002). A comparison of attitudinal loyalty measurement approaches. *Journal of Brand Management, 9*(3), 193-209.

Bentler, P. M., & Speckart, G. (1981). Attitudes "causes" behavior: A structural equation analysis. *Journal of Personality & Social Psychology, 40*, 226-238.

Berger, P. D., & Nasar, N. I. (1998). Customer life time value: marketing models and applications. *Journal of Interactive Marketing, 12*, 17-30.

Beverly, S. (1993). Guest history: Is it being utilized? *International Journal of Contemporary Hospitality Management, 5*(1), 22-27.

Blattberg, R. C., & Deighton, J. (1996). Manage marketing by the customer equity test. *Harvard Business Review, 74*, 136-166.

Blau, P. M. (1964). *Exchange and power in social life*. New York: John Wiley & Sons.

Bojanic, D. C. (1992). Consumer perceptions of price, value, and satisfaction in the hotel industry: An exploratory study. *Journal of Hospitality and Leisure Marketing, 41*(1), 5-22.

Bolton, R. N., & Drew, J. H. (1991). A multistage model of consumers' assessments of service quality and value. *Journal of Consumer Research, 17*, 375-384.

Bolton, R. N., Kannan, P. K., & Bramlett, M. D. (2000). Implications of loyalty program membership and service experiences for customer retention and value. *Journal of the Academy of Marketing Science, 28*(1), 95-108.

Borenstein, S. (1992). The Evolution of U.S. Airline Competition. *Journal of Economic Perspectives, 6*(2), 45-73.

Bourdeau, B. L. (2005). *A new examination of service loyalty: Identification of the antecedents and outcomes of an attitudinal loyalty framework.* Unpublished PhD. Dissertation, Florida State University, Tallahassee.

Bowen, J. T., & Shoemaker, S. (1998). Loyalty: A strategy commitment. *Cornell Hotel & Restaurant Administration Quarterly, 39*(1), 12-35.

Carlisle, J. A., & Parker, R. C. (1989). *Beyond negotiation: Redeeming customer-supplier relationships*. New York: John Wiley.

Chaiken, S., Pomerantz, E. M., & Giner-Sorolla, R. (1995). *Structural consistency and attitude strength* Mahwah, New York: Lawrence Erlbaum Associates.

Chang, A., & Tseng, C. N. (2005). Build customer capital through relationship marketing activities. *Journal of Intellectual Capital, 6*(2), 253-256.

Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment, 7*(3), 309-319.

Clarke, K. (2001). What price on loyalty when a brand switch is just a click away? *Qualitative Market Research, 4*(3), 160-168.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Cohen, J. (1992). A Power Primer. *Psychological Bulletin, 112*, 115-159.

Cook, K. S., & Whitmeyer, J. M. (1992). Two approaches to social structure: Exchange theory and network analysis. *Annual Reviews, 18*, 109-127.

Cortina, J. M. (1993). What Is Coefficient Alpha? An examination of theory and applications. *Journal of Applied Psychology, 78*(1), 98-104.

Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin, 52*(4), 281-302.

Crotts, J. C., Coppage, C. M. A., & Andibo, A. (2001). Trust-Commitment Model of Buyer-Supplier Relationships. *Journal of Hospitality & Tourism Research, 25*(2), 195-208.

Cunningham, R. M. (1956). Brand loyalty - What, Where, How much? *Harvard Business Review, 34*, 116-128.

Dai, Y.-D. (2002). *Overall customer satisfaction, trust, and commitment in customer voluntary performance behaviors with travels in lodging services.* Unpublished

Doctoral Dissertation, Pennsylvania State University.

Day, G. S. (1969). A two-dimensional concept of brand loyalty. *Journal of Advertising Research, 9*, 29-35.

Dev, C. S., Morgan, M. S., & Shoemaker, S. (1995). A Positioning Analysis of Hotel Brands: Based on Travel-Manager Perceptions. *Cornell Hotel and Restaurant Administration Quarterly, 36*(6), 48-55.

Dick, A. D., & Basu, H. (1994). Customer Loyalty: Toward an integrated conceptual framework. *Journal of the Academy of Marketing Science, 22*(2), 99-113.

Dillman, D. A. (2007). *Mail and internet surveys: The tailored design method*. Hoboken, New Jersey: John Wiley & Sons, Inc.

Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers'. *Journal of Marketing Research (JMR), 28*(3), 307-329.

Doney, M. P., & Cannon, P. J. (1997). An examination of the nature of trust in buyer-seller relationships. *61*(2), 35.

Dowling, G. R., & Uncles, M. (1997). Do customer loyalty programs really work? *Sloan Management Review, 38*(4), 71-&.

Dube, L., & Renaghan, L. M. (2000). Creating visible customer value. *Cornell Hotel & Restaurant Administration Quarterly, 41*(1), 62-73.

Dube, L., & Renaghen, L. M. (2000). Creating visible customer value. *Cornell Hotel & Restaurant Administration Quarterly, 41*(1), 62-72.

Duboff, R. S., & Sherer, L. U. (1997). Customized Customer Loyalty. *Marketing Management, 6*(2), 20-27.

Duffy, D. L. (1998a). Customer loyalty strategies. *Journal of Consumer Marketing, 15*(5), 435.

Duffy, D. L. (1998b). Customer Loyalty Strategies. *The Journal of Consumer Marketing, 15*(5), 435-448.

Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Fort Worth, TX: Harcourt Brace Jovanovich.

Ekinci, Y., & Riley, M. (1999). Measuring hotel quality: Back to the basic. *International Journal of Contemporary Hospitality Management, 11*(6), 287-295.

Emerson, R. M. (1976). Social exchange theory. *Annual review of sociology, 2*, 335-362.

Festinger, L. (1957). *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson.

Festinger, L., & Carlsmith, L. M. (1950). Cognitive consequences of forced compliance. *Journal of Abnormal and Social Psychology, 58*, 203-210.

Fu, Y.-Y., & Parks, S. C. (2001). The Relationship between Restaurant Service Quality and Consumer Loyalty among the Elderly. *Journal of Hospitality Tourism Research, 25*(3), 320-326.

Geyskens, I., Steenkamp, J.-B. E. M., Scheer, L. K., & Kumar, N. (1996). The effects of trust and interdependence on relationship commitment: A trans-Atlantic study. *13*(4), 303-317.

