

揭示品牌忠誠度的組成要素

Revealing the Compositions of Brand Loyalty

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摘要

此研究的目的是要確認是否品牌忠誠度有包含行為性、態度性、及複合性品牌忠誠度。兩階段的研究設計主要是用來收集手機使用者的資料，包含前測是用探索性因素分析(EFA)來深度探討及縮減品牌忠誠度的測量項目，以及主研究是用確認性因素分析(CFA)來確認品牌忠誠度的潛在結構。

此研究確認品牌忠誠度具有多構面的結構，並且包含行為性、態度性、及複合性品牌忠誠度。換句話說，複合性品牌忠誠度的存在揭露了一個與行為性及態度性品牌忠誠度截然不同的第三獨特構面。

關鍵詞：行為性品牌忠誠度、態度性品牌忠誠度、複合性品牌忠誠度

Abstract

The primary objective of this study was to verify whether the underlying structure of brand loyalty consists of behavioral, attitudinal, and composite brand loyalty. Two stages of research design were employed to gather data from mobile phone users in the study, including the pre-test to gain insight and to purify measurement of brand loyalty by applying Exploratory Factor Analysis (EFA), and the main study to confirm the underlying structure of brand loyalty by applying Confirmatory Factor Analysis (CFA). This study found that the existence of the multidimensional construct of brand loyalty was confirmed, and that the multidimensional construct unquestionably consists of three distinct dimensions: behavioral brand loyalty, attitudinal brand loyalty, and composite brand loyalty. In other words, the existence of composite brand loyalty revealed a third unique dimension of brand loyalty distinguished from behavioral brand loyalty and attitudinal brand loyalty.

Keywords: behavioral brand loyalty, attitudinal brand loyalty, composite brand loyalty

1. THE INTRODUCTION

1.1 Introduction

Retaining customers has become more important since the market is very competitive.

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Many practitioner and academic researchers have devoted their efforts to studying how to create and maintain consumers' brand loyalty, because brand loyal consumers benefit a firm by reducing marketing costs associated with attracting new customers (Aaker, 1992). In addition, these loyal consumers are willing to pay premium prices to stay connected with a brand (Bojanic, 1996). Most importantly, they not only live up to their loyal behavior by undertaking a repeat purchase on a brand, but also disseminate positive word-of-mouth encouraging their peers to purchase the same brand (Taylor & Hunter, 2002).

Brand loyalty has often been perceived as either repeat purchase (Dick & Basu, 1994;), preference (Adkins, Burgess, & Wesley, 2002), or commitment (Fullerton, 2003; Pritchard, Havitz, & Howard, 1999). Such uni-dimensional measurement fails to satisfy the need of practitioners and academic researchers who are dedicated to identifying the true brand loyalty. In addition, it neglects the importance of understanding consumers' decision processes with regard to purchasing behavior (Agnew, 1987). Jacoby and Chestnut (1978) suggested that brand loyalty should be measured in a multi-dimensional way, and can be identified as behavioral, attitudinal, and composite brand loyalty (Jacoby & Chestnut, 1978). However, no research has been done to investigate whether those three brand loyalties can serve as an underlying structure of the general brand loyalty. Therefore, the first objective of this dissertation is to verify whether the underlying structure of brand loyalty consists of behavioral, attitudinal, and composite brand loyalty.

1.2 Problem Background

Brand loyalty has received tremendous attention for decades. Due to the fact that information technology plays a key role in providing information to the consumer, consumers have been exposed to a proliferation of brand choice alternatives. Ha (1998) indicated that the consumer does not seem to be as loyal to brands as they used to be, since so many forces drive consumers to switch to other companies. Therefore, the question marketers always ask themselves is: what is brand loyalty? Since the term *brand loyalty* has not been uniquely defined in marketing literature, the definitions of brand loyalty can be categorized in the following.

1.3 Purpose of the Study

The purpose of this study is to identify the three underlying dimensions of brand loyalty (behavioral brand loyalty, attitudinal brand loyalty, and composite brand loyalty).

1.4 Research Questions or Research Hypotheses

This study attempted to investigate the question: Can behavioral brand loyalty, attitudinal brand loyalty, and composite brand loyalty serve as the underlying structure of general brand loyalty? Based on this research question, the corresponding hypothesis can be developed as

follows:

H₁: Brand loyalty is a multidimensional construct of behavioral, attitudinal, and composite brand loyalty.

2. THE LITERATURE REVIEW

2.1 Brand Loyalty

The reason so many researchers devote their efforts to brand-related studies is to locate where the brand loyal customers are, because brand loyalty has been an important concept for practitioners for two reasons: loyal customers can bring enormous profit to a company because they are less price sensitive than a disloyal customer (Reichheld, 1996); reducing the cost of acquiring new customers (Reichheld, 1993). Indeed, brand loyalty has been the top choice of the fundamental concepts with which marketers are most familiar, because many marketers always ascribe the success of marketing strategies to a higher portion of brand loyal customers. Identifying brand loyal consumers may provide marketers with means of more effective market segmentation and bring the company wealth by retaining customers (Doyle, 1998). The emerging evidence can be seen in literature suggesting that brand loyalty is always taken into account while those marketers implement effective marketing strategies (Taylor & Hunter, 2003; Strauss & Friege, 1999).

The concept of brand loyalty sprouted in the 1920s (Jacoby & Chestnut, 1978), and has continued to develop to the present. To date, a great deal of empirical studies have been proposed in the past nine decades, and interpreted brand loyalty with different distinct operational definitions, such as preference (Adkins, Burgess, & Wesley, 2002; Bristow & Sebastian, 2001), repeat purchase (Dick & Basu, 1994; Lin, Wu, & Wang, 2000; Yoo et al., 2000), and commitment (Fullerton, 2003; Hawkes, 1994; Pritchard, Havitz, & Howard, 1999; Taylor & Hunter, 2003).

Prior to further discussing the brand loyalty, the three aforementioned concepts of brand loyalty are worthwhile to distinguish. First, preference refers to a choice made by a consumer among several brands on the basis of liking or disliking. An example of an operational definition can be seen in such a question as, "Which brand do you prefer?" (Moss & Colman, 2001). No actual purchase is necessarily needed while consumers express their emotional predisposition. Second, repeat purchase refers to consumers purchasing the same brand continually without any emotional attachment to it (Hawkins, Best, & Coney, 2001). Relative frequency of purchase devoted to a specific brand provides indication of how many brand-related purchases have been made. Third, commitment refers to an emotional attachment encouraging consumers to repurchase a brand consistently over time (Olive, 1999; Taylor & Hunter, 2003). Cunningham (1961) further asserted that the consumers with brand commitment express loyalty to a brand by both previous purchase behavior and resistance to other competitive brands. Crosby and Taylor's (1983) study indicated that the consumers with

higher commitment possess more stable preference on the same brand, and further implied the underlying attitudinal component resulting in the high correlations between commitment and preference. On the contrary, commitment, based on the definition proposed by Cunningham, will not be associated with repeat purchase. The evidence can be seen in the controversy of spurious brand loyalty and true brand loyalty (Dick & Basu, 1994).

2.2 Types of Brand Loyalty

The diversity in the definition of brand loyalty encourages generations of typology in classifying brand loyalty. Day (1969) proposed two types of brand loyalties, behavioral and attitudinal dimensions, to distinguish between actual brand loyalty and spurious brand loyalty. The author defines behavioral brand loyalty as the proportion of the total purchase of the product that consumers devote to the brand, while attitudinal brand loyalty is considered as the attitude toward the brand. As Jacoby and Chestnut (1978) noted, Day's attitudinal brand loyalty may be employed to identify the consumers who are spuriously loyal. Jacoby and Chestnut further combined attitudinal brand loyalty and behavioral brand loyalty to compensate for the incompleteness of Day's study with a third dimension of brand loyalty, composite brand loyalty. In addition, Jacoby and Chestnut's study detailed 33 types of measurements for behavioral brand loyalty, 12 types of measurements for attitudinal brand loyalty, and eight types of measurements for composite brand loyalty, although there is no continuous empirical study that examined those three brand loyalties with a variety of measurements at the same time.

