The Effects of Community Involvement, Brand Identity, and Brand Valuation on Marketing Performance

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ABSTRACT

The study takes the Apple's fans as an example to explore the effects of community involvement, brand identification, and brand valuation on marketing performance. An analytic framework linking four variables and including seven hypotheses is proposed for conducting an empirical study. A web platform is used to perform the questionnaire survey, and research subjects are limited to the consumers who have bought and used Apple products. After completing the data collection, the reliability and validity of data are analyzed, and then the hypotheses are tested by adopting the methods of regression analysis and structural equation modeling. The results reveal that the extent of community involvement has positively affected brand identification, brand valuation, and marketing performance. Besides, the perceptions of both brand identification and brand valuation positively influence marketing performance of a company. Furthermore, it is noted that both brand identification and brand valuation have the mediating effects between community involvement and marketing performance. The findings can provide the practitioners as a reference for developing the strategies of internet marketing and community development.

Keywords: *community involvement; brand identification; brand valuation; marketing performance.*

INTRODUCTION

Recently, there has been a growing interest in exploring the topics about community involvement since brand community has attracted a lot of attentions to society, corporate, and academy (Maignan & Ferrell, 2004; Luo & Bhattacharya, 2006; Ioana, Anda, Ioan & Bianca, 2015). Notwithstanding, to our best knowledge, community involvement leading to marketing performance has not received adequate research attention in the prior literature (Idemudia, 2009). Filling this gap is crucial given that community involvement can enhance brand identity, bring in brand valuation, and link to the success of marketing performance for companies (Lee & Zhuang, 2010; Warawut, Phapruke, & Pratanporn, 2013). Galbreath (2009) indicated that community involvement could impact on the future trend of marketing channels. Hence, it deserves to know if community involvement in brand management

can play a significant role in promoting marketing performance (Marin, Ruiz, & Rubio, 2009).

As stated in past research (Algesheimer, Dholokia, & Herrmann, 2005), a company should hold definite responsibility toward community involvement which has been linked to its brand development and consumer behaviors. Algesheimer et al. (2005) pointed out a considerable amount of studies examining the relationship between brand community identification and consumer behavior, and found that identification played an important role for developing the brand community. For example, Smith and Ingram (2012) indicated the importance of building a community or business brand and introduced tips for brand building. They mentioned that branding gave the identification to the business or community and

offered idea about products and service. Generally speaking, effective branding can help in increasing customer loyalty and revenues to the business or community. Rafael, Enrique, and Alejandro (2009) indicated that consumer-company identification could directly generate better attitudes toward the brand and greater purchase intentions. However, a few studies focused on different facings and gave controversial comments on community involvement. For example, the research examining the issues about brand identification (Lee & Zhuang, 2010), brand value creation (Chu & Keh, 2006), and online brand community (Tsai & Liu, 2013; Ho, 2015), enriched the fields of studying community involvement. But, the common conclusion is that enterprise and/or consumers involving the community development and operating community website are necessary for them to develop marketing channels and extend market share (So, King, Sparksa & Wang, 2013; Warawut et al., 2013; Zhou & Wu, 2013).

The brand community website has occupied a quite important place in marketing performance in recent years (Muniz & Schau, 2005). Although community involvement is a significant issue on operating business, only a few of previous studies discuss the effects on marketing performance (Warawut et al., 2013; Zhou & Wu, 2013). Hence, the associated issues about managing community, enhancing brand identity and valuation, and bringing the marketing performance are worthy of studying. The current study considers sealing the past research gap, and would like to explore three principal research questions. Firstly, if the corporate participates in the community, can its brand identity and brand valuation enhance accordingly? Secondly, is it possible that a company involves community issues in which the brand identification and valuation can promote its marketing performance as well? Thirdly, can brand identification and brand valuation play the mediating roles between community involvement and marketing performance? In other words, based on the

perspective of consumers, the current study aims to develop a new analytic framework, investigating the effects of the corporate devoted to brand community, and verifying whether its brand identification and brand valuation can be enhanced, as well as marketing performance can further be facilitated.

This research takes Apple Inc. brand as the subject for conducting an empirical study since Apple Inc. is an outstanding company that has created community involvement around its products and service. Nair (2014) indicated that Apple attempted to increase market demand for its products through differentiation, which entailed making its products unique and attractive to consumers. Hence, as stated by Danciu (2010), Apple had quite complete and strong brand identification. Many users have recognized themselves as Apple fans who are proud of using its products and loyal to Apple Inc., such as smart phones and computers. That is the main reason why the current research chooses Apple's Fans as the research subjects. The study is expected to have a valuable theory contribution by linking the relations among community, brand, and performance in a company, and by further verifying the effects of community involvement. The practical application of the research results is to encourage the corporate to be aware of managing brand community, being actively interactive with potential consumers.

