

EUNJU KO *Yonsei University*

HAO ZHANG* *Yonsei University*

The Moderating Effects of Nationality and Lifestyle on the Relationship between Brand Equity and Purchase Intentions[†]

This research investigates the differences in sportswear purchasing behavior between global consumers in Korea and China. Korean and Chinese consumers showed significant differences in purchasing behavior. Brand personality, perceived price, and brand loyalty showed a significant, positive relationship with purchase intentions across both cultural groups. The results identified two lifestyle categories for Korean and Chinese consumers: Adventurer and Follower. The consumers of each lifestyle group have significantly different views regarding brand equity and purchase intentions. Several marketing implications are discussed in this paper.

The effect of brand equity on consumer behavior has received renewed attention (Van Osselaer & Alab, 2000; Yoo *et al.*, 2000). Brand equity provides consumers with quality information about a particular product (Krishan & Hartline, 2001). It refers to the marketing effect or outcomes that accrue to a product with its brand name, compared with those that would accrue if the same product did not have a brand name (Aaker, 1991). Relevant

[†]This work was supported in part by the Yonsei University Research Fund of 2007.

Professor, Department of Clothing and Textiles, Yonsei University, Seoul, Korea (ejko@yonsei.ac.kr)

*Ph. D Candidate, Department of Clothing and Textiles, Yonsei University, Seoul, Korea

Key Words: brand equity, purchase intentions, nationality, lifestyle, sportswear

research finds that brand equity has a significant relationship with the purchase intentions of consumers, but the elements of brand equity have different roles. Jung and Sung (2008) found that (from among the elements of brand equity), only brand loyalty showed a positively significant relationship with purchase intentions for the three different culture groups. The influence of various elements of brand equity varied according to the culture of the consumers. Yasin *et al.* (2007) considered the country of origin for the brand as one moderators influencing the relationship between the antecedents of brand equity. However, limited research analyzes what factors can moderate the direct influence of the elements of brand equity on purchase intentions.

It has been suggested that there is the emergence of a new group of consumers who have similar preferences that are promoted globally (Ko *et al.*, 2007). These similarities can be for product benefits that have global appeal or for products that meet the needs of emerging global lifestyles (Domzal & Unger, 1987). Rather than focus on national differences (a multinational approach), successful global marketers segment the world market according to consumer similarities. This paper determined the differences in the relationship between brand equity and purchase intentions for different lifestyle groups.

This research considered nationality as another factor that influences the relationship between brand equity and purchase intentions. Certain types of

cultures and the values of different countries place different importance on the purchase intentions of consumers (Phinney, 1992). This research focused on the sportswear market in Korea and China as there are limited sportswear based cross-cultural studies. The sportswear markets in Korea and China are attractive; the total worth of sports apparel and footwear in Korea was over \$3 billion dollars in 2005 (Korean Textile News, 2005). Most Korean consumers correlate imported brand names and higher prices with superior quality in the sportswear industry. China produces 65% of the world's sports products. Many sportswear companies have started to place more attention on China due to its importance as a sportswear manufacturing center, but also because it has become a major consumer. The China Education and Sports Suppliers Association (CESSA, 2008) predicted that the Beijing Olympics would further promote the purchase of sports goods among Chinese consumers. The sales volume of sportswear and shoes will reach \$11.4 billion dollars in 2008. China is to become the second largest market for sports goods after the United States (China Economic Net, 2008).

This study explored the following research objectives:

- (1) A comparison of the differences in sportswear purchase behavior between Korean and Chinese consumers.
- (2) A determination of the differences in the relationship between brand equity and purchase intentions among Korean and Chinese consumers.
- (3) An identification of the lifestyle characteristics to discover the relationship between brand equity and purchase intentions for different lifestyle groups.

LITERATURE REVIEW

Brand Equity

Brand equity has been an important concept in business practices as well as in academic research because marketers can find a competitive advantage through successful brands, such as the opportunity

for successful extensions and improved resilience against the promotional pressures of competitors (Lassar *et al.*, 1995). Brands with remarkable and favorable images can secure stable revenues from loyal consumer groups (Kang, 2001; Kim & Kang, 1999). Brand equity has been the subject of a number of studies and has been viewed from various perspectives. In the 1990s, one of the most widely accepted definitions for brand equity stated that brand equity is, "a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and/or to that firm's customers" (Aaker, 1991). Keller *et al.* (2003) provided a customer-based definition, stating that brand equity is the differential effect that brand knowledge has on consumer responses to the marketing of that brand. Brand equity is managed by maintaining brand consistency, protection of the sources of brand equity, making appropriate decisions between fortifying and leveraging the brand, and fine-tuning the supporting marketing program (Keller, 1998).