Olson and Jacoby's study (as cited in Jacoby & Kyner, 1973) applied the optimal factor-analytic solution to examine the construct validity of brand loyalty, and the 67% of variance indicated four noticeable constructs of brand loyalty: behavioral brand loyalty, attitudinal brand loyalty, multibrand loyalty, and general brand loyalty. In the study, tremendous attention was paid to behavioral brand loyalty and attitudinal brand loyalty, explaining how consumers repeat their same brand purchase and what brand they prefer most, and are consistent with the concept of repeat purchase and preference as well.

Dick and Basu (1994) categorized brand loyalty, based on the relationship between relative attitude and repeat purchase, into three types: true brand loyalty (high repeat purchase and high relative attitude), latent brand loyalty (low repeat purchase and high relative attitude), and spurious brand loyalty (high repeat purchase and low relative attitude). The consumers with true brand loyalty showed a favorable attitude and frequent purchasing behavior, and especially compared to those consumers with aforementioned commitment, they exhibited higher purchase intention as well.

Latent brand loyalty occurs when the consumers possess a desirable attitude toward a brand with lower frequency of repurchase or no repeat purchase. Its nature seems similar to the commitment and preference identified in the previous section. The consumers with

spurious brand loyalty are not committed to a brand, in a certain degree; they keep purchasing the same brand routinely because of some repeat purchase patterns such as convenience, inertia, or availability, which will drive the consumers to stay with the same brand (Holland & Baker, 2001). The nature of repeat purchase aforementioned seems to be consistent with the explanation of the spurious brand loyalty because both of them lack any emotional attachment to brand attributes.

In an attempt to explore how consumers become loyal at each attitudinal phase, Oliver (1997) developed a framework to interpret the cognition-affect-conation pattern, and suggested that consumers become loyal in the sequence of cognition, affective sense, and conative sense, followed by action inertia. Four types of brand loyalty are identified in the loyalty phase: cognitive loyalty, affective loyalty, conative loyalty, and action loyalty. Cognitive loyalty is initiated in the first loyalty phase where consumers sense the preferable brand based on the brand attribute information (e.g. prior knowledge or experience) available to consumers. As Oliver indicated, the existence of satisfaction in this phase plays a crucial role in deciding whether cognitive loyalty can be converted to affective loyalty. Affective loyalty, the second loyalty phase, refers to the composite dimension consisting of satisfaction and a positive attitude toward the brand. It exhibits a certain degree of liking for the brand and is further considered a commitment. Conative loyalty refers to a brand-specific commitment to repurchase. In this phase of loyalty development, the commitment has become the consumers' motivation to repurchase the same brand and leads to action inertia. The final phase of loyalty development, action loyalty, assigns consumers an additional desire to overcome any obstacle preventing the repurchase. Once repurchase is made, action inertia will be automatically developed as well.

Gounaris and Stathakopoulos (2004) further set forth four brand loyalties (premium loyalty, inertia loyalty, covetous loyalty, and no loyalty) based on the three dimensions: emotional attachment, purchasing behavior, and social influences. Consumers who possess premium loyalty will exhibit a high degree of relative attachment to the brand and a high frequency of repeat purchase, and be highly affected by social pressure. Inertia loyalty refers to a consumers' high level of habitual purchasing behavior without any emotional attachment to the brand. Covetous loyalty refers to the high level of emotion consumers attach to the brand without any purchase. Finally, no brand loyalty means a complete lack of emotional attachment to the brand without any purchase.

All of the typology mentioned above provides an insight into the underlying structure of brand loyalty and can be concluded that, at least, brand loyalty functions are based on both behavioral dimensions and attitudinal dimension as well. Since the literature makes it clear that brand loyalty is too complex to be measured by a single unidimension (Jacoby & Kyner, 1973), it seems that studying composite brand loyalty should provide a better understanding of the nature of brand loyalty while conducting research on behavioral brand loyalty and

attitudinal brand loyalty. Thus, the researcher of this study adopted Jacoby and Chestnut's three types of brand loyalties (behavioral, attitudinal, and composite) as the focus of this study to explain the behavior of loyal consumers.

2.3 Behavioral Brand Loyalty

Brand loyalty has been perceived as a consequence of the behavioral function, and has received much attention by the majority of early researchers, who only examined brand loyalty with behavioral dimension (Kuo, Chang, & Cheng, 2004). It is not surprising for those researchers, to consider behavioral brand loyalty as the outcome of the relationship between the brand and consumers because, for marketers, the corollary of consumers' loyal behavior is consumers' same-brand repurchase behavior.

2.3.1 Conceptual Background of Behavioral Brand loyalty

Behavioral brand loyalty can be conceptualized with different definitions: how much money consumers pay for a given brand when compared to others brands (Cunningham, 1956); the probability that consumers purchase the same brand in the current purchase as that purchased last time (Morrison, 1966); a biased choice behavior with respect to branded merchandise (McConnell, 1968); a function of a brand's relative frequency of purchase in time-independent situations, and a function of relative frequency and purchase pattern for a brand in time-dependent situations (Sheth, 1968); the conditional probability of consumers who make same-brand repurchase (Colombo & Morrison, 1989); a state variable summarizing accumulated purchasing experience (Mannering, Winston, Griliches, & Schmalensee, 1991); the consumer's behaviour of repeatedly purchasing a specific brand over a certain period of time (Lin et al., 2000); and the degree to which the usual or favorite brand within a product category is purchased (Wood, 2004). The essence of these conceptual definitions is consistent with the contention of Havitz and Howard (1995) and Park (1996), that behavioral brand loyalty consists of several components: duration, frequency, intensity, sequence, and probability of brand use over time. Behavioral brand loyalty will encourage consumers to maintain a long-term length of patronage with a repurchase pattern, such as frequent repurchase on the brand they prefer over a specified time-period, proportion of purchase they devote to the brand, and sequence where they choose the brand over the other brands. Such formation of behavioral brand loyalty is based on past behavior, and it can be assumed that the consumers with behavioral brand loyalty are more likely to repurchase the same brand in the future.

2.3.2 Measurements of Behavioral Brand Loyalty

Measurement of brand loyalty is crucial in analyzing brand loyalty, because different measurements provide diverse definitions for researchers to interpret brand loyalty. The

earliest researcher who measured behavioral brand loyalty, Link, conducted his study in 1934 on behavioral brand loyalty by identifying repeat purchase within two consecutive surveys, which simply asked consumers to recall the brand purchased (Jacoby & Chestnut, 1978). Many studies referred to Link's study and further proposed different approaches in measuring consumers' behavioral brand loyalty. Popular measurements of behavioral brand loyalty are: (a) proportion of purchase; (b) sequence of purchase; and (c) probability of purchase.

First, Cunningham (1956) utilized market share as the concept of the proportion of purchase to measure behavioral brand loyalty and introduced dual-brand loyalty (the percentage of total purchases devoted to the two most frequently purchased brands), and triple-brand loyalty (the percentage of total purchases devoted to the three most frequently purchased brands). Other operational definitions of proportion-of-purchase include: exclusive purchase (behavioral brand loyalty exists when a consumer only repurchases a single brand without any exception) and two-thirds criterion (behavioral brand loyalty is defined as the consumers purchase four or more times in a certain 6-week period, without any marketing activity involved) (Jacoby and Chestnut, 1978).