LITERATURE REVIEW AND PROPOSED HYPOTHESES

Community Involvement and its Effects

Nowadays, the virtual community and network community platforms are rising up, and members are able to share their life and experience via these community platforms (Rheingold, 2000; Morandin, Bagozzi, & Bergami, 2013). Community involvement can be defined as the processes of developing active and sustainable communities based on social justice and mutual respect (Smith & Ingram, 2012). In other words, community involvement is about influencing

power structures to remove the barriers for preventing people to participate in the issues that affect their lives. Community brand is managed and learned valuable lessons from the business world, and thus the enterprise manages the brand community to collect customer's experiences gained from what the customers heard from trusted sources (Smith & Ingram, 2012). So far, many companies have established their Facebook fans website, which lead companies to start focusing on the virtual community for achieving the unlimited business or product delivery (Morandin et al., 2013).

Besides, the issue of corporate social responsibility (CSR) has become very hot recently, which is related to community involvement (Galbreath, 2009; He & Li, 2011). Since every business is a stakeholder in its community, all business should recognize their long-term interests in operating community (Swapna, 2011). Whether it is physical or virtual community, enterprise should participate in the community, and this is a new business opportunity to create a win-win strategy for enterprise and consumer (Galbreath, 2009; Srivastava, 2011). When a brand possesses characteristic and action, i.e. brand recognition plays a positive effect on self-concept, and then this brand has triggered the element of identification (Dutton, Dukerich, & Harquail, 1994). If the information provided by the brand is consistent with the self-concept or expectations, the brand identification of community members is likely to occur due to the role of self-sustaining or self-identified (Smith & Ingram, 2012). Therefore, the following hypothesis is proposed:

H1: Consumers' perceptions of community involvement can positively affect their brand identification.

Muniz and O'Guinn (2001) believe that the relationship between consumers and the brand will influence the relationship between the consumers and other consumers; that is the relationship between the consumers and the brand will affect the relationship between the

consumers and the community. This means that consumers' positive perceptions of a brand will encourage them to share the passion for the brand with their community members, and come into loving the brand (Tsai & Liu, 2013). In other words, if the community members obtain better feeling from the offered product, the members will give better brand valuation. Hence, the hypothesis is proposed as follows:

H2: Consumers' perception of community involvement can positively affect brand valuation.

A considerable amount of research has indicated that if an organization is devoted to community development, it will increase members' loyalty to the organization, and reduce the chance moving to other organizations (e.g. O'Reilly & Chatman, 1986). It means that the higher degree of community involvement will associate directly with members' loyalty to the community. In general, an organization is composed of some specific purposes. If the community members identify with the organization objective, they will more easily have loyalty to the organization, including its products or service (Bhattacharya, Rao, & Glynn, 1995). So, it can be inferred that the degree of community involvement in a company is positively connected with customers' brand loyalty, and brand loyalty will further promote its marketing performance (Tsai & Liu, 2013). Therefore, hypothesis H3 is proposed:

H3: The degree of engaging community involvement has a positive effect on marketing performance.

Brand Identification and Marketing Performance

There are different viewpoints about brand identification (Mindrut, Manolica, & Roman, 2015). Ghodeswar (2008) defined brand identification as a unique set of brand associations to imply a promise to customers, and indicated brand identification including core identification and extended identification. However, brand identification was regarded as an overall

understanding of customers, competitors, and business environment of the corporate, and it could be influenced by different identification notions (Balmer & Thompson, 2009). In fact, the focuses of brand identification include a variety of concepts, such as brand personality, relationship, and powerful symbol association (Ghodeswar, 2008). Hence, brand identification needs to resonate with customers, differentiate from competitors, and represent what the organization can and will do over time (Aaker, 1996; Mindrut et al., 2015).

As for marketing performance, the definitions are diverse. Kaplan and Norton (1992) pointed that performance measures have been widely accepted, and defined it as a measure of achievement to evaluate whether the good outcome and future development for the enterprises. Marketing performance has generally been defined as the level of marketing behavior, which is an action plan to achieve the target level, as well as a measurement to achieve a specific goal. Although there are many marketing performance indicators of consumers construct, the current study only selects two perceived performance indicators, i.e. customer satisfaction and repurchase intentions, because they are powerful behavioral performance indicators and can be directly measured by Apple's Fans.

The image of brand community and company's ability to manage the brand strategy could influence the marketing performance of the brand (Srivastava, 2011). Vytautas, Aiste, and Regina (2007) indicated that positive image was built through conveying brand identification to consumer efficiently. It is believed that brand identification can help to develop the relationship between a brand and its customers. Srivastava (2011) mentioned that brand identification could affect the communication in creating and maintaining synergy. This can result in gaining customer loyalty and achieving business growth. Hence, a strong brand identification of customers can develop trust which, in turn, results in differentiating the brand from competitors (Ghodeswar, 2008; Srivastava, 2011). Hence, it

is important to establish clear and consistent brand identification by linking brand attributes with the ways they are communicated (Hatch & Schultz, 2008).