Literature can be grouped into two distinct categories in regards to the measurement of brand equity. The most common financial measurements employ stock prices (Myers, 2003). Simon and Sullivan (1993) used the movements in stock prices (based on the theory that the stock market reflects future prospects of brands by adjusting the price of firms) to capture the dynamic nature of brand equity. Another type of measurement focuses on customer-based brand equity. In marketing literature, this type of measurement can be seen as operationalizing brand equity, which generally falls into two groups: those that involve consumer perceptions (such as awareness, brand associations, or perceived quality) and those that involve consumer behavior (such as brand loyalty and the focus on paying a price differential). The focus on consumer behavior has led to a number of variables, such as overall preferences, perceived value, and an intangible measure of utility or satisfaction. Kamakura and Russell (1993) used scanner panel data to determine three components of brand equity (perceived value, brand dominance, and intangible value). However, this approach is limited because it

only offers estimates of brand equity and the method of computing brand equity as residuals in a regression equation that understates the actual variation of equities across brands.

Only a few authors incorporate both perceptual and behavioral dimensions. Aaker (1991) suggested using a brand-earnings multiplier that is based on a weighted average of the brand using five key components of brand equity: awareness, association, perceived quality, loyalty, and other proprietary assets such as patents and trademarks. Keller (1993) adopted two basic approaches (direct and indirect) to measuring customer-based brand equity emphasizing two constructs: brand awareness and brand image. The indirect approach tries to identify potential sources of customer-based brand equity distribution channels, the effectiveness of marketing communications, and the successfulness of a brand by measuring brand awareness and the characteristics and relationships among brand association (Atilgan *et al.*, 2005). The direct approach focuses on consumer responses to different elements of the marketing program of a firm (Keller & Sood, 2003).

Much research has focused on the outcomes of brand equity. Cobb-Walgren *et al.* (1995) used two sets of brands; one is a hotel brand and the other one is brand of household cleanser. Across categories, the brand with a higher equity generated significantly greater preferences and purchase intentions. Vogel *et al.* (2008) proved that brand equity has significant effects on customer loyalty intention by using sales dataset. Jung and Sung (2008) did a cross-cultural study between the USA and Korea that found that (among brand equity elements) brand loyalty showed a positive correlation with purchase intentions across consumers groups.

Sportswear Purchase Intention

Understanding consumer purchasing behavior is a key factor for a firm seeking to: attract and retain customers, improve the prospect for survival and growth, and enhance the value of shareholders (Ko *et al.*, 2008). Although purchase intention has been widely studied, there exists only limited research on sportswear purchase intention. Most sportswear purchase behavior studies examine consumer

behavior both before and after purchases. Lee (1998) examined the consumer purchase behavior during the product purchase decision process to determine differences in needs and wants regarding sportswear products among different age groups. He evaluated consumer behavior during each stage of the information search, product selection, purchasing decision, purchasing, and satisfaction after purchase. The different levels of involvement and influencing factors of this decision process have been widely accepted, and are fundamental to understanding purchase intention (Ko *et al.*, 2008). This research also found that there are several antecedents that influence the purchase intentions of consumers, such as country of origin effect, brand image, perceived quality, and perceived price.

Lifestyle

Globalization is the worldwide convergence of cultural, political, and economic aspects of life resulting from the elimination of communication and trade barriers (Giddins, 1999). The development of a successful strategy for global marketing depends upon the ability of a firm to segment world markets so that uniform sets of marketing decisions can be applied to a group of countries or particular types of consumers in different countries (Sethi, 1971).

As the need for segmentation of international markets is becoming widely recognized (Douglas & Craig, 1992), attention turns to searching for appropriate bases for segmentation (Jain, 1987). Rather than focus on national differences (a multinational approach), successful global marketers segment the world market according to consumer similarities. These similarities may include the appeal for specific product qualities or for products that meet the needs of emerging global lifestyles (Domzal & Unger, 1987).

Customers define lifestyles by the consumption choices they make in a variety of product categories. Lifestyle can be defined quantitatively, and used to group consumers for market segmentation. In addition, marketers endow products with brand characteristics that correspond to certain consumer personalities. Inferences about product characteristics are an important factor for the success of a brand.

These inferences refer to the extent to which a consumer holds strong, favorable, and unique associations with a specific brand (Keller, 1993). Kim (2005) derived overall lifestyle profiles, including demographic traits, media usage, and leisure patterns, for each type of lifestyle. Lim and Lim (1993) examined the apparel purchasing behavior of female university students, and eight factors were generated regarding lifestyle choices. Five subgroups were clustered: the fashion-pursuit group, home-intended group, outer-intended group, conservative-economy group, and passive-inactive group. Lee (2000) studied the apparel shopping motivation of consumers according to lifestyle factors, and five subgroups were determined: the passive group, appearance considerations/self-realization group, appearance indifference group, family oriented/economic group, and achievement oriented/active group. Ko *et al.* (2009) classified sports shoes consumers in the US, China, and Korea into three groups which are adventurer, follower, and laggard. The present research follows the Ko *et al.* (2009) research method, but only classifies consumers into the adventurer and follower groups, because laggards formed only a small percentage of the total sample and did not show much differences with followers.