Second, Knouse (1986) measured behavioral brand loyalty with purchase sequences of decision-making units, and stated that decision-making units are not necessarily the same consumer who repurchases the brand. They could be housewives or their husbands who take turns repurchasing the brand for the family based on their availability and convenience. DuWors and Haines (1990) operationally defined behavioral brand loyalty as the consumers who make two consecutive purchases on the same brand while Tucker (1964), Chaudhuri (1999), and Lin et al. (2000) took "three in a row" into consideration of behavioral brand loyalty. McConnell (1968) further incorporated price inducements in the operational definition: four in a row before any inducement to switch brands, and three in a row after the inducement. Other operational definitions in this category include: number of brand runs (the degree of behavioral brand loyalty is measured by the numbers of brands a consumer purchases; the lower the number of brand runs, the stronger the behavioral brand loyalty) and average length of brand runs (behavioral brand loyalty refers to the average number of brands contained within a consumer's brand run; the longer the runs, the greater the behavioral brand loyalty) (Jacoby & Chestnut, 1978).

Third, the researchers apply either repurchase probability (Morrison, 1966; Bayus, 1992; Fader & Schmittlein, 1993; Ewing, 2000) or relative purchasing frequency (Kenhove et al., 2003; Iwasaki & Havitz, 2004) for the next purchase occasion as a function of the probability of purchasing the brand on the current occasion. Essentially, these probabilities of purchase refer to the loyal behavior determined by the probabilistic process with the consideration of time and the effect of past purchases. The aforementioned operant conditional learning provides a fundamental explanation that prior experience with the brand might produce positive reinforcement for future purchase behavior. Other similar operational definitions

include: first-order probability of repurchase (probability of the first order brand consumers would like to repurchase), average staying time (the average number of purchases for consumers to stay with the brand), and return purchase probability (the relative frequency of returning to the first brand on the next purchase) (Jacoby & Chestnut, 1978).

In addition to the several types of measurements mentioned above, Jacoby & Chestnut (1978) further proposed two other types of measurements: Synthesis measures and miscellaneous loyalty measures. Synthesis measures include: the shopping matrix (a p-by-p matrix is created to reflect consumers' buying behavior for a specific product with the rows being the average number of brands looked at in a given store and columns being the number of stores visited) and Sheth factor scores (proportion-of-purchase measures weighted by the sequence in which the brand was obtained). Miscellaneous loyalty is basically measured based on the average number of brands, such as N_m (the average number of brands purchased by families of brand m), S_m (the percentage of families differing in their most preferred brand during a period of time), and N_{ar} (the number of brands purchased during a period of time).

Some weaknesses can be identified based on the measurements of behavioral brand loyalty mentioned above. First, the explanation for the underlying reasons for consumers' behavioral pattern should be reinforced in the concept of proportion of purchase. For example, identifying the motivation of why consumers have a higher proportion of purchase might benefit the interpretation of consumers' loyal behavior. Second, sequence of purchase does not take the next brand into consideration, since asking consumers whether they would repurchase the same brand could extend marketers' scope on consumers' future purchase behaviors. Therefore, it might generate more precise predictability of behavioral brand loyalty. Finally, time interval could be a determinative factor in validating the concept of probability of purchase. The consumers who repurchase the same brand within an interval of a year are considered behaviorally loyal, as are the consumers who repurchase the brand within a month. Thus, marketers should take time into account while they distinguish the consumers with behavioral brand loyalty from the one with latent loyalty.

2.4 Attitudinal Brand Loyalty

While behavioral brand loyalty is partly determined by the aforementioned factors such as repeat purchase behavior, attitudinal brand loyalty also plays a crucial role, driving consumers' behavior behind the purchase (Baldinger & Rubinson, 1996; Dyson, Farr, & Hollis, 1996). As Raju (1980) pointed out, attitudinal loyalty can be considered a personality trait, meaning that a consumer's loyalty level would overstep his attitude toward individual brands to present a consistent response. Attitudinal loyalty could be also used to recognize those customers who do not make a decision between brands (Bennett & Rundle-Thiele, 2002). From a practitioner's perspective, attitudinal brand loyalty not only reveals the information regarding those consumers whose words and deeds are not in accord, but also

provides the prediction of potential markets in the future. It precludes the portion of the consumer with behavioral brand loyalty; it manifests the amount the consumer is willing to buy in the future. Whereas, developing a higher proportion of loyal consumers is the objective of marketing practices, marketers must rely on attitudinal brand loyalty to identify both the consumers who would like to purchase a brand or switch to another brand. Unfortunately, its importance does not obtain much attention by a corresponding degree of research interest. The evidence can be seen in Jacoby and Chestnut's (1978) study indicating the research on attitudinal brand loyalty was outnumbered by behavioral brand loyalty with the ratio of one to three.

2.4.1 Conceptual Background of Attitudinal Brand Loyalty

Jacob and Chestnut further indicated that the concept of attitudinal loyalty follows the cognitive school of thought, emphasizing the contribution of mental processes in building loyalty. From a psychological perspective, the attitudinal loyalty concept assumes that the consumer is engaged in a specific problem solving behavior with the comparisons of brand and its attributes. Therefore, Jacoby and Chestnut conceptually defined attitudinal loyalty as the propensity towards a brand as a function of a psychological process. Other conceptual definitions consistent with the propensity concept include, the degree of consumers' favorable attitudes toward the firm (Foster & Cadogan, 2000; Bennett & Rundle-Thiele, 2002), the degree to which consumers like some stimulus and perceive it to be good (Holbrook, 1986), and the high relative attitude toward the brand (Yi & Jeon, 2003). Although attitudinal brand loyalty can be simply inferred to as the degree of brand loyalty consumers express to a brand (Beatty, Kahle, & Homer, 1988) or the combination of cognitive attitude, affective attitude, and conative attitude (Quester & Lim, 2003), a great deal of researchers rather embrace the idea of considering the concept of resistance to change as the foundation of attitudinal brand loyalty. They assert that attitudinal brand loyalty refers to a consumers' willingness to wait if the brand is not available in the store (Lau & Lee, 1999) and the consumers' refusal of switching to other brands (Baldauf, Cravens, & Binder, 2003; Taylor & Hunter, 2003).

Because attitudinal brand loyalty was identified as a multidimensional construct, three diverse themes are suggested to define attitudinal brand loyalty: investment loyalty, normative loyalty, and affective loyalty (Park, 1996; Park & Kim, 2000). Investment loyalty refers to the accumulation of investment in a brand purchase. As Allen & Meyer (1990) indicated, consumers are more likely to stay with the brand if they have increased their investment to the brand, and thus, their attitudinal brand loyalty is influenced by investment. Normative loyalty is said to be a consumers' awareness of social expectation or normative pressure from significant others. It has been reported as producing a high level of commitment because of increased social expectation or normative pressures from peers. Affective loyalty is considered as a psychological attachment affected by a consumer's intention of repurchasing

the same brand. It does reflect a consumer's internal thought or perception toward the brand.

2.4.2 Measurements of Attitudinal Brand Loyalty

As mentioned in the aforementioned section in the behavioral brand loyalty, only one third of literature emphasizes the measurement of attitudinal brand loyalty because many researchers were comfortable with the predictability of consumers' subsequent behavior provided by behavioral brand loyalty (Jacoby & Chestnut, 1978). Since many factors underlying the development of brand loyalty could not be accurately predicted by behavioral brand loyalty, the importance of attitudinal brand loyalty began to be noticed. The earliest literature operationally defining attitudinal brand loyalty was proposed by Guest (1944), who measured attitudinal brand loyalty with brand preference and identified whether consumers are loyal by asking which brand they preferred. This author pioneered the research of investigating consumers' psychological attributes in relation to brand loyalty, and lightened the future direction of incorporating attitudinal components into the measurement of brand loyalty.

To better understand the benefits of employing attitudinal brand loyalty in the measurement of brand loyalty, Bennett and Rundle-Thiele (2002) put forth two ways of operationalizing attitudinal brand loyalty: individual measure and brand-specific measure. The individual measure, so-called personality trait measures, measures consumers' propensity to be brand loyal. The example can be seen in Reynolds et al.(1974) where the authors measured attitudinal brand loyalty by summing the scores from the four-item psychological scales including, "I do most of my shopping in the same stores I have always shopped in," "Once I get used to where things are in a supermarket, I hate to change stores," "I like things the old, established way," and "Once I have made a choice of which store to buy clothes in, I am likely to shop there without trying another store." Moreover, Foster and Cadogan (2000) utilized a different psychological scaling process, a four-item measure, developed based on Aaker's (1995) Brand Equity Top Ten to measure consumers' perceptions on the strength of the firm's brand personality and popularity and their feelings toward the act of purchasing firm's product.