The research of He and Li (2011) has pointed out that customers with stronger brand identification are more likely to be satisfied with the focal brand, and brand identification has positive and indirect effects on brand loyalty via customer satisfaction. Therefore, brand identification will increase the purchase intention and affect the marketing performance (So et al., 2013). So, building brand identification is one of the essential elements, and brand identification has been viewed as a key success factor in marketing performance (Warawut et al., 2013). Therefore, the following hypothesis is proposed:

H4: The perception of brand identification can positively affect marketing performance.

Brand Valuation and Marketing Performance

To define brand valuation, one must understand the term of brand value. Brand value is the relation of its quality to its price, and it may involve the sales and purchase price of a company (Keller, 2003). Besides, brand value can endure the period of product life cycle from introduction, growth, mature to decline. As the matter of fact, branding is one of the main issues in product strategy for companies (Kim & Lavack, 1996). Hence, Chu and Keh (2006) pointed that brand value was important at two macro or firm levels. First, it affects the perception of investors and financial analysts, and subsequently plays a role in determining the stock prices of firms. Second, it positively affects behavioral outcomes, including purchase intentions.

Brand valuation refers to the degree of consumer likes and dislikes of a brand (Keller, 1993; Raghubir & Kim, 1999). Wang (1993) stated that the brand valuation is consumer's emotion and cognition to the brand, including brand preference, quality cognition, and reference price. But, according to the definition of Aaker (1996), brand valuation includes consumer

attitude, perceived value, and purchase intention, while Keller (1993) pointed out the purchase intention of consumers depends on consumers' perceived value to the product. In addition, Kapferer (1997) and Vaid (2003) addressed that brand valuation is evaluated by brand value, while brand value is the sum of the customer perception to the brand image including quality of products and services, financial performance, customer loyalty and satisfaction, market share, and so on. Therefore, when consumers have higher quality evaluation to the brand, they will have a higher perceived value (Zeithaml, 1988; Dodds, Monroe, & Grewal, 1991; Grewal, Krishnan, Baker & Borin, 1998).

Some studies have examined the link between customer satisfaction and firm performance, particularly in service-oriented sectors and industries. For example, Kotler (1991) suggested that high customer satisfaction ratings are generally believed to be the best indicator of a firm's future earnings. In the context of retail industry, Gomez, Edward, and Dick (2003) found the evidence that changes in customer satisfaction could significantly affect sales performance, particularly satisfaction with a store's service levels. Majerova and Kliestik (2015) proposed managing the brand to increase its valuation and performance. Besides, the results from the research (Dodds, Monroe, & Grewal, 1991) provide evidences of the existence of a link between brand valuation and marketing performance. Therefore, the study proposes the following hypothesis:

H5: The perception of brand valuation can positively affect marketing performance.

Besides, according to Chien's (2010) research, consumer awareness of CSR can impact positively on its company identification, and subsequently consumers' company identification partially mediate the influences of CSR to marketing performance. Some research also found that consumer awareness of the brand and community development will affect brand identification (Dutton et al., 1994; Smith &

Ingram, 2012) and brand valuation (Muniz & O'Guinn, 2001; Park, Maclnnis, Priester, Eisingerich & Iacobucci, 2010; Tsai & Liu, 2013), and the consumer awareness to brand identification and brand valuation will further influence the marketing performance (Grewal, Krishnan, Baker & Borin, 1998; Gomez et al., 2003; He and Li, 2011; Warawut et al., 2013). Based on the logic of mediation proposed by Baron and Kenny (1986), brand identification and brand valuation are likely to play mediating roles between community involvement and marketing performance. Therefore, the study infers two sets of hypotheses as follow:

H6: Brand identification can mediate the relationship between community involvement and marketing performance.

H7: Brand valuation can mediate the relationship between community involvement and marketing performance.
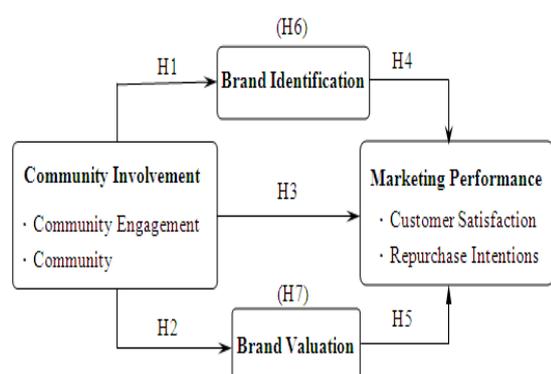
METHODOLOGY

Research method and procedure

An empirical study was conducted by using a questionnaire survey for the fans who have participated in Apple community. The research procedure can be divided into three stages. In the stage of conception development, the study selects the research subject first of all, and then collects relevant research literature to clarify the research problems. The following steps are to ensure the research scope, establish the research objective, and develop the hypotheses. In the stage of questionnaire design, the study defines the variables and sets the measuring items for these variables to construct operational definitions and design the questionnaire. Once the work of questionnaire survey has been completed, the data is coded to do descriptive statistical analysis and factor analysis. In the last stage of hypothesis testing, the methods of regression analysis and structural equation modeling (SEM) are conducted to perform data analysis. Besides, the data is analyzed to verify its reliability and validity. The regression models and structure equation modeling are

used to test the proposed hypotheses. Finally, the study discusses theoretical and managerial contributions of the results and provides the suggestions for further research.