Graham, J. W. (1991). An easy on organizational citizenship behavior. *Employee Responsibilities and Rights Journal, 4*, 249-270.

Greenbaum, S. I. (1996). Twenty-five years of banking research. *Financial Management, 25*(2), 86-&.

Grefen, D., & Ridings, C. M. (2002). Implementation team responsiveness and user evaluation of customer relationship management: A quasi-experimental design study of social exchange theory. *Journal of Management Information Systems, 19*(1), 47-69.

Gronroos, C. (1994). From marketing mix to relationship marketing: Towards a paradigm shift in marketing. *Management Decision, 32*(2), 4-20.

Gruen, T. W., Summers, J. O., & Voelpel, S. (2000). Relationship marketing activities, commitment, and membership behaviors in professional association. *Journal of marketing, 64*(3), 34-49.

Guest, L. (1944). A study of brand loyalty. *Journal of Applied Psychology, 28*, 16-27.

Gursoy, D., Spangenberg, E. R., & Rutherford, D. G. (2006). The hedonic and utilitarian dimensions of attendees' attitudes toward festivals. *Journal of Hospitality & Tourism Research, 30*(3), 279-293.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Upper Saddle River, New Jersey: Pearson Education, Inc.

Hallowell, R. (1996). The relationships of customer satisfaction, customer loyalty, and profitability: An empirical study. *International Journal of Service Industry Management, 7*(4), 27-&.

Hellier, P. K., Geursen, G. M., Carr, R. A., & Rickard, J. A. (2003). Customer repurchase intention: A general structural equation model. *European Journal of Marketing, 37*(11/12), 1762-1800.

Heskett, J. L., Jones, T. O., Loveman, G. W., Sasser, W. E., & Schlesinger, L. A. (1994).

Putting the Service-Profit Chain to Work. *Harvard Business Review, 72*(2), 164-174.

Heskett, J. L., Sasser, W. E. J., & Schlesinger, L. A. (1997). *The service profit chain: How leading companies link profit and growth to loyalty, satisfaction and value.* New York Free Press.

Hogan, E. J., Lemon, N. K., & Rust, T. R. (2002). Customer equity management: Charting new directions for the future of marketing. *5*(1), 4.

Hughes, A. M. (1996). *The complete database marketer* (2nd ed.). New York: McGraw-Hill.

Insko, C. A. (1967). *Theories of attitude change*. New York: Appleton-Century-Crofts.

Iwasaki, Y., & Havitz, M. E. (1998). A path analytic model of the relationships between involvement, psychological commitment, and loyalty. *Journal of leisure research, 30*(2), 256-280.

Iwasaki, Y., & Havitz, M. E. (2004). Examining relationships between leisure involvement, psychological commitment and loyalty to a recreation agency. *Journal of Leisure Research, 36*(1), 45-72.

Jacoby, J. (1971). A model of multi-brand loyalty. *Journal of Advertising Research, 11*, 25-30.

Jacoby, J., & Chestnut, W. R. (1978). *Brand loyalty: Measurement and management*. New York: John Wiley & Sons.

Jacoby, J., & Kyner, D. B. (1973). Brand loyalty vs. repeat purchasing behavior. *Journal of Marketing Research, 10*, 1-9.

James, L. R. (1998). Measurement of personality via conditional reasoning. *Organizational research methods, 1*(2), 131-163.

Jang, D., & Mattila, A. S. (2005). An examination of restaurant loyalty programs: what kinds of rewards do customer prefer. *International Journal of Contemporary Hospitality Management, 17*(5), 402-408.

Jarvis, L. P., & Mayo, E. J. (1986). Winning the Market-Share Game. *Cornell Hotel & Restaurant Administration Quarterly, 27*(3), 73-79.

Javalgi, R. G., & Moberg, C. R. (1997). Service loyalty: Implications for service providers. *Journal of Services Marketing, 11*(2/3), 165-179.

Jiang, W., Dev, C. S., & Rao, V. R. (2002). Brand extension and customer loyalty: Evidence from the lodging industry. *Cornell Hotel and Restaurant Administration Quarterly, 43*(4), 5-16.

Joel, C. (2007). *Cognitive dissonance: Fifty years of a classic theory*. Thousand Oaks, California: Sage Publications Inc.

John, T. B., & Stowe, S. (1998). Loyalty: A strategic commitment. *Cornell Hotel & Restaurant Administration Quarterly, 39*(1), 12.

Jugenheimer, D. W. (1979). Brand Loyalty, Measurement and Management. *Journal of Advertising, 8*(2), 46.

Kassinis, G. I., & Soteriou, A. C. (2003). Greening the service profit chain: The impact of environmental management practices. *Production and Operations Management, 12*(3), 386-403.

Keaveney, S. M. (1995). Customer switching behavior in service industries: An exploratory study. *Journal of Marketing, 59*(71-82).

Keller, K. L. (1993). Conceptualizing, Measuring, Managing Customer-Based Brand Equity. *Journal of Marketing, 57*(1), 1.

Kelley, S. W., Skinner, S. J., & Donnelly, J. H. (1992). Organizational socialization of service customers. *Journal of Business Research, 25*, 197-214.

Kelly, S. W., Donnelly, J. H., & Skinner, S. J. (1990). Customer participation in service production and delivery. *Journal of Retailing, 66*, 315-335.

Kim, H.-b., Kim, W.-G., & An, J.-A. (2003). The effect of customer-based brand equity on firm's financial performance. *Journal of Consumer Marketing, 20*(4), 335-351.

Kim, W. G., Han, J. S., & Lee, E. (2001). Effects of relationship marketing on repeat purchase and word of mouth. *Journal of Hospitality Tourism Research, 25*(3), 272-288.

Kim, W. G., & Kim, H.-B. (2004). Measuring customer-based restaurant brand equity. *Cornell Hotel and Restaurant Administration Quarterly, 45*(2), 115-131.

Kinnear, P. R., & Gray, C. D. (2004). *SPSS 12 made simple*. New York: Psychology Press.

Kish, L. (1995). *Survey sampling*. New York: John Wiley & Sons, Inc.

Kumar, V., & Shah, D. (2004). Building and sustaining profitable customer loyalty for the 21st century. *Journal of Retailing, 80*(4), 317-330.

Lawler, E. J., & Thye, S. R. (1999). Bring emotions into social exchange theory. *Annual review of sociology*.