Hypotheses Design

Relationship between brand equity and purchase intention Cobb-Walgren *et al.* (1995) measured brand equity based on the theory of Aaker (1991) and examined the effect of brand equity on purchase intention. Results showed that brand equity is related to brand preferences and purchase intention. Research by Jung and Sung (2008) also showed that brand equity positively influences purchase intentions for apparel markets (even in different culture groups) but the influence of each element of brand equity varies. As determined through previous research, the elements of brand equity include brand personality, perceived quality, perceived price, brand loyalty, and brand awareness (Atilgan *et al.*, 2005; Jung & Sung, 2008; Keller, 1993).

There is extensive prior research on the effects of elements of brand equity on purchase intention. Wang *et al.* (2009) divided brand personality into

product-brand personality and company-brand personality that proved that product-brand personality had significant influence on purchase intention. Ko *et al.* (2008) found that the perceived quality positively influence purchase intentions for both Koreans and Chinese, but the perceived price had positive effects for Koreans but negative effects for Chinese. Brand loyalty and brand awareness were found to have positive effects on purchase intentions (Aaker, 1991). Therefore, the first hypothesis is:

H₁: The elements of brand equity, (a) brand personality, (b) perceived quality, (c) perceived price, (d) brand loyalty and (e) brand awareness positively influence the purchase intentions of consumers in sportswear markets.

Differences between Korea and China Kaiser (1990) emphasized the social, economic, and consumption experience factors affecting the apparel purchase behavior and purchasing needs of consumers, which vary by country. Roth (1995) supported the presence of a strong link between social values and the purchasing needs of consumers to be fulfilled in different country markets that represent different socio-economic classes and cultures. According to Yau (1994), the product choice of consumers and preference for a particular product or brand are generally influenced by complex social influences. As a result of differences in culture and socio-economic conditions, certain types of values may be regarded as more important to consumers in one country market than to those in another country market (Phinney, 1992). Empirical studies also proved that there are differences of sports shoe purchase behavior between Koreans and Chinese. For example, Ko *et al.* (2008) found that sports shoes purchase intention by Koreans was influenced by brand image and perceived quality, but Chinese sports shoes purchase intention was influenced by country of origin effect, brand image, perceived quality, and perceived price. Based on prior research, the second hypothesis is formulated to be:

H₂: For different countries, there are significant differences in (a) sportswear purchase behavior and (b) the relationship between brand equity and purchase intention.

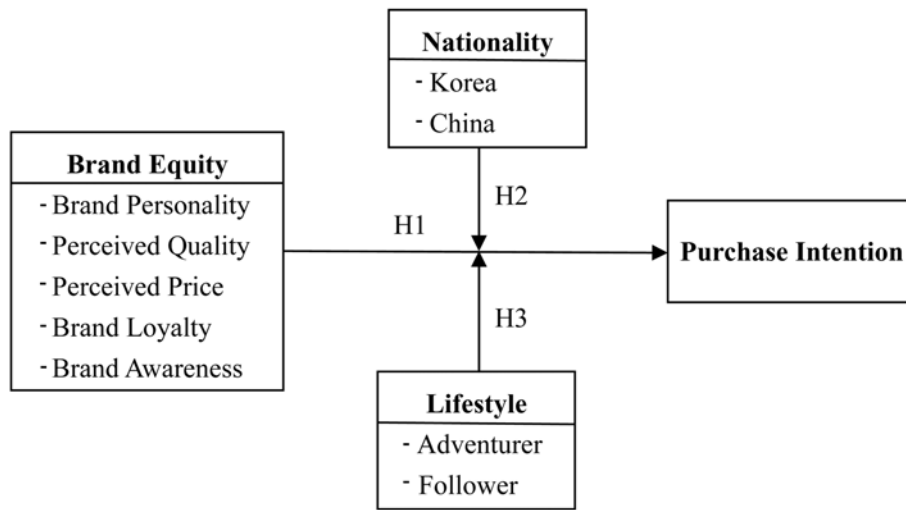


Figure 1. Research Framework

Differences between Different Lifestyle Groups Lazer (1963) developed the lifestyle and purchase behavior relationship model and suggested that the purchasing behaviors of individual consumers are affected by personal values and expectations from each social group. Lee and Kim (2004) examined the apparel purchase intention, information usage, product selection, and store selection for purchasing apparel products by Japanese female university students. Samples were segmented into groups by lifestyle factors. Lifestyle factors fully explained the differences in the characteristics of each segmented group. In research by Ko *et al.* (2007), fashion lifestyle was found to have a significant effect on purchase intention that significantly altered the advertising methods of three different countries. Ko *et al.* (2009) also classified American, Chinese and Korean consumers into three groups, and proved there are differences in the relationships among country of origin, brand equity, and brand loyalty. Therefore, this study proposed that for different lifestyle groups, there are differences in the relationship between brand equity and purchase intentions. The hypothesis is as follows:

H₃: For different lifestyle groups, there are differences in (a) sportswear purchase behavior and in (b) the relationship between brand equity and purchase intention.