The brand-specific measure refers to the measurement of the psychological attachment to a brand, and includes purchase intention and brand commitment (Bennett & Rundle-Thiele, 2002). Juster (1966) successfully illustrated how to measure attitudinal brand loyalty by employing an 11-point purchase probability scale to predict consumer purchase rates. This type of scale has been used as a better predictor of consumers' purchase than other verbal buying intentions (Heald, 1970). By the same token, Lau and Lee (1999) directly gauged attitudinal brand loyalty by means of repurchase intention, and simply asked consumers whether they intended to keep buying a given brand. On the part of brand commitment, Bennett and Rundle-Thiele (2002) noted that attitudinal brand loyalty can be hunted out by

measuring brand commitment with the agree/disagree questions such as, “I rarely take chances by buying unfamiliar brands even if it means sacrificing variety.” Park and Kim’s (2000) study also measured attitudinal brand loyalty by adopting Allen and Meyer’s (1990) 24-item commitment scales, asking consumers whether they are happy with the brand and whether it is ethical to switch to other brands. Similar to commitment measures, a great deal of researchers rather measured resistance to change than using commitment to identify attitudinal brand loyalty. As Taylor and Hunter (2003) argued, “resistance to change is the root tendency of commitment as well as the primary evidence of commitment, and that resistance to change is a key antecedent to loyalty” (p. 24). Most researchers measure attitudinal brand loyalty by taking consumers’ response on the question of whether they will wait for the brand when the brand is unavailable (Baldauf et al., 2003; Yoo et al., 2000). Likewise, Lau and Lee’s (1999) study reversely asked consumers whether they would switch the other brands which are on sale or when the brand they prefer is not available.

In addition to the aforementioned measurements, Jacoby and Chestnut (1978) proposed more different measurements of attitudinal brand loyalty, such as constancy of preference that attitudinal brand loyalty exists if constancy in relative attitude toward brands can be identified over time (Yi & Jeon, 2003; Quester & Lim, 2003); brand name loyalty that degrees of attitudinal brand loyalty are assessed by asking them whether they make a purchase selection according to their favorite brand name (Park, 1996). The most fascinating work in which Jacoby and Chestnut contributed to measurement of attitudinal brand loyalty is the concept of acceptance and rejection. This concept basically posits consumers’ brands in either the acceptance region or the rejection region, reflecting the consumers’ brand preference. Two types of measures are used to measure attitudinal brand loyalty in this concept: distance measure and number measure. The distance measures, such as distance between acceptance and rejection regions and distance between acceptance and neutrality regions, gauge the distance between regions to provide researchers an indication of degree of attitudinal brand loyalty will be. The greater the distance between regions, the greater the degree of attitudinal brand loyalty. On the contrary, the number measure, such as number of brands in the acceptance region and number of the brands in the rejection region, counts the actual number in each region to represent the degree of unibrand loyalty. The higher the number of brands in a region, the lower the degree of attitudinal brand loyalty for each brand in the region.

2.5 Composite Brand Loyalty

Several researchers have discussed the necessity of simultaneously integrating both attitudinal brand loyalty and behavioral brand loyalty into the development of the brand loyalty, such as to capture spurious brand loyalty (Day, 1969), to distinguish latent brand loyalty (Newman & Werbel, 1974), to identify attributes underlying consumers’ behavior of repurchasing their preferred brand (Gounaris & Stathakopoulos, 2004; Wood, 2004), to better

understand the role of price sensitivity, evoked set size, and satisfaction in development of true brand loyalty (Wood, 2004), and to explain reasonable intention of repurchasing a brand (Gounaris & Stathakopoulos, 2004). Such studies have concurred on the issue that brand loyalty should be considered as not only a result of repeat purchase behavior, but also as a consequence of cognitive attachment to a brand. Thus, the assemblage of behavioral brand loyalty and attitudinal brand loyalty, so-called composite brand loyalty (Jacoby & Chestnut, 1978), should provide more efficient compensation for the shortcoming of both behavioral brand loyalty and attitudinal brand loyalty. A note should be addressed that most aforementioned researchers did not apply the term *composite brand loyalty* in their empirical studies. Instead, they employed true brand loyalty, premium brand loyalty, or simply brand loyalty while they deployed their measurement based on both attitudinal and behavioral aspects. Moreover, the simultaneity of both measurements is also required for the formation of composite brand loyalty. Therefore, after carefully filtering much literature, the researcher of this dissertation identified those studies which simultaneously adopted both attitudinal and behavioral measurements, and considered those as being undertaken on a basis of composite brand loyalty.

2.5.1 Conceptual Background of Composite Brand Loyalty

Essentially, the conceptual definition of composite brand loyalty should, at least, contain two components: a behavioral component and an attitudinal component, such as the exhibit of overall liking for the brand and repeat purchase of the brand (Bristow & Sebastian, 2001); the relationship between relative attitude toward a brand and patronage behavior (Dick & Basu, 1994); consumer behavior of purchasing a brand routinely and resisting switching to another brand (Yoo et al., 2000). Since composite brand loyalty is an extremely complex construct, it might relate to not only inert behavior and rigid consideration, but also timing, multibrand allegiance, and evaluative decision. Thus, it is worthwhile to depict composite brand loyalty with an additional component. Day (1969) took timing into account and conceptually defined composite brand loyalty as consumers' preference expressed in the proportion of total purchase of a brand over a period of time. The role of timing in this conceptual definition is to constrain an inappropriate report of repurchasing a brand and further eliminate the unrealistic market share. A purchase made by a consumer ten years ago should not be counted in the proportion of purchasing the brand because the purchase no longer has a significant effect on the development of the consumer's brand loyalty.

In Gounaris and Stathakopoulos's (2004) study, composite brand loyalty is defined as a degree of relative attachment to the brand and frequency of repeat purchase, and can be affected by social pressure. The supplementary component, social pressure, plays the antecedent role which triggers the occurrence of composite brand loyalty. It includes social group influences and peer's recommendations, and might dominate consumers' attitude and

subsequent behavior.

Competitive inducement, such as price promotion, is employed as the additional component in Joseph and Richard's (1974) conceptual definition. The authors define brand loyalty as resistance to competitive inducement to switch brands with repeat purchase of a brand. The function of this inducement can reveal the degree of consumers' resistance to change, and examine whether a consumer is composite brand-loyal or not, because price promotion has a certain effect on behavioral brand loyalty (Cunningham, 1956) while attitudinal brand loyalty has an impact on consumer's perception toward price promotion (Foster & Cadogan, 2000). The mediating role the inducement plays exhibits the interaction among composite brand loyalty, repeat purchase, and consumers' brand commitment.

Delgado-Ballester and Munuera-Aleman (2001) incorporated brand recommendation into the conceptual definition and interpreted composite brand loyalty as consumers' commitment encouraging them to purchase the brand they prefer and further recommend to others. A consumer is considered composite brand-loyal when he/she disseminates their word-of-mouth after their purchasing behavior driven by their commitment to a brand. This additional component, type of positive word-of-mouth, not only serves as an outcome of composite brand loyalty, but also extends the influence of composite brand loyalty.