Leone, R. P., Rao, V. R., Keller, K. L., Luo, A. M., McAlister, L., & Srivastava, R. (2006). Linking Brand Equity to Customer Equity. *Journal of Service Research, 9*(2),

125-138.

Lindner, J. R., Murphy, T. H., & Briers, G. E. (2001). Handling nonresponse in social science research. *Journal of Agricultural Education, 42*(4), 43-53.

Luck, D., & Lancaster, G. (2003). E-CRM: Customer relationship marketing in the hotel industry. *Managerial Auditing Journal 18*(3), 213-231.

Luo, X. (2002). Trust production and privacy concerns on the internet-A framework based on relationship marketing and social exchange theory. *Industrial Marketing Management, 31*, 111-118.

Magi, A. W. (2003). Share of wallet in retailing: the effects of customer satisfaction loyalty cards and shopper characteristics. *Journal of Retailing, 79*, 97-106.

Malhotra, N. K. (2007). *Marketing research-An applied orientation* (5th ed.). Upper Saddle River: Pearson Prentice Hall.

Mardrigal, R. (2001). Social Identity effects in a belief-attitude-intentions hierarchy: Implications for corporate sponsorship. *Psychology and Marketing, 18*, 145-165.

Mark, D. U., Grahame, R. D., & Kathy, H. (2003). Customer loyalty and customer loyalty programs. *The Journal of Consumer Marketing, 20*(4/5), 294.

Martilla, J. A., & James, J. C. (1997). Importance-performance analysis. *Journal of Marketing, 41*(1), 77-79.

Mason, D. D. M., Tideswell, C., & Roberts, E. (2006). Guest Perceptions of Hotel Loyalty. *Journal of Hospitality Tourism Research, 30*(2), 191-206.

Mattila, A. S. (2001). Emotional Bonding and Restaurant Loyalty. *Cornell Hotel and Restaurant Administration Quarterly, 42*(6), 73-79.

Mattila, A. S. (2006). How Affective Commitment Boosts Guest Loyalty (and Promotes Frequent-guest Programs). *Cornell Hotel and Restaurant Administration Quarterly, 47*(2), 174-181.

McConnell, J. D. (1968). The development of brand loyalty: A empirical study. *Journal of Marketing Research, 5*, 13-19.

McGuire, W. J. (1966). The current state of cognitive consistency theory. In S. Feldman (Ed.), *Cognitive consistency motivation antecedents and behavioral consequences*. New York: Academic Press.

Michell, T. (1985). An evaluation of the validity of correlational research conducted in organizations. *Academy of Management Review, 10*(2), 192-205.

Miller, L. E., & Smith, K. L. (1983). Handling nonresponse issues. *Journal of Extension,*

21(5), 45-50.

Min, H., Min, H., & Emam, A. (2002). A data mining approach to developing the profiles of hotel customers. *International Journal of Contemporary Hospitality Management, 14*(6), 274-285.

Mittal, B., & Lassar, W. M. (1998). Why do customers switch? The dynamics of satisfaction versus loyalty. *Journal of Service Marketing, 12*(3), 177-194.

Moorman, C., Deshpande, R., & Zaltman, G. (1993). Factors affecting trust in market research relationships. *57*(1), 81.

Moorman, C., Zaltman, G., & Deshpande, R. (1992). Relationships between providers and users of market research: The dynamics of trust within and between organizations. *29*(3), 314.

Morals, D. B., Dorsal, M. J., & Backman, S. J. (2004). Can Tourism Providers Buy Their Customers' Loyalty? Examining the Influence of Customer-Provider Investments on Loyalty. *Journal of Travel Research, 42*(3), 235-243.

Morgan, A. G., Leech, L. N., Gloeckner, W. G., & Barrett, C. K. (2007). *SPSS for introductory statistics* (3rd ed.). New Jersey: Lawrence Erlbaum Associates, Inc.

Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing, 58*(3), 20-38.

Mulhern, T., & Duffy, D. (2004). Building loyalty at Things Remembered, *Journal of Consumer Marketing* (Vol. 21, pp. 62-66): Emerald.

Muncy, J. A. (1983). *An Investigation of the two-dimensional conceptualization of brand loyalty (consumer behavior).* Unpublished PhD dissertation, Texas Tech University, Lubbock, Texas.

Norusis, M. J. (2005). *Spss 13.0 statistical procedures companion*. Upper Saddle River: Prentice Hall, Inc.

O'Neill, J. W., & Mattila, A. S. (2004). Hotel Branding Strategy: Its Relationship to Guest Satisfaction and Room Revenue. *Journal of Hospitality Tourism Research, 28*(2), 156-165.

Oh, H. (2000). The effect of brand class, brand awareness, and price on customer value and behavioral intentions. *Journal of Hospitality Tourism Research, 24*(2), 136-162.

Oh, H. (2001). Revisiting importance-performance analysis. *Tourism Management, 22*(6), 617-627.

Oh, H. (2002). Transaction evaluation and relationship *Journal of Hospitality & Tourism,*

26(3), 278-305.

Oh, H., Kim, B.-Y., & Shin, J.-H. (2004). Hospitality and tourism marketing: Recent developments in research and future directions. *International Journal of Hospitality Management, 23*(5), 425-447.

Oliver, R. L. (1997). *Satisfaction: A behavioral perspective on the customer*. New York: McGraw-Hill.

Oliver, R. L. (1999). Whence consumer loyalty? *Journal of Marketing, 63*, 33-44.

Olsen, R. L., & Johnson, M. D. (2003). Service equity, satisfaction, and loyalty: from transaction-specific to cumulative evaluation. *Journal of Service research, 5*(3), 184-195.

Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.

Palmer, A., McMahon-Beattie, U., & Beggs, R. (2000). A structural analysis of hotel sector loyalty programmers. *International Journal of Contemporary Hospitality Management, 12*(1), 54-60.

Parasuraman, A., & Grewal, D. (2000). The impact of technology on the quality-value-loyalty chain: A research agenda. *Journal of the Academy of Marketing Science, 28*(1), 168-174.

Park, S.-H. (1996). Relationships between involvement and attitudinal loyalty constructs in adult fitness programs. *Journal of Leisure Research, 28*(4), 233-250.

Paul D. Berger, N. I. N. (1998). Customer lifetime value: Marketing models and applications. *Journal of Interactive Marketing, 12*(1), 17-30.

Pedhazur, E. J. (1973). *Multiple regression in behavioral research* (3rd ed.). Boston: Thomas Learning, Inc.