RESEARCH METHOD

Research Model

The following research model Figure 1 was constructed based on the results of a literature review in related areas and on the hypotheses. This model describes the relationships between brand equity and purchase intentions along with the moderated influence of consumer lifestyles.

Instrument

Multidimensional brand equity was used to measure the brand equity of sportswear brands. Aaker (1991) conceptualized brand equity as a set of assets (or liberties). He proposed the following five assets of brand equity: brand awareness, brand associations, perceived quality, brand loyalty, and other proprietary assets. These assets (or liberties) are considered 'dimensions' in the present study. From the perspective of consumers, brand personality, perceived quality, perceived price, brand loyalty, and brand awareness are the five most important dimensions. The brand equity was measured by brand personality (3 items), perceived quality (3 items), perceived price (2 items), brand loyalty (2 items), and brand awareness (2 items) based on previous research (Aaker, 1991; Ko *et al.*, 2008; Yoo *et al.*, 2000).

A 21-item lifestyle questionnaire was employed

to capture the extent to which consumers valued specific activities, interests, opinions, brands, and fashion attitude. This scale has been used by many previous researchers (Boedeker, 1995; Fraj & Martinez, 2005; Ko *et al.*, 2009; Shim, 1994), and was selected for this study because these items were pertinent to this study. Lifestyle measurement tools include brand consciousness (3 items), leadership (3 items), adventure (3 items), practice (3 items), fashion (3 items), ostentation (3 items), and healthy lifestyles (3 items). Responses to the 21 statements pertaining to lifestyle were measured using a five-point Likert-style scale ranging from 1 = strongly disagree to 5 = strongly agree.

Sampling and Data Collection

The Korean sample included 200 college and graduate students in Seoul Korea. Data were collected in July 2008; and 200 complete questionnaires were used out of the 215 obtained. The Chinese sample included 200 college and graduate students in Beijing China. Data were

collected in June 2008; and 200 complete questionnaires were used out of the 210 obtained. All respondents were given a self-administered questionnaire that was completed within 15 to 20 minutes. All participants were residents of their respective countries. A two-way language barrier complicated the comparison of respondents; translations were discussed and modified so that the items on the questionnaires conveyed the same meaning. The demographic characteristics of the samples are described in Table 1.

Among the 200 Korean respondents, there were 84 males (42%), and 116 females (58%). There were 92 respondents (46.0%) younger than 20, 74 respondents (37%) aged from 20 to 25, and 34 respondents (17%) older than 25. The majors were diverse, but many respondents studied Human Ecology (38%). Their monthly incomes were mostly in the middle-range (39%) and high-range (24%). Only 4% of respondents had very low household incomes. The distribution of apparel consumption reflected the distribution of household income. More

Table 1. *Demographic Analysis of Korean and Chinese Respondents*

Characteristics	Categories	Korean (200)		Chinese (200)	
		Frequency	Percentage (%)	Frequency	Percentage (%)
Gender	Male	84	42.0	106	53.0
	Female	116	58.0	94	47.0
Age	Under 20	92	46.0	80	40.0
	20-25	74	37.0	120	60.0
	Up 25	34	17.0	0	0.0
Major	Liberal	42	21.0	146	73.0
	Engineering	34	17.0	10	5.0
	Science	14	7.0	40	20.0
	Art	14	7.0	4	2.0
	Human Ecology	76	38.0	0	0.0
	Other	20	10.0	0	0.0
Household Income	Very Low	8	4.0	18	9.0
	Low	32	16.0	46	23.0
	Middle	78	39.0	57	28.5
	High	48	24.0	57	28.5
	Very High	34	17.0	22	11.0
Apparel Consumption	Very Low	24	12.0	64	32.0
	Low	54	27.0	20	10.0
	Middle	92	46.0	80	40.0
	High	20	10.0	18	9.0
	Very High	10	5.0	18	9.0

than 40% of Korean respondents spent at the middle level, and 27% of them spent at the low level.

Among the 200 Chinese respondents, there were 106 males (53%) and 94 females (47%). There were 80 respondents (40.0%) younger than 20, and the rest were all aged from 20 to 25. Most of the respondents were from liberal (73%) and natural science (20%) colleges. Their monthly incomes were distributed evenly in the low (23%), middle (28.5%), and high levels (28.5%). More than 40% of Chinese respondents spent at the middle level, and 32% of them spent at a very low level.