The most complex definition of composite brand loyalty, among those brand loyalty related literature, was proposed by Jacoby and Kyner (1973). The authors defined composite brand loyalty as (a) the biased, (b) behavioral response, (c) expressed over time, (d) by some decision-making unit, (e) with respect to one or more alternative brands out of a set of such brands, and (f) is a function of psychological processes. Except attitudinal and behavioral components, this conceptual definition reflects composite brand loyalty with four additional components: timing, dominator, size of evoked set, and evaluative process. Simply speaking, these four components refer to consumers' repeat purchase of the brand they prefer under the conditions of when, who, what, and how. However, no study has been done based on these four conditions simultaneously because it is very difficult to operationalize this conceptual definition. As the authors indicated, the size of the evoked set is the additional component manipulated in their study. The size of the evoked set depicts the degree of competition undertaken in the consumers' mind, and should be able to reflect consumers' brand commitment within their decision process. Once it can represent consumers' psychological function, composite brand loyalty can be detected with repeat purchase behavior.

2.5.2 Measurements of Composite Brand Loyalty

Since composite brand loyalty has been recognized as the assemblage of behavioral brand loyalty and attitudinal brand loyalty, the behavioral component and attitudinal component seem indispensable in the measurement of composite brand loyalty. To measure composite brand loyalty, Dick and Basu (1994) simply identified the composite brand-loyal

consumers by cross-examining relative attitude with repeat purchase, followed by measuring the strength of their loyalty. The composite brand loyalty, so-called true loyalty in the study, involves a high level of both relative attitude and repeat purchase.

Delgado-Ballester and Munuera-Aleman (2001) first identified whether consumers were involved in the previous purchase behavior, followed by three questions, asking them whether consumers consider themselves to be loyal to the brand, whether they consider the brand is the best brand on the market, and whether they will recommend buying the brand. Cunningham (1961) adopted the same approach but employed a dissimilar question: whether consumers will wait for a brand's availability when the brand is out of stock. The respondents who provided a confirmative response to the above question were regarded as the one with composite brand loyalty.

Day (1969) gauged composite brand loyalty as based on an equation calculating the ratio of the proportion of total purchases devoted to a brand to the initial attitude toward the brand. Based on the model, a lower value assigned to attitudinal items represents a favorable attitude toward the brand. Thus, consumers should possess a higher degree of composite brand loyalty if they simultaneously reported a lower score on attitudinal items and reported a higher score on behavioral items. However, because behavioral loyalty was measured during a period of time while the measurement of attitudinal loyalty was implemented at the beginning of the study, the author reported, "There is a possibility that attitude component of the brand loyalty score may not be accurate during some of the time period required to estimate the purchase probability" (p. 30).

Jacoby and Kyner (1973) and Pessemier (1959) both measured composite brand loyalty based on consumers' resistance to price inducements before switching to the other brands. The greater the price inducement, consumers stayed with their current brand, the stronger their composite brand loyalty. By the same token, to capture consumers' composite brand loyalty, Wood (2004) employed a 10 point scale statement asking consumers to rate whether they make their purchase according to their favorable brand regardless of price. Consumers scoring higher than 5 were marked composite brand loyal.

Application of an evoked set in measurement of composite brand loyalty can be seen in Newman and Werbel's (1974) study. The authors applied the decision tree to recognize the consumers with behavioral loyalty first, followed by asking how many brands were considered at the outset of the decision process, whether the old brand was the one mainly considered, and whether there was any brand related to information seeking. Loyalty scores range from 10 to 50 and were assigned based on consumers' verbal reports to the questions regarding prepurchase information search. The higher the score consumers had, the greater brand loyalty they possessed. The consumers, who pointed out only one brand in their evoked set and did not perform any information seeking behavior, were scored 50 and were considered as composite brand-loyal.

The other measurements, which combine information seeking behavior into the measurement of composite brand loyalty, can be found in the research of Towle and Martin (1976). Towle and Martin utilized a five-point Likert Scale to collect consumers' responses about whether they look for the brand name on the package. The consumers who obtained higher scores were identified as composite brand-loyal. Similarly, Bellenger, Steinberg, and Stanton (1976) employed a multivariate method to measure store name loyalty by obtaining the percentage of shopping consumers devoted to a given store and asking them whether they shopped at the store when they needed an item they thought it carried. The consumers were identified composite brand-loyal if they scored higher in a five-point scaling instrument, which was used with the anchors of strongly agree (scale=5), agree, neutral, disagree, and strongly disagree (scale=1).

2.6 Hypotheses Development

As mentioned previously, behavioral brand loyalty can be measured by probability of purchase (Morrison, 1966), the conditional probability of same-brand repurchase (Colombo & Morrison, 1989), a biased choice (McConnell, 1968), relative frequency of purchase (Mannering et al., 1991), duration (Havitz & Howard, 1995), and sequence of purchase (Park, 1996). Attitudinal brand loyalty can be gauged by preference (Jacoby & Chestnut, 1978), favorable attitude (Bennett & Rundle-Thiele, 2002), relative attitude (Yi & Jeon, 2003), refusal of switching (Baldauf et al., 2003), and commitment (Bennett & Rundle-Thiele, 2002). Finally, composite brand loyalty can be measured by the combination of social influence, relative attitude, and repeat purchase (Gounaris & Stathakopoulos, 2004), resistance to competitive inducement to switch brands with repeat purchase of a brand (Joseph & Richard, 1974), the combination of repeat purchase, commitment, and recommendation to others (Delgado-Ballester & Munuera-Aleman, 2001), the biased behavioral response expressed over time with respect to one or more alternative brands out of a set of such brands (Jacoby & Kyner, 1973), and wait for availability (Cunningham, 1961). Since these three brand loyalties might become independent from each other and simultaneously exist (Gounaris & Stathakopoulos, 2004), the hypothesis can be proposed as follows:

H₁: Brand loyalty is a multidimensional construct of behavioral, attitudinal, and composite brand loyalty.

3. METHODOLOGY

In this study, mobile phone users in Taiwan were chosen as the targeted population. The statistics made by Taiwan government indicates that the number of mobile phone subscribers grew from 1997 to 2003, and started its decline in 2004 (<http://www.dgt.gov.tw>). It implies that the mobile phone industry has become more mature than ever. Thus, this phenomenon has fostered the importance of the development of brand loyalty.

3.1 Research Design

This research was designed to identify three underlying dimensions of brand loyalty: behavioral brand loyalty, attitudinal brand loyalty, and composite brand loyalty. Two stages of research design were employed to gather data from mobile phone users in the study, including the pre-test to gain insight and to purify measurement, and the main study to confirm the underlying structure identified in the pretest. Both the pre-test and the main study took a quantitative approach in the collection of data.

3.2 Selection of Participants

For the pre-test, the author of this study used convenience samples in the university where the author was working. A total of two hundred participants from four classes of the university were acquired for the pre-test, in order to fulfill the requirement of exploratory factor analysis. For the main study, the author of the study randomly selected one university in each of the northern, middle, and southern parts of Taiwan as the site to undertake the surveying activity. In each university selected, one hundred questionnaires from two randomly selected classes were projected to be obtained. A total three hundred participants from those three universities were needed for the main study to meet the threshold of structural equation modeling.

With the permission from the universities, the author of this study borrowed ten minutes of class time in the selected classes, and solicited the students, who are currently taking continuing education, to participate in the surveying activity. A questionnaire was distributed to each participant who was willing to attend this surveying activity. The advantage of using the students as participants was to increase the reliability of this study because those continuing education students, whose age, income, and gender were normally distributed in the demographics, well represented the defined population in the study. This quota sampling technique, as Gliner and Morgan (2000) noted, is often used in marketing research because the resulting samples look representative of the population. Additionally, in order to increase the response rate and to reduce the non-response bias, NT \$100 was given away to the participants for the appreciation of their participation.