Pedhazur, E. J., & Schmelkein, L. P. (1991). *Measurement, design, and analysis: an integrated approach* (Student ed.). Hillsdale, New Jersey: Lawrence Erlbaum Association, Inc.

Peter, J. P. (1979). Reliability: A review of psychometric basics and recent marketing practices. *Journal of Marketing Research, 16*(1), 6-17.

Peter, J. P. (1981). Construct Validity: A Review of Basic Issues and Marketing Practices. *Journal of Marketing Research, 18*(2), 133-145.

Peterson, M., & Lyer, D. S. (2005). Gauging an industry standard of attitudinal loyalty for vocation lodging in the USA. *Journal of Vocational Marketing, 12*(2), 107-118.

Petrick, J. F. (2002). Development of a multi-dimensional scale for measuring the perceived value of a service. *Journal of Leisure research, 34*(2), 119-134.

Prasad, K., & Dev, C. S. (2000). Managing hotel brand equity: A customer-centric framework for assessing performance. *Cornell Hotel & Restaurant Administration Quarterly, 41*(3), 22-31.

Pritchard, M. P. (1992). *Development of the psychological commitment instrument (PCI) for measuring travel service loyalty.* Unpublished Doctoral Dissertation, University of Oregon.

Pritchard, M. P., Havitz, M. E., & Howard, D. R. (1999). Analyzing the Commitment-Loyalty Link in Service Contexts. *Journal of the Academy of Marketing Science, 27*(3), 333-348.

Pritchard, M. P., & Howard, D. R. (1997). The loyal traveler: Examining a typology of service patronage. (Cover story). *Journal of Travel Research, 35*(4), 2-10.

Pruitt, D. G. (1981). *Negotiation Behavior*. New York: Academic Press, Inc.

Reichheld, F. (2002). The mismanagement of customer loyalty. *Harvard Business Review, 80*(11), 126-126.

Reichheld, F. F. (1993). Loyalty-Based Management. *Harvard Business Review, 71*(2), 64-73.

Reichheld, F. F. (1996). Learning from customer defections. *Harvard Business Review, 74*(2), 56-69.

Reichheld, F. F. (2003). The one number you need to grow. [Article]. *Harvard Business Review, 81*(12), 46-+.

Reinartz, W., & Kumar, V. (2002). The mismanagement of customer loyalty. *Harvard Business Review, 80*(7), 86-+.

Reinartz, W., Tomas, J. S., & Kumar, V. (2005). Balancing acquisition and retention resources to maximize customer profitability. *Journal of Marketing, 69*, 63-79.

Reinartz, W. J., & Kumar, V. (2003). The impact of customer relationship characteristics on profitable lifetime duration. *Journal of Marketing, 67*(1), 77-79.

Riechheld, F., & Sasser, E. W. (1990). Zero defections: Quality comes to services. *Harvard Business Review, 68*, 105-111.

Riechheld, F. F. (1996). *The loyalty effect: The hidden force behind growth, profits, and lasting value.* Boston: Harvard Business School Press. .

Rogelberg, S. G., Conway, J. M., Sederburg, M. E., Spitzmuller, C., Aziz, S., & Knight,

W. E. (2003). Profiling active and passive nonrespondents to an organizational survey. *The Journal of Applied Psychology, 88*(6), 1104-1114.

Rogelberg, S. G., & Stanton, J. M. (2007). Introduction Understanding and Dealing With Organizational Survey Nonresponse. *Organizational Research Methods, 10*(2), 195-209.

Rosenberg, M. J., & Czepial, J. (1984). A marketing approach for customer retention. *Journal of customer marketing, 1*, 45-51.

Rousseau, D. M., Sitkin, B. S., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of Management Review, 23*(3), 393-404.

Rundle-Thiele, S., Dawes, J., & Sharp, B. (1998). *An empirical investigation of the relationship between three types of loyalty.* Paper presented at the ANZMAC Conference, University of Otago, Dunedin.

Rust, R. T., Lemon, K. N., & Narayandas, D. (2005). *Customer Equity Management*. New Jersey: Pearson Education, Inc.

Rust, R. T., Lemon, K. N., & Zeithaml, V. A. (2004). Return on Marketing: Using Customer Equity to Focus Marketing Strategy. *Journal of Marketing, 68*(1), 109-127.

Rust, R. T., Zeithaml, V. A., & Lemon, K. N. (2000). *Driving customer equity: How customer lifetime value is reshaping corporate strategy*. New York: The Free Press.

Ruyter, K., Wetzels, M., & Bolemer, J. (1988). On the relationship between service quality, service loyalty, and switching costs. *International Journal of Service Industry Management, 9*(5), 436-453.

Samuelson, B. M., & Sandvik, K. (1997). *The concept of customer loyalty.* Paper presented at the EMAC, Warwick Business School, Warwick.

Sarel, D., Marmorstein, H., & Stone, M. (2002). A strategic orientation for e-commerce investments: A customer equity approach / Response / Reply. *Journal of Targeting, Measurement and Analysis for Marketing, 11*(2), 110-124.

Scanlan, L., & McPhail, J. (2000). Forming service relationships with business travelers: The critical attributes to improve retention. *Journal of Hospitality and Tourism Research, 24*(4), 491-513.

Scheaffer, R. L., Mendenhall III, W., & Ott, R. L. (1996). *Elementary survey sampling* (5th ed.). Boston: Duxbury Press.

Selin, S. W., Howard, D. R., Udd, E., & Cable, T. T. (1988). An analysis of consumer

loyalty to municipal recreation programs. *Leisure Sciences, 10*(3), 217-223.

Sheatsley, P. B. (1983). Questionnaire construction and item writing. In P. H. Rossi, J. D. Wright & A. B. Anderson (Eds.), *Handbook of survey research* (pp. 195-230). San Diego, CA: Academic Press.

Sheth, J. N., & Parvatiyar, A. (1995). Relationship marketing in the consumer markets: antecedents and consequences. . *Journal of the Academy of Marketing Science, 23*(4), 255-271.

Shoemaker, S., & Bowen, J. T. (2003). Commentary on "Loyalty A Strategic Commitment". *Cornell Hotel & Restaurant Administration Quarterly, 44*(5/6), 47-52.

Shoemaker, S., & Lewis, R. C. (1999). Customer loyalty: the future of hospitality marketing. *18*(4), 345-370.