RESULTS

Confirmatory Factor Analysis for Brand Equity and Lifestyle

A series of confirmatory factor analysis models were estimated based on data from the Korean and Chinese samples. The two-step approach to structural equation modeling suggested by Anderson

and Gerbing (1988) was used in this study. Before estimating the paths to test the relationship among constructs, a confirmatory factor analysis for brand equity and lifestyle was conducted to assess construct and convergent validity through AMOS 7.0. Table 2 and Table 3 indicate results of the CFA for the measurement model that give factor loadings and t-values.

Table 2 also indicates that every item has a significant t-value on its latent construct for brand equity. For each country, the CFA model was acceptable because each GFI (for Korea, GFI = 0.956; for China, GFI = 0.923) and AGFI (for Korea, AGFI = 0.922; for China, AGFI = 0.863) value was acceptable. Average variance extracted (AVE) was used to test the discriminant validity. The results show that for each construct, the average variance extracted was much higher than its highest shared variance with other constructs, providing additional support for the discriminant validity (Fornell and Larcker, 1981). Cronbach's Alpha was used for the reliability test and all of the values were higher than

Table 2. *Confirmatory Factor Analysis and Reliability Test for Brand Equity*

Factor	Scales	Factor Loadings		t-value		Cronbach's alpha	
		Korean	Chinese	Korean	Chinese	Korean	Chinese
Brand Personality (AVE: K = .64, C = .65)	This Brand is Sophisticated.	.83	.81	10.47	11.56		
	This Brand has Good Styles.	.85	.78	10.42	11.32	.84	.84
	This Brand has Good Colors	.72	.82	Fix	Fix		
Perceived Quality (AVE: K = .44, C = .56)	This Brand has Good Durability.	.73	.71	Fix	Fix		
	This Brand is Comfortable to Wear.	.67	.75	6.13	9.39	.68	.79
	This Brand is not Deformed by Wash or Sunshine.	.57	.78	6.27	8.96		
Perceived Price (AVE: K = .44, C = .40)	This Brand has the Most Valuable Product after Comparing Prices with Other Brands.	.53	.62	4.74	4.22	.68	.63
	This Brand has the Best Quality Product Compared to the Price I Paid.	.78	.65	Fix	Fix		
Brand Loyalty (AVE: K = .48, C = .55)	This Brand is Frequently Recommended to Others.	.53	.71	5.68	2.55	.70	.69
	I would be Disappointed if I can not Purchase This Brand.	.82	.77	Fix	Fix		
Brand Awareness (AVE: K = .48, C = .56)	This Brand Advertises Frequently.	.70	.70	4.37	8.34	.67	.70
	This Brand is good at Delivering Messages Through Advertisement.	.68	.79	Fix	Fix		

Korean: $\chi^2 = 55.10$, $df = 44$, GFI = .97, AGFI = .92, NFI = .88, IFI = .95, CFI = .94, TLI = .92

Chinese: $\chi^2 = 107.89$, $df = 44$, GFI = .92, AGFI = .85, NFI = .88, IFI = .92, CFI = .92, TLI = .88

Table 3. *Confirmatory Factor Analysis and Reliability Test for Lifestyle*

Factor	Scales	Factor Loadings	t-value	Cronbach's alpha
Brand Consciousness (AVE = .46)	A Branded Products are Worth Paying for	.66	9.99	.71
	A Well-know Brand Means Good Quality	.73	10.54	
	When I Find What I Like I Usually buy It without Hesitation	.65	Fix	
Leadership (AVE = .60)	I Like Being in Charge of a Group	.68	12.47	.79
	I Have More Ability Than Most People	.91	13.92	
	I Consider Myself an Intellectual	.71	Fix	
Adventure (AVE = .72)	I Like Doing Things That are New and Different	.81	19.81	.89
	I Like the Challenge of Doing Something I Have Never Done Before	.84	20.90	
	I Like Trying New Things.	.90	Fix	
Practice (AVE = .58)	I am very Interested in How Mechanical Things, such as Engines, Work.	.60	11.33	.79
	I Love to Make Things I can use Everyday.	.90	13.04	
	I Like Making Things with my Hands.	.76	Fix	
Fashion (AVE = .48)	I Follow The Latest Trends and Fashions	.66	10.60	.74
	I Feel very Confident In my Ability to Shop for Clothing	.77	11.50	
	Dressing Well is an Important Part of My Life	.65	Fix	
Ostentation (AVE = .58)	Wearing Designer Clothing Gives me Social Status	.68	12.64	.80
	The Clothes That I Wear Identify my Role	.85	14.88	
	A Person's Reputation Is Affected by How He/she Dresses	.75	Fix	
Healthy Lifestyle (AVE = .42)	I Prefer Functional Furniture.	.54	9.47	.63
	I Try to Find the Balance Between Work and My Private Life.	.72	7.20	
	Designs and Colors are Important Factors for the Furniture and Decoration.	.68	Fix	

$\chi^2 = 470.75$, $df = 168$, $GFI = .90$, $AGFI = .86$, $NFI = .87$, $IFI = .91$, $CFI = .91$, $TLI = .89$

0.6. Therefore, the reliability of the data from the two countries was good enough to be further analyzed. The selected items of brand equity made reliable and valid measures for the research constructs.