3.3 Instrumentation

3.3.1 Behavioral Brand Loyalty

Based on the previous literature, behavioral brand loyalty can be measured by proportion of purchase, sequence of purchase, probability of purchase, conditional probability of purchase, and duration (Kenhove, Wulf, & Steenhaut, 2003; DuWors & Haines, 1990; Ewing, 2000; Colombo & Morrison, 1989; Havitz & Howard, 1995). Thus, the study embraced all operational definitions and constructed a five item measurement for behavioral brand loyalty

with a 5-point Likert scaling method, including “Strongly disagree,” “Disagree,” “Neutral,” “Agree,” and “Strongly agree.” Proportion of purchase can be used to measure behavioral brand loyalty by: “Compared to other brands, the mobile phone of this brand is the brand I purchased most often,” while the question “I have consistently purchased the brand of mobile phones” represents sequence of purchase, “I will probably purchase this brand as my next brand of mobile phones” indicates probability of purchase, “If there is any promotion available, I will probably purchase this brand as my next brand of mobile phones” is for conditional probability of purchase, and “I have used this brand of mobile phones for a long time” is for duration.

3.3.2 Attitudinal Brand Loyalty

Attitudinal brand loyalty can be measured through identifying brand preference, constancy of brand preference, brand insistence, resistance to change, and brand name loyalty (Guest, 1944; Yi & Jeon, 2003; Quester & Lim, 2003; Lee, 1999; Baldauf, Cravens, & Binder, 2003; Park, 1996). Thus, with a 5-point Likert scaling method, including “Strongly disagree,” “Disagree,” “Neutral,” “Agree,” and “Strongly agree,” the four corresponding items of attitudinal brand loyalty were developed as: “I like this brand of mobile phones” (brand preference), “I have liked this brand of mobiles for a certain length of time”(constancy of brand preference), “If the mobile phones of this brand are not available in the store, I am willing to wait or visit the other stores” (brand insistence), “I like this brand of mobile phones; thus, I would not switch to other brands” (resistance to change), and “I have a favorable attitude toward this brand of mobile phones” (brand name loyalty).

3.3.3 Composite Brand Loyalty

According to prior literatures, composite brand loyalty can be gauged through (a) the relative attitude with repeat purchase measured by the strength of their loyalty (Dick & Basu, 1994), (b) resistance to price inducements before switching to the other brands (Jacoby & Kyner, 1973; Pessemier, 1959; Wood, 2004), (c) the brand in top priority of consumers’ evoked sets they would like to purchase first (Newman & Werbel, 1974), (d) brand information seeking behavior, such as looking for a brand name during the purchasing activity (Towle & Martin, 1976), and (e) consumers’ initial attitude toward the brand they purchased (Day’s, 1969). With a 5-point Likert scaling method, including “Strongly disagree,” “Disagree,” “Neutral,” “Agree,” and “Strongly agree,” the four items of composite brand loyalty were developed as: “I am loyal to this brand” (the strength of their loyalty), “I would stay with this brand even though other brands offer better deals” (resistance to price inducements), “The brand is my top choice when I would like to purchase mobile phones” (the top priority of consumers’ evoked sets), “ When I go to the mobile phone store, I would look for the brand’s mobile phones first” (brand information seeking behavior), and “I

liked this brand very much when I purchased its mobile phone the first time” (initial attitude toward the brand).

3.4 Procedures

3.4.1 Pretest

In the pre-testing stage, two hundred participants were expected to participate in this study. Each participant was required to self-administer the completion of a 17-item brand loyalty questionnaire. The sample size requirement was important and was influenced by method of analysis. Because this stage employed Exploratory Factor Analysis (EFA) for data analysis, a sufficient number of samples were required. According to Hair, Anderson, Tatham, and Black (1998), the sample size should be larger than 100 for factor analysis, and the minimum should have at least five times of the variables analyzed in the study, while a ten-to-one ratio is preferred. Thus, two hundred samples were sufficient for the pre-test.

The purpose of the pre-test was to identify the underlying structure of brand loyalty. Thus, data analysis in the pre-test was undertaken through three stages of data analysis. First, the samples acquired from the method of simple random sampling were analyzed by descriptive analyses to understand the characteristics of the sample and to compare means and standard deviations of each multi-item scale. Second, reliability and validity were tested to assess whether measurement was consistent to assure the measure was free from systematic error. Third, exploratory factor analysis was employed to identify latent construct and reduce measurement items. The remaining items from the third stage were utilized as the brand loyalty items in the main study to confirm the underlying structure of brand loyalty, to examine the relationship between brand loyalty and its antecedents and consequences, and to see whether there were differences in the brand loyalty among consumers with different age, income, and gender.

3.4.2 Main Study

In the main study, three hundred participants attended the surveying activity. Each participant was asked to self-administer the completion of a questionnaire which consisted of the remaining items for brand loyalty and 3 items for demographics. Due to the fact that the main study was designed to confirm the underlying structure of brand loyalty, Confirmatory Factor Analysis (CFA) by using AMOS (Analysis of Moment Structures) was employed for data analysis. According to Anderson and Gerbing (1988), a minimum of 150 is required for the structural equation modeling. Thus, this study employed three hundred samples for testing the proposed hypothetical model.

The data analysis in the main study was undertaken through three stages of data analysis. First, the samples were analyzed by descriptive analyses to understand the characteristics of the sample and to compare means and standard deviations of each multi-item scale. Second,

reliability and validity were tested to assess whether the measurement was consistent to assure the measure was free from systematic error. Third, confirmatory factor analysis was employed to confirm the underlying structure of brand loyalty identified in the pre-test and to test the first hypothesis: H1: Brand loyalty is a multidimensional construct of behavioral, attitudinal, and composite brand loyalty.

3.5 Data Processing and Analysis

Data processing and analyses in this study were composed of six statistical analyses, including descriptive analyses, reliability and validity tests, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA). Both the Statistical Package for the Social Sciences 14.0 (SPSS) and AMOS 6.0 (Analysis of Moment Structures) were used in this study to undertake these six statistical analyses.

3.5.1 Descriptive Analysis

In both the pre-test and main study, descriptive analyses were performed on all attributes of three brand loyalties, five perceived values, purchase intention, and word-of-mouth as evidenced in questionnaire responses. These descriptive analyses included means and standard deviations. In addition, frequency analysis was undertaken to determine the overall characteristics of the respondents on each of the demographic variables, including gender, age, and income.

3.5.2 Reliability Tests

This study assessed data quality by using reliability. To assess reliability, the coefficient alpha is the most popular measure of reliability for a multi-item scale (Sekaran, 2000). It was able to assess the internal homogeneity among items used in this research. The value of the coefficient alpha, which was larger than 0.7, represented an internal consistency in results measurement in this study and was considered acceptable.

3.5.3 Exploratory Factor Analysis (EFA)

Exploratory factor analysis is a statistical method to find a way to summarize the information contained in a number of original variables into a smaller set of new composite factors with a minimum loss of information (Hair et al., 1998). This study employed the principle component method with varimax rotation on the measurement items for three brand loyalties.

Because the pre-test in this study was to identify the underlying structure of brand loyalty, thus, the number of factors, significance of factor loading, and community were considered. For the number of factors, the factor having eigenvalue greater than one was considered significant and was retained. For the significant factor loadings, based on a 0.05

significant level, a power level of 80 percent, and standard errors assumed to be twice those of conventional correlation coefficients, two hundred samples required factor loading of 0.4 and above to be significant. Thus, the items with the loadings exceeding 0.4 were retained for further analyses. In terms of communality, the variables with communalities more than 0.5 had a sufficient explanation and were retained (Hair et al., 1998).

3.5.4 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis is a multivariate statistical method to confirm the underlying structure in a data matrix. This analysis allows manifest variables to be free to load on only one latent construct and constrains relationships among variables and other latent constructs to zero (Anderson & Gerbing, 1988). In addition, confirmatory factor analysis also allowed every latent construct to freely co-vary with each of the other latent constructs.

To ensure whether or not a pattern of correlations for a set of observations was consistent with a specific theoretical formulation, the goodness-of-fit testing was conducted by using several criteria. An acceptable model fit was determined by Chi-square, p value less than 0.05, a value of root mean square of approximation error (RMSEA) less than or equal to 0.05, a value of comparative fit index (CFI) greater than 0.9, and a value of goodness-of-fit index (GFI) greater than 0.9 (Byrne, 2001; Hair et al., 1998). Thus, the hypothesis H1 was tested by CFA in this study to identify whether there are three underlying dimensions in the structure of brand loyalty.