Skogland, I., & Siguaw, J. A. (2004). Are Your Satisfied Customers Loyal? *Cornell Hotel and Restaurant Administration Quarterly, 45*(3), 221-234.

Soderlund, M., & Ohman, N. (2003). Behavioral intentions in satisfaction research revisited. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior, 16*, 53-66.

Soderlund, M., & Ohman, N. (2005). Assessing behavior before it becomes behavior: An examination of the role of intentions as a link between satisfaction and repatronizing behavior. *International Journal of Service Industry Management, 16*(2), 169-185.

Sparks, B. (1993). Guest history: Is it being utilized? *International Journal of Contemporary Hospitality Management, 5*(1), 22-27.

Stauss, B., Schmidt, M., & Schoeler, A. (2005). Customer frustration in loyalty programs. *International Journal of Service Industry Management, 16*(3-4), 229-252.

Stevens, D. J. (2002). *Applied multivariate statistics for the social sciences* (4th ed.). Mahwah, New Jersey: Lawrence Erlbaum Association, Inc.

Sui, J. J. (1993). *An empirical investigation of antecedents and consequences of loyalty for local casino customers.* Unpublished master's thesis, University of Nevada, Las Vegas.

Sui, J. J., & Baloglu, S. (2003). The Role of Emotional Commitment in Relationship Marketing: An Empirical Investigation of a Loyalty Model for Casinos. *Journal of Hospitality Tourism Research, 27*(4), 470-489.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston, MA: Pearson Education, Inc.

Thiabut, J. W., & Kelley, H. H. (1959). *The social psychology of groups*. New York: John Wiley & Sons.

Thomas, J. S. (2001). A methodology fo linking customer acquisition to customer retention. *Journal of Marketing Research, 38*(2), 262-268.

Tideswell, C., & Fredline, E. (2004). Developing and Rewarding Loyalty to Hotels: The Guest's Perspective. *Journal of Hospitality Tourism Research, 28*(2), 186-208.

Trochim, W. M. K. (2000). *The research methods knowledge base* (2nd ed.). Cincinnati, OH: Atomic Dog Publishing, Inc.

Verhoef, P. C., & Donkers, B. (2001). Predicting customer potential value an application in the insurance industry. *Decision Support Systems, 32*(2), 189-199.

Voss, K., E., Stem, J., D. E., & Stergios, F. (2000). A comment on the relationship between coefficient alpha and scale characteristics. *Marketing Letters, 11*(2), 177-191.

Warren, P., & Ostergren, N. W. (1990). Marketing Your Hotel: Challenges of the '90s. *Cornell Hotel and Restaurant Administration Quarterly, 31*(1), 56.

Yi, Y. J., & Jeon, H. (2003). Effects of loyalty programs on value perception, program loyalty, and brand loyalty. *Journal of the Academy of Marketing Science, 31*(3), 229-240.

Yi, Y. J., & La, S. (2004). What influences the relationship between customer satisfaction and repurchase intention? Investigating the effects of adjusted expectations and customer loyalty. *Psychology & Marketing, 21*(5), 351-373.

Zeithaml, V. (1998). Consumer perception of price, quality, value: A means-end model and synthesis of evidence. *Journal of Marketing, 52*, 2-22.

Zins, A. H. (2001). Relative attitudes and commitment in customer loyalty models - Some experiences in the commercial airline industry. *International Journal of Service Industry Management, 12*(3-4), 269-294.

APPENDICES

Appendix A: The Structure of Instrument

Structure of Instrument

Construct	Variable	Measurement	Reference	No. of Items
Marketing Drivers of Customer Equity		Importance scale: very Important/not at all important Performance scale: Excellent performance/Very Poor performance		
Value Strategy				
	Price	Five Point Likert Scale	Rust, et al.(2004)	1
	Convenience	Five Point Likert Scale	Rust, et al.(2004)	1
	Quality	Five Point Likert Scale	Rust, et al.(2004)	2
Brand Strategy				
	Awareness	Five Point Likert Scale	Rust, et al.(2004)	1
	Affection	Five Point Likert Scale	Rust, et al.(2004)	1
	Ethics	Five Point Likert Scale	Rust, et al.(2004)	2
Relationship Strategy				
	Loyalty	Five Point Likert Scale	Rust, et al.(2005)	2
	Community	Five Point Likert Scale	Rust, et al.(2005)	2
	Knowledge	Five Point Likert Scale	Rust, et al.(2005)	2
	Affinity	Five Point Likert Scale	Rust, et al.(2005)	2
Attitudinal Loyalty		Strongly disagree-strongly agree		
	Trust	Five Point Likert Scale	Tideswell & Fredline (2004)	3
	Commitment	Five Point Likert Scale	Sui & Baloglu (2003)	3
	Switch Costs	Five Point Likert Scale	Sui & Baloglu (2003)	2
Behavioral Loyalty		Strongly disagree-strongly agree		
	Proportion of Visit	Five Point Likert Scale	Tideswell & Fredline (2004)	3
	Cooperation	Five Point Likert Scale	Sui & Baloglu (2003)	3
	Word of Mouth Endorsement	Five Point Likert Scale	Tideswell & Fredline (2004); Sui & Baloglu (2003)	3

Demographic Profiles			
	Age	Ordinal Scale	1
	Gender	Nominal Scale	1
	Marital	Nominal Scale	1
	Ethnicity	Nominal Scale	1
	Household Size	Ordinal Scale	1
	Education	Ordinal Scale	1
	Occupation	Nominal Scale	1
	Income	Ordinal Scale	1
	Travel Goal	Nominal Scale	1
	Residency Nation	Nominal Scale	1

Appendix B. Manuscript of Questionnaires

Manuscripts of Questionnaire

Instruction: For each of the statements below, please specify its importance to you as a hotel guest. Similar, please indicate how the hotel performance in each area. Please circle the numbers in the importance and performance statements that best describes your response.

(Importance Scale: 1=Not at all important. 2=Somewhat unimportant. 3=Neutral. 4=Somewhat import. 5=Very important).

(Performance Scale: 1=Very poor performance. 2=Poor performance. 3=Neutral. 4=Good performance. 5=Excellent performance.)

Marketing Drivers

Value Strategy

Price

The room rate of this hotel is a good value for me

Convenience

The location of this hotel is convenient.

Quality

The physical surroundings of the hotel are comfortable

The service rendered in this hotel is superior.

Brand Strategy

Cognitive

The media advertising of the hotel brand attracted my attention.