Research framework

This study selects consumers who have used Apple Inc. products as research subjects to explore the interrelated relationships among community involvement, brand identification, brand valuation and marketing performance. The research framework is constructed as shown in Figure 1. In the framework, the independent variable is community involvement, the dependent variable is marketing performance, and the mediating variables are brand identification and brand valuation. Seven sets of hypotheses are proposed in the framework. Hypotheses H1, H2 and H3 are proposed to test the influences of community involvement on brand identification, brand valuation and marketing performance. Hypotheses H4 and H5 are to test the effects of brand identification and brand valuation on marketing performance. The mediating effects of brand identification and brand valuation are also examined in hypotheses H6 and H7.

PS: () represents mediating effect

Figure1. *Research framework*

Operational definition and measurement

The term of community involvement can be operationally defined as the extent of company's managers and consumers devoted to community activities. It includes the active involvement of people in the issues that affect their lives, and focuses on the relationships among individuals, groups, and the institutions which share their

skills, awareness, knowledge and experience (Swapna, 2011; Bakar, Osman, Bachok & Ibrahim, 2014). The measuring items of community involvement are designed referring to previous research (Swapna, 2011; Smith & Ingram, 2012).

The study refers the definition of organizational identification which includes self-perpetuating, self-reinforcing, and self-distinguish, to define the brand identification (Dutton et al., 1994). The operational definition of brand identification is defined as the level of identifying the brand concept, meaning, and products through self-distinguishing and self-reinforcing. The measuring items of brand identification refer to the literature (Huang & Chang, 2007; Tsai & Liu, 2013).

Wang (1993) defined brand valuation as consumer's emotion and cognition to the brand, including brand preference, quality cognition and reference price. In other words, brand valuation can be operationally defined as the degree of consumer likes and dislikes of a brand (Keller, 1993). The measuring items of brand valuation refer to the research (Keller, 1993; Aaker, 1996).

Usually, for the convenience of measuring, the company can evaluate its performance form the perception of customers, like the overall degree of achieving customer satisfaction and repurchase intentions in the near future. Since company's performance is generally derived from brand value and consumer behaviors, marketing performance can be measured by customer satisfaction and repurchase intentions (Keller, 2003). The measuring items of marketing performance are designed referring to previous research (Keller, 2001; Keller, 2003).

Questionnaire design and sampling method

In the study, a questionnaire survey was performed by using a website platform. There are some well-known communities of Apple brand in Taiwan, such as Apple website, Facebook Apple fans, Mobile01, MacUknow, iPhone4.tw, Taipeimac and store.pirates.com.tw. Since these communities have thousands of members with

very active and strong cohesion, they are the targets of research subject. The execution time of performing questionnaire survey is from April 15 to May 10, 2015. This questionnaire includes the basic information of responding authors, such as gender, education, age, income and so on. The measuring items presented in the questionnaire uses a five-point Likert scale. The format of a typical Likert scale is: 1. strongly agree; 2. agree; 3. neutral; 4. disagree; 5. strongly disagree. After the survey is completed, the data is automatically coded and edited for doing the subsequent statistical analysis.

RESULTS AND ANALYSIS

Data collection and sample structure

A total of 431 questionnaires were collected, of which 20 invalid questionnaires were deleted because the respondents had incomplete answers or never used Apple products. As a result, there were 411 usable questionnaires, and the effective sample rate was 95%. Among them

138 (33.6%) people have at least one Apple brand's product. People all surf the websites and discuss about Apple products with others. In terms of frequency, 43 (10.5%) people surfed the brand community website several times daily, 31 people daily, 44 people weekly, and 230 people occasionally.

The sample structure, as shown in Table 1, has been classified in accordance with the five characteristics of gender, age, education, occupation and monthly income. The samples consist of 238 (57.9%) female and 173 (42.1%) males, showing that the subjects' gender was distributed in female more than male. In term of age, there are 144 subjects at the ages of 31-40 (35%) and most subjects' ages range between 21 and 40 years old. Subjects' education background is mainly university (212, 51.6%). The subjects' occupation mainly belongs to private employees (162, 39.4%). With regard to monthly income, the distribution is mainly 35,001-50,000 NT dollars with total 163 (39.7%) people.