Table 3 indicates that every item has a significant t-value on its latent construct for lifestyle. Because $GFI = 0.90$ and $AGFI = 0.86$, the CFA model of lifestyle is acceptable. For testing reliability, Cronbach's Alpha was also used, and all of the values were higher than 0.6. Therefore, the reliability of each factor was strong enough to be analyzed further. The selected lifestyle items made reliable and valid measures for the research constructs.

Identify Lifestyle Using K-mean Cluster Analysis

Cluster analysis using the K-means method was conducted to determine whether consumers could be segmented into distinct groups based on lifestyle factors. Clustering was performed by minimizing

similarity and redundancy among clusters and dividing respondents into clusters.

As shown in Table 4, the two groups were classified after a K-mean cluster analysis. Group 1, with 45.5% of the subjects ($n = 182$), had the highest mean score on every item. Respondents in this group showed a positive attitude on healthy lifestyles that have higher brand and fashion consciousness with a desire to be a leader and adventurer. These type of respondents were considered "Adventurer". Group 2, with 54.5% of the subjects ($n = 218$), had the lowest mean scores in each factor (around 3). They show a neutral attitude on brand and fashion consciousness with no desire to be a leader or adventurer, but have positive attitudes on healthy lifestyles. This group was considered the "Follower". The results of the t-test showed that the differences between these two groups were significant.

Differences of Sportswear Purchase Behavior between Koreans and Chinese

Table 5 shows that the nationality segmentation of Korea and China showed differences in sportswear purchase behavior, which supports H_{2-a}. Sportswear purchase behavior, favorite brand, purchased brand,

purchased item, purchase location, and information usage were significantly different between Korean and Chinese consumers. Almost 60% of the favorite brands of Chinese consumers are Nike and Adidas, but there are still more than 40% of them that like other brands. However, only 40% of them had previously purchased Nike and Adidas while, nearly 60% of them had purchased domestic brands (e.g. Li-Ning and Anta). Nearly 80% of the favorite brands of Korean consumers are Nike and Adidas. In addition, 80% of them have also purchased Nike and Adidas. Korean consumers purchased all kinds of sportswear items (clothing: 21%, pants: 21%, and shoes: 57%), but most Chinese consumers only purchased sports shoes (75%). Both Korean and Chinese consumers preferred to purchase sportswear in specialty shops (K: 39%, C: 20%). The second preference for Korean consumers was another retailing outlet, such as the internet. However, the second preference for Chinese consumers were other department stores (34.9%). Korean and Chinese consumers used the media as their first source of information (K: 47.0%, C: 38.5%). Chinese and Korean consumers also listened to salespersons (30.5%) as their second information source.

Table 4. Cluster Analysis for Lifestyle

Lifestyle Factor	Group Means		t-value
	Adventurer (n = 182)	Follower (n = 218)	
Brand Conscious	4.00 (.67)	3.20 (.63)	12.30***
leadership	3.80 (.78)	2.86 (.72)	12.48***
Adventurer	4.10 (.62)	3.28 (.87)	10.61***
Practice	3.46 (1.00)	2.89 (.84)	6.17***
Fashion	4.04 (.64)	3.09 (.62)	14.90***
Ostentation	3.89 (.62)	2.83 (.69)	159.95***
Healthy Lifestyle	4.01 (.57)	3.50 (.66)	8.24***

***p < .001

Table 5. Differences of Sportswear Purchase Behavior

Contents	Description	Chinese (n = 200)	Korean (n = 200)	χ^2	Adventurer (n = 182)	Follower (n = 218)	χ^2
Favorite Sportswear Brand	Adidas	44 (22.0)	76 (38.0)	185.036***	52 (28.6)	68 (31.2)	1.81
	Nike	72 (36.0)	80 (40.0)		66 (36.3)	86 (39.4)	
	Puma	3 (1.5)	22 (11.0)		12 (6.6)	13 (7.1)	
	Others	81 (40.5)	22 (11.0)		52 (28.6)	51 (23.4)	
Purchased Sportswear Brand	Adidas	31 (15.5)	75 (37.5)	101.87***	70 (38.5)	36 (16.5)	7.90*
	Nike	50 (25.0)	67 (33.5)		41 (22.5)	76 (34.9)	
	Puma	3 (1.5)	24 (12.0)		16 (8.8)	11 (5.0)	
	Others	116 (58.0)	34 (17.0)		55 (30.2)	95 (43.6)	
Purchased Sportswear Item	Gym Wear/T-shirts	35 (17.5)	42 (21.0)	58.378***	30 (16.5)	47 (21.6)	3.32
	Jumper / Pants	15 (7.5)	42 (22.0)		38 (20.9)	19 (8.7)	
	Shoes	150 (75.0)	114 (57.0)		112 (61.5)	152 (69.7)	
Purchased Place	Discount / Wholesaler	19 (9.5)	36 (18.0)	97.488***	13 (7.1)	42 (19.3)	13.55*
	Department Store	69 (34.5)	12 (6.0)		41 (22.5)	40 (18.3)	
	Specialty Shop	100 (50.0)	78 (39.0)		64 (35.2)	114 (52.3)	
	Other (Internet, etc)	12 (6.0)	74 (37.0)		39 (21.4)	47(21.6)	
Information Usage	Sales person / Catalog	61 (30.5)	84 (42.0)	42.776**	59 (32.4)	86 (39.4)	20.30**
	Mass Media	78 (38.5)	94 (47.0)		72 (39.6)	100 (45.9)	
	Observing others	39 (19.5)	18 (9.0)		25 (13.7)	32 (14.7)	
	Others (internet, etc)	22 (11.0)	4 (2.0)		6 (3.3)	20 (9.2)	