Affective

The image of the hotel brand fits my personality very well.

Ethics

The hotel has high ethical standards with respect to its customers and employees relationships.

The hotel is well known as a excellent corporate citizen.

Relationship Strategy

Loyalty

The loyalty program (Frequent Stay) in the hotel is worthy to be involved with.

The preferential treatment I receive from the hotel loyalty program is an important factor to influence my decision to stay at this hotel.

Community

The hotel is an active sponsor of community events.

The hotel is an active sponsor of destination meeting events.

Knowledge

The hotel knows a lot of information about me.

The employee in the hotel recognized my name and treated me specially.

Affinity

The related information mailed from this hotel engages me.

The related activity of this hotel is great to participate in.

Customer Loyalty
(1=strongly disagree. 2=disagree. 3=neutral. 4=agree. 5=strongly agree)
Attitudinal Loyalty
Trust
1. This hotel is basically honest.
2. This hotel cares about their customers.
3. I have found that I can rely on this hotel to keep the promises that it makes.
Commitment
1. I am emotionally attached to this hotel.
2. I have a sense of belonging to this hotel.
3. I enjoy visiting this hotel.
Switching Cost
1. The costs in time and effort of changing from this hotel to another one are higher for me.
2. It would be very inconvenient for me to go to other hotels.
Behavioral Loyalty
Cooperation
1. If I saw an idea that I liked at another hotel, I would share this idea with this hotel's management or employees.
2. I would allow my name and a positive comment that I made about this hotel to be used in an advertisement.
3. I would like to receive any information (letters, promotional material or e-mail) from this hotel regularly.
Word of Mouth
1. I often encourage other people to stay at this hotel.
2 I will always tell to other people positive words about this hotel.
3. I take pride in telling other people about my experiences about this hotel.
Proportion of Visit
1. How many years since your first stay in this hotel?
a. Under 1 year b. 1 to 2 years c. 2 to 3 years d. 3 to 4 years
e. 4 to 5 years f. 6 years and over 6 years
2. How many days have you stayed in Taipei in past five years?
a. 2 to 3 days b. 4 to 6 days c. 7 to 10 days d.11 to 14 days
e. 15 days and over 15 days
3. How many days have you stayed in this hotel in past five years?
a. 2 to 3 days b. 4 to 6 days c. 7 to 10 days d. 11 to 14 days
e. 15 days and over 15 days

Demographic Profile
Age
1. Please indicate your age?
a. Under 20 years old b. 21-30 years old c. 31-40 years old
d. 41-50 years old. e. 51-60 years old f. More than 61years old
Gender
2. What is your Gender?
a. Female b. Male

Marital

3. What is your current marital status?

a. Separated b. Divorced

Ethnicity:

4. What is your Ethnicity?

a. Asian b. African/African American c. Caucasian/White

d. Hispanic/Latino e. Multiracial. f. Would rather not say

g. Other (Please Specify) _____

Household Size

5. Please indicate how many persons live in your household-including yourself?

a. 1 person b. 2 persons c. 3 persons

d. 4 persons e. 5 persons f. 6 persons and above 6 persons

Education

6. What is the best description of your education level?

a. High School b. Two Year College

d. Four Year College d. Post Graduate

Occupation

7. What is the best description of your occupation?

a. Professional b. Management/Executive c. Service Worker/Clerk

d. Retired e. Not in work force f. Others (Please specified)_____

Annual Income

8. What is your annual gross household income before taxes (1US$=NT$32.5)?

a. less than US$20,999 (NT$682,480)

b. US$21,000-US$29,999 (NT$682,500-NT$974,670)

c. US$30,000-US$39,999 (NT$975,000-NT$1,299,967)

d. US$40,000-US$49,999 (NT$1,625,000-NT$1,949,967)

e. US$50,000-US$59,999 (NT$1,950,000-NT$2,274,967)

f. US$60,000-US$69,999 (NT$1,950,000-NT$2,274,967)

g. US$70,000-US$79,999 (NT$2,275,000-NT$2,599,967)

h. US$80,000 and More than $80,000 (NT$2,600,000)

Travel Goal

9. What was the current purpose of your stay in this hotel?

a. Pleasure b. Business c. Visiting Friends/Relatives

d. Meeting/Conference

e. Events/Sports f. Transit g. Others, please specify_____

Nation of Residency

10. What is your nation of residency?

a. Taiwan b. Other Asia Countries (Please Specify) _____, c. North America (Please Specify) ____

d. South America (Please Specify) _____, e. Europe (Please Specify) _____, f. Other (Please Specify) _____.

Appendix C. IRB Approval Letter

Oklahoma State University Institutional Review Board

Date:	Friday, July 07, 2006
IRB Application No	HE0681
Proposal Title:	Relationship, Loyalty, and Marketing - A Hotel Customers Perspectives
Reviewed and Processed as:	Exempt

Status Recommended by Reviewer(s): Approved **Protocol Expires: 7/6/2007**

Principal Investigator(s

✓Ru-Jian Wang
121 Brumley, Apt. 12
Stillwater, OK 74078

Phyllis Y Chu
121 Brumley Apt. 12
Stillwater, OK 74074

Jerrold K. Leong
210 HESW
Stillwater, OK 74078

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 415 Whitehurst (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,

Sue C. Jacobs, Chair
Institutional Review Board

Appendix D. Cover Letter

OKLAHOMA STATE UNIVERSITY

OSU

College of Human Environmental Sciences
School of Hotel and Restaurant Administration
210 Human Environmental Sciences West
Stillwater, Oklahoma 74078-6173
405-744-6713; Fax: 405-744-6299

Dear [redacted] Hotel Guest,

The purpose of this research project conducted by Oklahoma State University is to determine which hotel marketing strategy will enhance customer loyalty. The ultimate goal of this project is to gather information that may be used by hotels to offer better service leading to improved emotional commitment by the hotel guest. The benefit of this study is to recognize what guests really want and how to earn the guests' commitment and trust, sharing the needed information with the lodging and hospitality industry. We appreciated your response that gives us the opportunity to learn how to better serve our future guests.

Would you be kind enough to take about 15-20 minutes of your valuable time to complete this survey?. For each of the statements please indicate its importance to you as a guest. Furthermore please indicate how hotel has performed in each area. Please deposit the completed survey in a locked box at the front desk. If you have any questions related to this survey, or have any suggestions or comments, I will be glad to talk with you, please contact Ru-jian Wang by telephone (405)332-0012, or by e-mail: john.wang@okstate.edu.