Table1. *Descriptive statistics of sample structure*

Attributes	Items	Numbers	Percentage (%)	Accumulative Percentage (%)
Gender	Male	173	42.1	42.1
	Female	238	57.9	100.0
	Total	411	100.0	
Age	Under 20	20	4.9	4.9
	21-30	143	34.8	39.7
	31-40	144	35.0	74.7
	41-50	91	22.1	96.8
	51-60	11	2.7	99.5
	Over 61	2	0.5	100.0
Education	Under senior high school	23	5.6	5.6
	College	64	15.6	21.2
	University	212	51.6	72.7
	Over graduate school	112	27.3	100.0
Occupations	Students	85	20.0	20.7
	Private employee	162	39.4	60.1
	Public employee	48	11.7	71.8
	IT industry	37	9.0	80.8
	Services industry	47	11.4	92.2
	Freelancer	13	3.2	95.4
	Others	19	4.6	100.0
Monthly Income	Under $30,000	145	35.3	35.3
	$30,001-$50,000	163	39.7	74.9
	$50,001-$70,000	60	14.6	89.5
	Over $ 70,001	43	10.5	100.0

Source: Compiled by this study

Reliability And Validity Analysis

The study uses exploratory factor analysis to process the factors extraction. The standard for factor selected should be the eigen value larger than 1.0, the correlation coefficient of item to

total larger than 0.50, and the loading of each item larger than 0.60. The adaption model is determined by KMO (Kaiser Meyer Olkin) value, if the value larger than 0.70 means acceptable results (Kaiser, 1958). The reliability

analysis uses Cronbach's α coefficient to detect whether each measure item is consistent with each other, and the value of reliability should be larger than 0.60 (Hair Jr., Black, Babin, & Anderson, 2010).

In the study, community involvement is an independent variable with 7 measuring items. The result of factor analysis indicating two dimensions are extracted, named as community engagement (α = 0.73) and community cohesiveness (α = 0.90). The correlation coefficients of item to total are larger than 0.50 and show that all data are suitable for processing the factor analysis. Cronbach's α is 0.90 showing that the measuring items have good explanatory ability and reliability (Hair Jr. et al., 2010). On the other hand, marketing performance is a dependent variable, and there are 7 measuring items. The factor analyses shows that the factor loadings of all measure items are larger than 0.60, and KMO is 0.83. Two dimensions were extracted, named as customer satisfaction (α = 0.88) and repurchase intentions (α = 0.84). The correlation coefficients of item to total are larger than 0.50 and show that all data are suitable for processing the factor analysis. Cronbach's α is 0.89 showing that the measure items have good explanatory ability and reliability.

Since the questionnaire was designed based on prior literature adopting suitable and relevant measuring items and scale, some experts were asked to serve as the representatives to read the questionnaire items and gave modifying suggestions. The questionnaire was ensured to have a good content validity. Besides, the study detected the convergent validity for each variable. As Gaski and Nevin (1985) indicated, if the correlation of two rubrics of different assessments was smaller than their individual Cronbach's α, the two rubrics have good discriminant validity. Besides, if the correlation of any two factors of this study is smaller than its own Cronbach's alpha, it means that the data has good discriminant validity and construct validity. Furthermore, as recommended by Fornell and Larcker (1981), the average variance extracted (AVE) can measure the amount of variance captured by the construct, which is related to the amount of variance due to measurement error. If the value of AVE is less than 0.5, this implies that the variance due to measurement error exceeds the variance captured by the construct, making the validity of the entire construct and its dimensions questionable. For this reason, the value of AVE should be greater than 0.5. As shown in Table 2, the test results indicated that the value of each dimension is in accordance with AVE measure, and all variables have good discriminant validity.

Table2. *Discriminant validity and composite reliability analysis of each dimension*

Dimensions	Customer Engagement	Community Cohesiveness	Brand Identification	Brand Valuation	Customer Satisfaction	Repurchase Intentions	CR	AVE
Community Engagement	.70						.83	.61
Community Cohesiveness	.66***	.87					.90	.75
Brand Identification	.61***	.58***	.89				.94	.79
Brand Valuation	.66***	.56***	.57***	.87			.92	.75
Customer Satisfaction	.28**	.30**	.48***	.49***	.87		.88	.76
Repurchase Intentions	.68***	.62***	.56***	.62***	.59***	.79	.84	.63

PS1. Diagonal value = the square root of AVE; CR = composite reliability; Diagonal value = Pearson correlation coefficient.

*PS2: **p < .01, ***p < .001*

Source: *Compiled by this study*

Examining for Common Method Variance

The study tests the bias caused by common method variance using Harman's single factor analysis. Hence, an exploratory factor analysis was performed for all measure items. If the explanatory ability of a certain factor is greater than 50% or the testing result has only one factor, it means the data will be seriously

affected by the common method variance. After completing test, we found that six factors could be extracted, and the explanatory ability of the first factor was 26.68%, less than 50%. It implies that the sample data is not seriously affected by common method variance.

Besides, a single factor confirmatory factor analysis (CFA) was conducted to detect all 22 measure items. If the common method variance existed and caused bias, all measuring items would be performed in the factor loadings. That is, factor loadings are higher than 0.50, and the goodness-of-fit (GFI) value in the single factor

CFA model will be higher than the GFI value in the structural equation model of this study. If the above situation does not happen, it means that there is no serious problem in common method

variance in these samples (Mossholder, Bennett, Kemery & Wesolowski, 1998).