4. RESULTS

4.1 Pretest

4.1.1 Data Description for Pretest Study

The sample population for the pretest study was composed of students who are studying at Tajen University. The pretest questionnaire was distributed to 200 students while they were taking continuing education. Of the 200 questionnaires handed out, 172 questionnaires were retained, due to the fact that 12 students rejected participating in the surveying activity and 16 responses were returned blank or only partially completed. Therefore, this unexpected incident resulted in a response rate of 86%.

In terms of gender, 44.2% of the respondents were male while 55.8% of them were female. In terms of age, 43.6% of the respondents were 24 years old or under, while the respondents within the age group of 25 to 33 accounted for 34.9% and the age group of 34 to 58 accounted for 21.5%. For the monthly income, 16.9% of the respondents made under NT\$20,000 and 32.6% of the respondents made NT\$20,000 to NT\$30,000, while 50.6% of the respondents made over NT\$30,000 per month.

Also, the respondents were asked to report the brand they like most among the mobile phones they possessed. Compared to the other brands, Nokia was the brand the majority of

the respondents (43.0%) liked most among the mobile phones they possessed. Motorola was ranked second with 12.8% of the respondents, while OKWAP had a similar percentage, around 9%. This implies that Nokia received competitive brand preference from the respondents in terms of brand possession. Moreover, it should be noticed that 9% of the respondents indicated that they were using a non-famous brand, meaning that somewhat new brands of mobile phones were heading the way of increasing their market share.

4.1.2 Descriptive Analyses for the Pretest

The respondents reported their behavioral brand loyalty with similar scores within these five items. The average degree of behavioral brand loyalty was moderate, with a mean of about 3.55 (s.d.= 1.00), meaning some respondents were behaviorally loyal to the brand they were possessing, while the others behaved disloyally. For the attitudinal brand loyalty, the respondents assigned different scores to these five items showing their attitudinal brand loyalty. The item (I like this brand of mobile phone) received the highest score with a mean of 3.91 and a deviation of 0.83, while the item (I like this brand of mobile phone; thus, I would not switch to other brands.) was given the lowest score with a mean of 2.88 and a standard deviation of 0.97. Similar to behavioral brand loyalty, the average degree of attitudinal brand loyalty was also moderate, with a mean of 3.53 (s.d.= 0.92), indicating some respondents prefer the brand they possessed, while the others would have other brand choices in mind. Similar to behavioral brand loyalty, the respondents reported a moderate degree of composite brand loyalty within these five items, with a mean of 3.46 (s.d.=0.95), appearing that some respondents would purchase the same brand they preferred and that they possessed, while the others might have a different choice.

4.1.3 Reliability Test

All values of the coefficient alpha of three brand loyalties were larger than 0.7 (behavioral brand loyalty = 0.83, attitudinal brand loyalty = 0.76, composite brand loyalty = 0.85), indicating these multiple measures were considered highly reliable in the measurement of each construct.

4.1.4 Exploratory Factor Analysis (EFA)

The initial EFA, as shown in Table 1, indicated three extracted factors with the eigenvalue larger than one, each item with the loading more than 0.5, and most items with communalities greater than 0.5 except ABL3 (If the brand is not available, I will wait). This evidence suggested fourteen items should be retained for further analyses. However, assessing whether the remaining items represent the corresponding factor should be considered while reducing measurement items. The initial EFA result indicated that there were 7 items associated with factor 1, including “(BBL3)I will probably purchase the brand as my next brand,” “(BBL4) If any promotion is available, I will purchase the brand as my next brand,”

“(ABL1) I like the brand,” “(ABL2) I have liked the brand for a certain length of time,” “(ABL5) I have a favorable attitude toward the brand,” “(CBL4) When I go to the store, I will look for the brand first,” and “(CBL5) I liked this brand very much when I purchased it the first time.” The highest loading of ABL1 contributed factor 1 as the construct for attitudinal brand loyalty. Apparently, BBL3, BBL4, CBL4, and CBL5 would not meaningfully represent factor 1 and should be removed because these four items were not designed to serve as the measurement items for attitudinal brand loyalty, based on the aforementioned literature review.

By the same token, factor 2 with 3 items, including “(CBL1) I am loyal to the brand,” “(CBL3) The brand is my top choice,” and “(CBL2) I would stay with the brand even though other brands offer better deals,” captured the construct for composite brand loyalty. The two items of “(ABL3) If the brand is not available, I will wait” and “(ABL4) I would not switch to other brands” were suggested to be removed. In addition, factor 3 with 3 items manifested the construct for behavioral brand loyalty, including, “(BBL1) I purchase the brand most often,” “(BBL2) I consistently purchase the brand,” and “(BBL5) I have used the brand for a long time.” In summary, based on the initial EFA, BBL1, BBL2, and BBL5 represented behavioral brand loyalty, while ABL1, ABL2, and ABL5 were retained for attitudinal brand loyalty, and CBL1, CBL2, and CBL3 purported composite brand loyalty.

Table 1 Initial EFA for Brand Loyalty

Item	Factor 1	Factor 2	Factor 3	Communalities
(BBL1) I purchase the brand most often			.820	.774
(BBL2) I consistently purchase the brand			.744	.728
(BBL3) I will probably purchase the brand as my next brand	.560			.528
(BBL4) If any promotion is available, I will purchase the brand as my next brand	.546			.585
(BBL5) I have used the brand for a long time			.755	.707
(ABL1) I like the brand	.825			.733
(ABL2) I have liked the brand for a certain length of time	.653			.562
(ABL3) If the brand is not available, I will wait		.547		.420
(ABL4) I would not switch to other brands		.782		.697
(ABL5) I have a favorable attitude toward the brand	.722			.638
(CBL1) I am loyal to the brand		.701		.737
(CBL2) I would stay with the brand even though other brands offer better deals		.845		.759
(CBL3) The brand is my top choice		.642		.691
(CBL4) When I go to the store, I will look for the brand first	.570			.512
(CBL5) I liked this brand very much when I purchased it the first time	.725			.607
Eigenvalue	7.045	1.402	1.230	

As predicted, the results accordingly depicted the designed three stable constructs with the eigenvalue of each factor larger than one, the loading of each item more than 0.5, and communalities of each item greater than 0.5 (see Table 2.). Reliability tests were also performed to assure the consistency in measurement of the result, with the value of each coefficient alpha larger than 0.7, indicating that these multiple measures were considered highly reliable in the measurement of each construct. Therefore, the reduction of measurement items for behavioral, attitudinal, and composite brand loyalty were successfully performed by employing the above analyses, resulting in the three items for each construct of brand loyalty for the subsequent main study.

Table 2
EFA With 9 Remaining Items

Item	Factor 1	Factor 2	Factor 3	Commu nalities	Cronbach's Alpha
(BBL1) I purchase the brand most often		.841		.789	
(BBL2) I consistently purchase the brand		.769		.741	
(BBL5) I have used the brand for a long time		.799		.781	.830
(ABL1) I like the brand	.862			.808	
(ABL2) I have liked the brand for a certain length of time	.772			.726	
(ABL5) I have a favorable attitude toward the brand	.761			.721	.816
(CBL1) I am loyal to the brand			.720	.767	
(CBL2) I would stay with the brand even though other brands offer better deals			.875	.806	
(CBL3) The brand is my top choice			.746	.750	.837
Eigenvalue	4.712	1.157	1.018		.884

4.2 Main Study

4.2.1 Data Description for Main Study

In the main study, three hundred students, who were the students studying continuing education in Northern Taiwan University, Mingdao University, and Tajen University, were involved in the surveying activity. These participating schools were chosen by random selection with SPSS from all of the schools located in the region of the northern, middle, and southern parts of Taiwan. The main study questionnaire was distributed to each participating student with NT\$100 appreciation. Of the 300 questionnaires handed out, 295 questionnaires were retained because the others were blank or contained partially uncompleted responses. Thus, better than the pretest, the main study obtained a 98% response rate.