The information from this survey will be kept strictly confidential, at no time will your name, or your company's name be associated with the results. Participation in this study is voluntary. You may not participate or may stop at any time without any penalty. Moreover, there are no known risks associated with this project, which are greater than those ordinarily encountered in daily life. By returning the completed survey, it implies that you are aware of the nature of the survey and the conditions of risk, confidentiality of your responses and that you consent to participate in this study.

If you have questions about the research and your rights as a research volunteer, you may contact, Dr. Sue C. Jacobs, IRB Chair, 415 Whitehurst Hall, Stillwater, Oklahoma 74078, U.S.A., (405) 744-1676 or irb@okstate.edu .Thank you for your valuable time and insights.

Sincerely,

Ru-jian Wang, Doctoral Student
Phone: (405)744-9338
john.wang@okstate.edu

OSU
Institutional Review Board
Approved 7/7/06
Expires 7/6/07
Initials grm

Appendix E. The Layout of Questionnaires

Instruction: For each of the statements below, please indicate its importance to you as a hotel guest. Similarly, please indicate how the hotel performance in each area. Please circle the numbers in the importance and performance statements that best describes your response.

Marketing Drivers

Importance Scale: 1=Not at all important. 2=Somewhat unimportant. 3=Neutral. 4=Somewhat important. 5=Very important.	**Performance Scale: 1=Very poor performance. 2=Poor performance. 3=Neutral. 4=Good performance. 5=Excellent performance.**

Importance Scale		Performance Scale
1 – 2 – 3 – 4 – 5	1. The room rate of this hotel represents a good value for me.	1 – 2 – 3 – 4 – 5
1 – 2 – 3 – 4 – 5	2. The location of this hotel is convenient.	1 – 2 – 3 – 4 – 5
1 – 2 – 3 – 4 – 5	3. The physical surroundings of the hotel are comfortable.	1 – 2 – 3 – 4 – 5
1 – 2 – 3 – 4 – 5	4. The service rendered in this hotel is superior.	1– 2 – 3 – 4 – 5
1 – 2 – 3 – 4 – 5	5. The media advertising of the hotel brand attracted my attention.	1 – 2 – 3 – 4 – 5
1 – 2 – 3 – 4 – 5	6. The image of the hotel brand fits my personality very well.	1 – 2 – 3 – 4 – 5
1 – 2 – 3 – 4 – 5	7. The hotel has high ethical standards with respect to its customers and employees relationships.	1 – 2 – 3 – 4 – 5
1 – 2 – 3 – 4 – 5	8. The hotel is well known as a excellent corporate citizen.	1 – 2 – 3 – 4 – 5
1 – 2 – 3 – 4 – 5	9. The loyalty program (Frequent Stay) in the hotel is worthy to be involved with.	1 – 2 – 3 – 4 – 5
	10. The preferential treatment I receive from the hotel loyalty program is an important factor to influence my decision to stay at this hotel.	
1 – 2 – 3 – 4 – 5	11. The hotel is an active sponsor of community events.	1 – 2 – 3 – 4 – 5
1 – 2 – 3 – 4 – 5	12. The hotel is an active sponsor of destination meeting events.	1 – 2 – 3 – 4 – 5
1 – 2 – 3 – 4 – 5	13. The hotel knows a lot of information about	1 – 2 – 3 – 4 – 5
1 – 2 – 3 – 4 – 5	me.	1 – 2 – 3 – 4 – 5
1 – 2 – 3 – 4 – 5	14. The employee in the hotel recognized my name and treated me specially.	1 – 2 – 3 – 4 – 5
	15. The related information mailed from this hotel engages me.	

Please turn to the next page

Important Scale: 1=Not at all important. 2=Somewhat unimportant. 3=Neutral. 4=Somewhat important. 5=Very important.		**Performance Scale: 1=Very poor performance. 2=Poor performance. 3=Neutral. 4=Good performance. 5=Excellent performance.**
Importance Scale 1 – 2 – 3 – 4 – 5	16. The related activity of this hotel is great to participate in.	Performance Scale 1 – 2 – 3 – 4 – 5

Customer Loyalty **Please circle the number which used describes your response.**

Five Point Likert Scale: 1=**S**trongly **D**isagree **(SD)**. 2=**D**isagree (**D**). 3=**N**eutral (**N**). 4=**A**gree (**A**) 5=**S**trongly **A**gree (**SA).**	
	SD – D – N – A - SA
1. This hotel is basically honest.	1 – 2 – 3 – 4 – 5
2. This hotel cares about their customers' welfare.	1 – 2 – 3 – 4 – 5
3. I have found that I can rely on this hotel to keep the promises that it makes.	1 – 2 – 3 – 4 – 5
4. I am emotionally attached to this hotel.	1 – 2 – 3 – 4 – 5
5. I have a sense of belonging to this hotel.	1 – 2 – 3 – 4 – 5
6. I enjoy visiting this hotel.	1 – 2 – 3 – 4 – 5
7. The costs in time and effort of changing from this hotel to another one are high for me.	1 – 2 – 3 – 4 – 5
8. It would be very inconvenient for me to go to other hotels.	1 – 2 – 3 – 4 – 5
9. If I saw an idea that I liked at another hotel, I would share this idea with this hotel's management or staff.	1 – 2 – 3 – 4 – 5
10. I would allow my name and positive comments that I made about this hotel to be used in an advertisement.	1 – 2 – 3 – 4 – 5
11. I would like to receive any information (letter, promotional material or e-mail) from this hotel regularly.	1 – 2 – 3 – 4 – 5
12. I often encourage other people to stay at this hotel.	1 – 2 – 3 – 4 – 5
13. I will always tell to other people positive words about this hotel.	1 – 2 – 3 – 4 – 5
14. I take pride in telling other people about my experiences with this hotel.	1 – 2 – 3 – 4 – 5

Please turn to the next page

Customer Retention. **Please circle the correct response.**

1. How many years since your first stay in this hotel?
   a. Under 1 year b. 1 to 2 years c. 2 to 3 years
   d. 3 to 4 years e. 4 to 5 years f. 6 years and over 6 years

2. How many nights have you stayed in **Taiwan** in past five years?
   a. 1 to 3 nights. b. 4 to 6 nights. c. 7 to 10 nights
   d.11 to 14 nights. e. 15 nights and over 15 nights.