After CFA testing, the results show that the factor loading of all measure items are greater than 0.50, except item 3 and 5 of CI, item 3 and 7 of MP. The goodness-of-fit values on single factor CFA model (χ2=889.45, DF=194, GFI=0.82 AGFI=0.74, IFI=0.92, CFI=0.92, RMR=0.08) are not satisfactory compared with standard values (GFI>0.80, AGFI>0.80, IFI>0.80, CFI>0.80, RMR<0.10). Compared with the structural equation model (SEM) (χ2=524.13, DF=120, GFI=0.87, AGFI=0.81, IFI=0.94, CFI=0.94, RMR=0.07), the performance is not satisfactory as well. Thus, the results confirm that the sample is not severely affected by the common method variance.

Table3. *The regression analysis results of CI to BI, BV and MP*

Dept. Vari.	BI		BV		MP	
	M1	M2	M3	M4	M5	M6
Cont. Vari.	β/t	β/t	β/t	β/t	β/t	β/t
Age	-.06/-1.28	-.07/-1.44	.71/-1.49	-.08/-1.69	-.03/-.61	-.03/-.07
Income	.08/1.74	.70/1.60	.75/1.56	.63/1.35	.04/.77	-.04/.70
Indt . Vari.						
CI	.67/4.89***		.62/4.39***		.57/4.10***	
CE		.65/4.67***		.62/4.65***		.34/3.81***
CC		.56/4.65***		.52/4.03***		.31/3.21**
R²	.45	.48	.40	.44	.34	.34
Adj. R²	.45	.47	.39	.43	.33	.33
F	111.46***	93.18***	90.23***	78.65***	68.93***	52.25***
D-W	1.91	1.97	1.91	1.97	2.01	2.01
VIF	1.03~1.57	1.53~1.57	1.03~1.57	1.53~1.57	1.03~1.57	1.53~1.57

*PS: **p<.01, ***p<.001. CI= community involvement; CE= community engagement; CC= community cohesiveness, β = regression coefficient. **Source:** Compiled by this study*

Results of Hypothesis Test

Before the regression analysis was performed, t-test and ANOVA were conducted to analyze the respondents' characteristics such as gender, age, education, occupation and income. The results demonstrated that there were significant differences in age and income. Therefore, this study selected these two characteristics as control variables and with four variables of community involvement, brand identification, brand valuation and marketing performance to execute regression analysis for testing hypotheses. The regression models from M1 to M11 show the explained variation (R2) with significance, all F values at the p < 0.05, indicating the regression models have significant explanatory ability. In the meanwhile, the D-W (Durbin-Watson Statistic) value of each model is between 1.85 to 2.05 (normally between 1.5 and 2.5), which means no self-correlation problem between the error terms. In

addition, the VIF (variation inflation factor) value of each model is less than 10; it means no serious co-linearity problem in the regression model.

The Effects of Community Involvement

The community involvement (CI) and its two dimensions, community engagement (CE) and community cohesiveness (CC), were set to independent variables, brand identification (BI), brand valuation (BV) and marketing performance (MP) were set as dependent variables. The results are shown in Table 3. The models M1, M3, and M5 given in Table 3 show that CI has significant influences on BI, BV, and MP (β = 0.67, t = 4.89; β = 0.62; t = 4.39; β = 0.57; t = 4.17). Furthermore, model M2, M4, and M6 for two dimensions of CI, i.e. CE and CC, have significant influences on BI, BV, and MP, where the influences of CE (β = 0.65, t=4.67; β = 0.62, t = 4.65; β = 0.34, t = 3.81) are greater than the

influences of CC (β = 0.56, t = 4.65; β = 0.52, t = 4.03; β = 0.31, t = 3.21). The results reveal that CI and its two dimensions have positive and significant impact on BI, BV, and MP. Therefore, the hypotheses H1, H2, and H3 are all supported.

The Effects of BI and BV

To process regression analysis, the community involvement (CI), brand identification (BI), brand valuation (BV) were set as independent variables, and marketing performance (MP) and its two dimensions customer satisfaction (CS) and repurchase intentions (RI) were set as dependent variables. The regression analysis results are shown in Table 4. In model M7, the BI has positive and significant impact on MP (β = 0.37; t = 3.43***). Furthermore, the regression models M10 and M11 were conducted by BI and BV to MP's dimensions, respectively. The results in model 11show a significant influence of BI on RI (β = 0.68, t = 4.84***) which is greater than the influence on CS (β = 0.43, t = 3.58***) in model 10. It means that BI has positive and significant impact on MP and its dimensions. Therefore, hypothesis H4 is supported.

Similarly, as shown in Table 4, in model M7, BV has a positive significantly impact on MP (β = 0.47, t = 4.01***). Besides, the result in model M11 also show a significant effect of BV on RI (β = 0.68, t = 5.17***) which is greater than the effect on CS (β = 0.44, t = 3.90***). It means that BV has positive significantly impact on MP and its dimensions. Thus, hypothesis H5 is also supported.