*p < .05, **p < .01, ***p < .001

Differences of Sportswear Purchase Behavior between Adventurers and Followers

Table 5 shows that the lifestyle segmentation of the respondents showed differences in sportswear purchase behavior, which supports H_{3-a}. Sportswear purchase behavior, purchased brand, purchase location, and information usage were significantly different between Adventurer and Followers. Both Adventurer and Followers prefer Nike and Adidas. More than 60% of Adventurers purchased Nike or Adidas before, but 50% of Followers purchased Nike or Adidas before. More than 40% of Followers purchased other brands. Although both Adventurers and Followers purchase sportswear in specialty stores, the percentage of Followers is much higher (52.3%). Both Adventurers and Followers used the media as a first source of information (A: 39.6%, F: 45.9%); in addition, they also listened to salespersons (A: 32.4%, F: 39.4) as the second information source.

Hypotheses Test

Testing Hypothesis 1 To test the hypotheses, a structural equation model was estimated. Analysis

was conducted for the combined data set from Korean and Chinese consumers that produced the following fit indices: chi-square = 207.17 (df = 62, p-value = 0.000), GFI = 0.931, AGFI = 0.883, RMR = 0.048. For the acceptable model fit, GFI should exceed 0.90 and AGFI should exceed 0.85 (Lattin *et al.*, 2003).

As shown in Figure 2, brand personality ($\beta = 0.31$, t-value = 3.13), perceived price ($\beta = 0.70$, t-value = 3.65) and brand loyalty ($\beta = 0.19$, t-value = 2.66) can positively influence the sportswear purchase intentions of consumers, thus H_{1-a}, H_{1-c} and H_{1-d} were supported. However, perceived quality and brand awareness were not found to have significant relationships with purchase intention, thus H_{1-b} and H_{1-e} were not supported.

Testing Hypothesis 2 Correlation matrices for the two countries are presented in Table 6.

To test the differences between Korean and Chinese consumers, a multi-group analysis with AMOS 7.0 was used to assess the moderating variable effects on the structural model (Byrne, 2001). This test is conducted in two steps. First, the