3. How many nights have you stayed in **this hotel** in past five years?
   a. 1 to 3 nights b. 4 to 6 nights c. 7 to 10 nights
   d. 11 to 14 nights e. 15 nights and over 15 nights.

Demographic Profile **Please circle the correct response**

1. Please indicate your age?
   a. Under 25 years old b. 26-35 years old c. 36-45 years old
   d. 46-55 years old. e. 56-65 years old f. More than 66 years old

2. What is your gender?
   a. Female b. Male

3. What is your current marital status?
   a. Single b. Married c. Other (Please Specify) _____

4. What is your ethnicity?
   a. Asian b. African American/ African c. Caucasian/White
   d. Hispanic/Latino e. Multiracial f. Would rather not say
   g. European h. other (Please Specify) _____

5. Please indicate how many persons live in your household-including yourself?
   a. 1 person b. 2 persons c. 3 persons
   d. 4 persons e. 5 persons f. 6 persons and above 6 persons

Please turn to the next page

6. What is the best description of your education level?
   a. High School b. Two Year College
   c. Four Year College d. Post Graduate

7. What is the best description of your occupation?
   a. Commerce b. Education c. Government
   d. Engineer e. Service Industry f. Self employed
   g. Not in the work force h. Retired
   i. Others (Please specify) _____

8. What is your annual gross household income before taxes (1US$=NT$32.5)?
   a. less than US$20,999 (NT$682,480)
   b. US$21,000-US$29,999 (NT$682,500-NT$974,670)
   c. US$30,000-US$39,999 (NT$975,000-NT$1,299,967)
   d. US$40,000-US$49,999 (NT$1,625,000-NT$1,949,967)
   e. US$50,000-US$59,999 (NT$1,950,000-NT$2,274,967)
   f. US$60,000-US$69,999 (NT$1,950,000-NT$2,274,967)
   g. US$70,000-US$79,999 (NT$2,275,000-NT$2,599,967)
   h. US$80,000 and More than $80,000 (NT$2,600,000)

9. What was the current purpose of your stay in this hotel?
   a. Business b. Pleasure c. Visiting Friends/Relatives
   d. Meeting/Conference e. Events/Sport f. Transit
   g. Others, please specify_____

10. What is your place of residency?
   a. Taiwan
   b. Other Asia Country (Please Specify) _____
   c. North America (Please Specify) _____
   d. South America (Please Specify) _____
   e. Europe (Please Specify) _____
   f. Other (Please Specify) _____

Please drop this questionnaire off at the front desk in the locked box provided. Our front desk agent can help you locate the box if you have trouble finding it.
Thanks you kindly for completing this survey.

VITA

Rujian Wang (王儒堅)

Candidate for the Degree of

Doctor of Philosophy

Dissertation: RELATIONSHIP, LOYALTY, AND MARKETING－A CORRELATION STUDY OF TAIWAN HOTEL CUSTOMERS' PERSPECTIVES

Major Field: Hotel and Restaurant Administration

Biographical:

Research Philosophy: Positivist, Postmodernist, and Counselor ─ Idealist on research of hospitality consumer buying behavior

Education: Received Diploma in Tourism Promotion at Word College of Journalism, Taipei, Taiwan in June, 1990; Received Bachelor of Science degree in Hospitality Management at Florida International University, Miami, Florida in December, 1992; received Master of Science degree in Hotel and Food Service Management at Florida International University, Miami, Florida in December, 1993; Received 14 Certificates of Cooking Principle Program in continuing education at Culinary Institution of America, Hyde Park, New York in January, 1996; Completed the requirements for the Doctor of Philosophy in Hotel and Restaurant Administration at Oklahoma State University, Stillwater, Oklahoma in December, 2007.

Experience: Management Specialist from 1994 to 1995 by Taiwan Sugar Corporation; Chief of Internship Replacement from 1996-2000 by National Kaohsiung Hospitality College (NKHC); Instructor from 1996 to 2000 by the Department of Chinese Culinary Arts, NKHC and Instructor from 2000 to 2004 by the Department of Western Culinary Arts, NKHC; Doctoral Teaching Associate in Spring 2005 at Oklahoma State University.

Professional Memberships: the Taiwan Hospitality Association; the International Council of Hotel, Restaurant, and Institutional Education; the National Scholars Honor Society.

Name: Rujian Wang Date of Degree: December, 2007

Institution: Oklahoma State University Location: Stillwater, Oklahoma

Title of Study: RELATIONSHIP, LOYALTY, AND MARKETING－A CORRELATION STUDY OF TAIWAN HOTEL CUSTOMERS' PERSPECTIVES

Pages in Study: 260 Candidate for the Degree of Doctor of Philosophy

Major Field: Hotel and Restaurant Administration

Scope and Method of Study: The purpose of the study was to validate customer equity theory by relating the marketing drivers to the generation of true customer loyalty among the patrons of a five-star hotel in Taipei, Taiwan. The study was guided by three objectives: (a) to determine the relationship between marketing drivers related to customer equity theory and customer loyalty, (b) to determine the profiles of customers according to the antecedents and behavioral outcomes of customer loyalty, and (c) to determine the association between the customer loyalty and the customer demographic profiles. The survey method would use self-administered questionnaires. A two-stage sampling approach including convenient sampling and systematic random sampling method was conducted. Paired samples t-test, regression analysis, cluster analysis, multiple variances of analysis in connected with discriminate analysis, one way of variance analysis, and important-performance analysis (IPA) were employed in the data analysis.

Findings and Conclusions: The findings of empirical tests supported the conclusion that fundamental and marketing strategies related to customer equity theory increased attitudinal and behavioral loyalty. There was no linear relationship on proportion of stay from the fundamental marketing strategy and the progressive marketing strategy. Customers in the hotel could be classified in terms of attitudinal loyalty (trust, commitment, and switching cost) and behavioral loyalty (word-of-mouth endorsement, cooperation, and proportion of visit) into four segments of customer loyalty: latent (27.5%), true (48.8%), low (19.1%), and spurious (4.6%). The customers' demographic variables could not be associated with the segments of customer loyalty, attitudinal loyalty and behavioral loyalty. The managerial implication is that profiling customer developed the marketing strategies that further influence the shifts of the segments of markets. The theoretical implications indicated that the empirical results was not completely supported by customer equity theory and might be an example of dissonance theory.

ADVISER'S APPROVAL: Jerrold K. Leong, Ph.D., FMP