The Mediating Effects of BI and BV

In order to test whether BI and BV play mediating roles between CI and MP, this study conducted multiple regression analysis based on Baron and Kenny's (1986) process. The testing results of mediating effects are shown as Table 4. Model M1 in Tables 3 shows that CI has a positive significantly effect on BI (β = 0.67; t = 4.89***); moreover, model M5 shows that CI has a positive significant effect on MP (β = 0.57; t = 4.10***). In Table 4, model M7 shows that BI has a positively significant effect on MP (β = 0.37; t = 3.43***), while model M8 shows that CI and BI have positive significant effects on MP (β = 0.23; t = 2.56**; β = 0.52; t = 4.98***), respectively. Compared with model M5, the value of β coefficient decreases from 0.57 to 0.23, and both p values are at the 0.01 significance level. It means that the effect on independent variable to dependent variable is still significant after introducing intermediary variable. It proves that there is a partial mediating effect of brand identity; thus hypothesis H6 is supported.

Similarly, in Table 3, model M2 shows that CI has a positive significant effect on BV (β = 0.62; t = 4.39***), and model M7 reveals that BV has a positive significant effect on MP (β = 0.67; t = 4.81***); while in Table 4 model M9 shows that CI and BV positive significantly affect on MP (β = 0.26; t = 2.65**; β = 0.52; t = 4.44***). As compared with model M5, β value decreases from 0.57 to 0.26, and both p values less than 0.05 of significance level. It means that there is a partial mediating effect of brand valuation; therefore, hypothesis H7 is also supported.

Table4. *The regression analysis results of CI, BI and BV to MP, CS and RI*

Ind. Vari.	MP	MP	MP	CS	RI
	M7	M8	M9	M10	M11
Cont. Vari.	β/t	β/t	β/t	β/t	β/t
Age	-.01/-.36	-.01/-.30	.01/.18	.01/.26	-.03/-.71
Income	.01/.17	.02/.36	.08/1.45	.08/1.52	-.05/-1.02
Indt. Vari.					
CI		.23/2.56**	.26/2.65**		
BI	.37/3.43***	.52/4.98***		.43/3.58***	.68/4.84***
BV	.47/4.01***		.52/4.44***	.44/3.90***	.68/5.17***
R^2	.46	.49	.50	.21	.49
Adj. R^2	.45	.49	.51	.20	.48
F	194.76***	193.89***	201.78***	122.85***	127.80***
D-W	1.85	1.92	1.96	1.89	2.05
VIF	1.03~1.57	1.03~1.81	1.03~1.65	1.03~1.56	1.03~1.57

*PS: **p<0.01, ***p<0.001. CI= community involvement; BI=brand identification, BV=brand valuation;*

CS = customer satisfaction; RI = repurchase intentions. **Source:** *Compiled by this study*
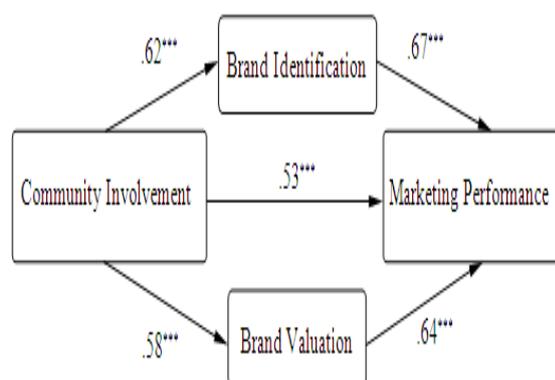
Results of SEM and Path Analysis

The method of SEM was further used to test the relationship among each variable of the research framework so as to understand the relationships among variables of the entire structural model. Some indices were used to measure the fit degree of the SEM and observed data. There are GFI, AGFI, IFI, CFI, RFI, NFI and TLI in

goodness-of-fit index. These values are closer to 1 meaning better degree of fit. However, there is no absolute standard for fit degree to test the SEM and data.

The recommended standard can be relaxed to 0.80, χ2 / df value less than 2, representing the goodness-of-fit is excellent; value between 1 and 5 represents good goodness-of-fit. RMR value is at least less than 0.10; RMR = 0 represents the best of fit; value between 0.05 and 1 represents fair goodness-of-fit. RMSEA value is considered one of the most representative goodness-of-fit index, RMSEA = 0 represents excellent goodness-of-fit; between 0 and 0.05 representing the goodness-of-fit is well, and value between 0.08 and 1 represents ordinary goodness-of-fit (Hair Jr. et al., 2010). The results of SEM show that χ2 = 524.13, p = 0.00, less than 0.05; AGFI = 0.81, greater than 0.80; GFI = 0.94, greater 0.80; RMSEA = 0.09, less than 0.10. Thus the SEM results meet the standard of goodness-of-fit, and it means that the goodness-of-fit of measuring structure model in this SEM is quite well.

As shown in Figure 2, the path analysis results further support that CI has significant positive impacts on BI (β = 0.62***) and BV (β = 0.58***). Besides, CI has a significantly positive impact on MP of direct effect 0.53***, and two indirect effects 0.42*** and 0.37***, i.e. CI to BI on MP and CI to BV on MP, respectively. Similarly, both BI (β = 0.67***) and BV (β = 0.64***) have significantly positive effects on MP. The above findings verify hypotheses H1 to H5 again.