Different from the pretest, 31.5% of the respondents of the main study were male, while 68.5% of them were female. In terms of age, the respondents within the age group of 15 to 24 accounted for 35.6%, while the percentage for the age group of 25 to 33 was 32.2%, and for the age of 34 to 58 was 32.2%. In addition, for monthly income, only 8.8% of the respondents made less than NT\$20,000 per month while 27.5% of the respondents made NT\$ 20,000 to NT\$ 30,000 and 63.7% of the respondents earned over NT\$ 30,000 per month. Based on the comparison between the pretest and the main study, the proportions for age and income groups in the main study seemed similar to the ones in the pretest except for gender.

4.2.2 Descriptive Analyses for the Main Study

For the main study, descriptive analyses were performed for the remaining items of behavioral brand loyalty, attitudinal brand loyalty. The same as the pretest, means and standard deviation were also presented for the descriptive analysis for the main study.

Three items were retained to measure the degree of behavioral brand loyalty on a five-point scale: Compared to other brands, the brand of mobile phones is the brand I purchased most often; I have consistently purchased the brand of mobile phones; I have used this brand of mobile phone for a long time. Three items were also retained for the attitudinal brand loyalty: I like this brand of a mobile phone; I have liked this brand of mobile for a certain length of time; I have a favorable attitude toward this brand of a mobile phone. For the composite brand loyalty, the three remained items were: I am loyal to this brand of mobile phone; I would stay with this brand of mobile phone even though other brands offer better deals; This brand is my top choice when I would like to purchase a mobile phone. As same as the pretest, the respondents reported a moderate degree of behavioral brand loyalty, attitudinal brand loyalty, and composite brand loyalty with a mean of about 3.30 (s.d.= 1.07) for the behavioral brand loyalty, 3.61 (s.d.=0.934) for the attitudinal brand loyalty, and 3.293 (s.d.= 1.026) for the composite brand loyalty.

4.2.3 Reliability Tests

Every brand loyalty of the coefficient alpha were larger than 0.7 (behavioral brand loyalty = 0.91, attitudinal brand loyalty = 0.92, composite brand loyalty = 0.89), revealing that the multiple measures used in the main study were highly reliable in measuring each construct.

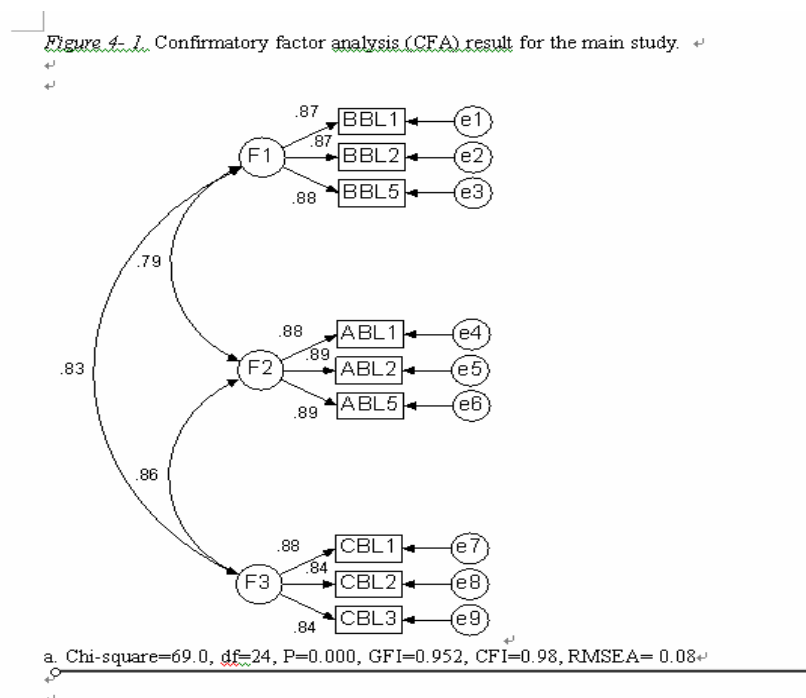
4.2.4 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis is to confirm whether manifest variables are free to load on only one latent construct. In other words, to examine whether there are three underlying dimensions in the structure of brand loyalty was the purpose of CFA in the main study. In addition, the first hypothesis was also tested as following:

H₁: Brand loyalty is a multidimensional construct of behavioral, attitudinal, and

composite brand loyalty.

AMOS 6.0 was utilized to test the goodness-of-fit for the model with several criteria, including Chi-square, root mean square of approximation error (RMSEA), comparative fit index (CFI), and goodness-of-fit index (GFI) (Byrne, 2001; Hair, Anderson, Tatham, & Black, 1998). As Figure 4-1 exhibits, the results ($\chi^2=69.0$, $df= 24$, $p=0.000$, $GFI=0.952$, $CFI=0.98$, $RMSEA=0.08$) showed a good fit for the model retained from the pretest. The χ^2/df value of 2.875 fell within an acceptable range of 2 to 5 at 0.00 significant level, as suggested by Marsh and Hocevar (1985). In addition, the values for both GFI and CFI were greater than 0.9, and the RMSEA value was equal to 0.08 (Hair et al., 1998), revealing an excellent goodness-of-fit index. Moreover, all of estimates after standardization showed distinct factor loadings. Although the estimates among behavioral brand loyalty, attitudinal brand loyalty, and composite brand loyalty were slightly high in-between, it was reasonable because composite brand loyalty can serve as the assemblage of behavioral brand loyalty and attitudinal brand loyalty (Jacoby & Chestnut, 1978). Based on the evidence found in Figure 4-1, brand loyalty can be considered as a multidimensional construct of behavioral brand loyalty, attitudinal brand loyalty, and composite brand loyalty. Hence, the hypothesis H_1 was supported, indicating that brand loyalty is a multidimensional construct of behavioral, attitudinal, and composite brand loyalty. The results of the confirmatory factor analysis provided support for the reliable measurement for behavioral brand loyalty, attitudinal brand loyalty, and composite brand loyalty, which enabled the author of this study to examine the succeeding hypotheses of this study.



5. DISCUSSION, CONCLUSIONS AND IMPLICATIONS

5.1 Conclusion and Discussion

The objective of this study was to verify whether the underlying structure of brand loyalty consists of behavioral, attitudinal, and composite brand loyalty. The result of CFA facilitated the hypothesis H_1 being supported, overwhelmingly indicating that the existence of the multidimensional construct of brand loyalty was confirmed, and that the multidimensional construct unquestionably consists of three distinct dimensions: behavioral brand loyalty, attitudinal brand loyalty, and composite brand loyalty. In other words, the existence of composite brand loyalty revealed a third unique dimension of brand loyalty distinguished from behavioral brand loyalty and attitudinal brand loyalty. This finding supports Jacoby and Chestnut's (1978) contention that brand loyalty should be measured in a multi-dimensional way in terms of behavioral, attitudinal, and composite.

5.2 Managerial Implication

Based on the findings of this study, several managerial implications can be proposed as follows:

- (a) Composite brand loyalty does exist in the mobile phone industry. Marketers should develop marketing information systems which can capture the customers who possess a higher degree of composite brand loyalty, because the aforementioned literature has indicated that composite brand loyalty can explain customers' reasonable intention of repurchasing a brand
- (b) Measurement of composite brand loyalty should be carefully developed based on the results of this dissertation. This can be done by adopting the measurement items this dissertation applied or cross-matching the items for both behavioral brand loyalty and attitudinal brand loyalty for the development of measurement items for composite brand loyalty.
- (c) The measurement for the composite brand loyalty can be used along with membership programs. Although most mobile phone companies developed their own membership program for their existing customers, the program has insufficient information leading to representing artificial brand loyalty. Through employing the composite brand loyalty along with information drawn from the membership programs, marketers can obtain useful data and save some marketing costs.

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