Source: *Compiled by this study*

Figure2.*Result of path analysis*

DISCUSSION AND CONCLUSION

Discussion

The study aims to the consumers who have been involved in the brand community activities in Taiwan area, and chooses Apple brand's users as the research samples. The survey data was measured by website questionnaire, and in total 411 valid samples were collected. An analytic framework including seven sets of hypotheses was proposed. The testing results support the seven proposed hypotheses, where community involvement has significant and positive influences on brand identification, brand valuation, and marketing performance. And, brand identification and brand valuation have significantly positive effects on marketing performance, and they also sever as mediating roles between community involvement and marketing performance.

The results indicate that community involvement has significant positive influence on brand identification. It supports the finding of Dutton et al. (1994) and Ho (2015), indicating higher network interpersonal relationship leading to higher participation in the community and arising higher community identification. Hence, a brand company may need to look for the brand users who have high dependence on network interpersonal relationship, through the discussion and sharing their experiences via web platform to enhance the members engaged in the community. The results also reveal that community involvement has significant positive influence on brand valuation, which is similar to the finding of Muniz and O'Guinn (2001). It implies that if people feel better of the brand, this will encourage them to share the passion for the brand with their community members, and come into identifying the brand during the members' interaction with each other. That is why current leading enterprises have begun to use brand community to increase efficiency, establish new business models and new customers, and create the brand valuation (Smith & Ingram, 2012; Ho, 2015). Furthermore, community involvement has a significant positive influence on marketing performance. As found in the research (O'Reilly & Chatman, 1986; Bhattacharya et al., 1995), managing community should be in a gradual stage from the members' convention to members' interaction. If members become

company's customers, it will drive sales and marketing performance finally. Hence, how to create the approach of community cohesiveness is an important issue for promoting performance.

The results also indicate that both brand identification and brand valuation have significantly positive effects on marketing performance, which supports the findings of He and Li (2011) and Warawut et al. (2013). They reported that managing the brand positioning and value proposition could strengthen customers' brand identification. That is why Apple cultivates consumer groups to consolidate its brand influence, and continues its innovation in design and technology to make it always being a leader in high-tech industry, becoming a strong brand and profitable company. Some past research, like Kotler (1991) and Park et al. (2010) have found that consumer awareness of the overall value association coming from the brand name and product. Hence, enhancing the brand valuation will enrich its intangible asset and further increase marketing performance accordingly. In other words, strengthening brand valuation can help to enhance customer satisfaction and repurchase intentions in the near future. So, it is an important issue for practitioners to manage company's brand value so as to achieve good performance results (Park et al., 2010).

Finally, the results reveal both BI and BV have partial mediation effects between CI and MP, and they are the same as the findings of Chien (2010). It indicates that a company needs to hold the brand community activities or events and give support to enhance the members to participate in the community. Through the interaction from community activities, corporate can increase the community identification, and then enhance the brand identification and brand valuation. Therefore, more positive brand identification and brand valuation will generate higher brand satisfaction and repurchase intentions, and further increase the sales in future.

Managerial implications

In the past, a few scholars intended to investigate the marketing performance through the aspect of social communication (Huang &

Chang, 2007), and some scholars proposed managing the community platform to build the positive interaction between corporate brand and its consumers (Tsai & Liu, 2013; Morandin et al., 2013). However, whether the corporate can stand out in the commercial market, the most important thing is its product or service. Based on content of product or service offered by company, consumers can build up the brand community which is able to create customers' value naturally. The corporate may need to stand closely to the user's altruistic perspective, not only one-sided presentation of the corporate information, but also concerning to customer's opinions to provide what they really want. The current research confirms the importance of community involvement, especially for the emerging e-commerce market. By managing community, a company can extend the market attachment value and also create unique service model.

Noting that community engagement is an important way for enterprises to educate the whole community members and benefit the larger community, the approach to community engagement is highly practical and useful (Baldus, Voorhees, & Calantone, 2015). The enterprise can encourage staff and customers to incorporate community engagement into all aspects of their work (Idemudia, 2014). It includes not only teaching and learning, but also social life and creative activity, as well as service and outreach. Face-to-face involvement is a good way for enterprises to monitor customers' behaviors, and to gather valuable information of market. It is possible that enterprise gets customized solutions and funding opportunities during these positive outcomes, and generates the greatest impact on corporate revenues.

Moreover, community cohesiveness is what enables different groups of people to get the same consensus. The members of the brand community are rather similar. In general, greater interpersonal attraction means stronger sense of belonging to the community. Hence, community cohesiveness is an important prerequisite for community involvement. The corporate is a key contributor which enables customers to work for the same goal. If the corporate cannot maintain

strong and lasting community cohesiveness, the brand community will not succeed. Therefore, how to maintain community cohesiveness for the brand development is a key issue in marketing management.

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