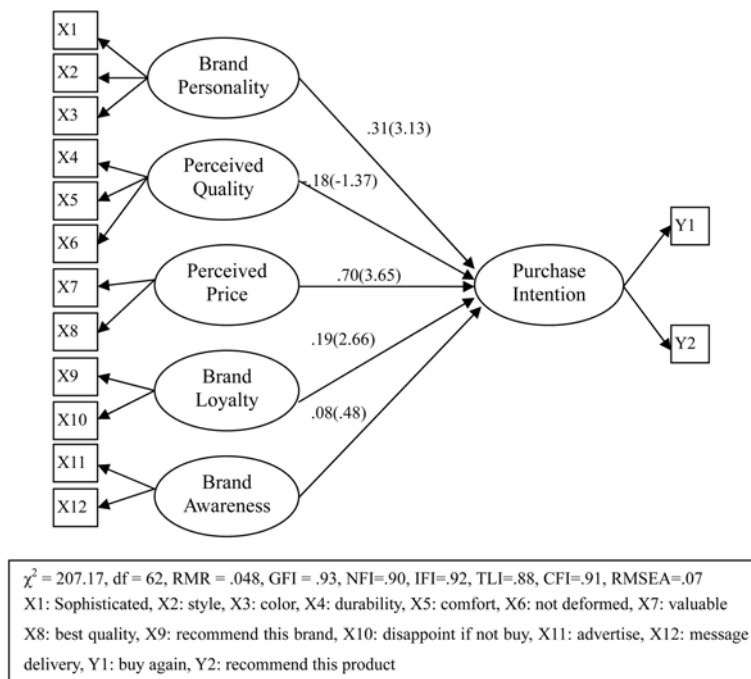


Figure 2. Results of Hypothesis Testing for Combined Data Set

Table 6. Correlation Matrix for Different Country-Korea and China

Division	Mean		SD		BP		PQ		PP		BL		BA		PI		
	K	C	K	C	K	C	K	C	K	C	K	C	K	C	K	C	
Brand Personality	3.77	3.79	.67	.81	1.00	1.00											
Perceived Quality	3.77	3.92	.64	.74	.41**	.53**	1.00	1.00									
Perceived Price	3.38	3.72	.90	.79	.22**	.35**	.20**	.35**	1.00	1.00							
Brand Loyalty	2.60	2.92	.92	.91	.27**	.13	.15*	.06	.35**	.20**	1.00	1.00					
Brand Awareness	3.34	3.36	.83	.87	.22**	.31**	.34**	.33**	.15*	.42**	.28**	.40**	1.00	1.00			
Purchase Intention	3.38	3.34	.89	.82	.17*	.55**	.09	.36**	.34**	.49**	.33**	.41**	.11	.46**	1.00	1.00	

* p < .05, ** p < .01 (K = Korean, C = Chinese; BP = Brand Personality, PQ = Perceived Quality, PP = Perceived Price, BL = Brand Loyalty, BA = Brand Awareness, PI = Purchase Intention)

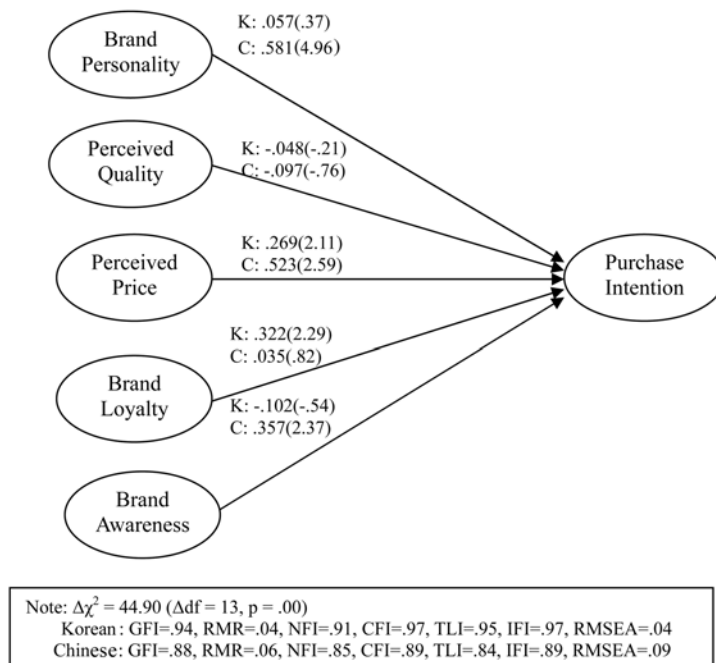


Figure 3. Results of Hypothesis 2 Testing for Korean and Chinese

appropriate structural parameters are constrained to be equal across groups, thereby generating an estimated covariance matrix for each group and an overall χ^2 value for the sets of sub-models as part of a single structural system. Next, parameter equality constraints are removed, resulting in a second χ^2 value with fewer degrees of freedom. Moderator effects are tested by assessing whether statistical differences exist between the two χ^2 values. If the

change in the χ^2 value is statistically significant, the null hypothesis of parameter invariance is rejected and a moderator effect is indicated (Brockman & Morgan, 2003).

In this study, the $\Delta\chi^2 = 44.90$ ($\Delta df = 13, p = 0.00$), thus the differences in the brand equity-purchase intention relationship between Korean and Chinese consumers were significant (see Figure 3). Thus, H_{2-b} was supported. As shown in Table 7, perceived price

Table 7. The Result of Structural Equation Modeling

Hypothetical Path	Path Estimates		t-value		Results		
	Korean	Chinese	Korean	Chinese	Korean	Chinese	
Brand Personality → Purchase Intention	.057	.581	.372	4.961***	Not Supported	Supported	
Perceived Quality → Purchase Intention	-.048	-.097	-.214	-.756	Not Supported	Not Supported	
Perceived Price → Purchase Intention	.269	.523	2.111*	2.587**	Supported	Supported	
Brand Loyalty → Purchase Intention	.322	.035	2.288*	.823	Supported	Not Supported	
Brand Awareness → Purchase Intention	-.102	.357	-.540	2.367*	Not Supported	Supported	
	Lifestyle	Adventurer	Follower	Adventurer	Follower	Adventurer	Follower
Brand Personality → Purchase Intention	.201	.448	1.160	3.064**	Not Supported	Supported	
Perceived Quality → Purchase Intention	-.145	-.249	-.534	-1.739	Not Supported	Not Supported	
Perceived Price → Purchase Intention	1.593	.316	2.016*	2.023*	Supported	Supported	
Brand Loyalty → Purchase Intention	-.077	.223	-.659	2.537*	Not Supported	Supported	
Brand Awareness → Purchase Intention	-.262	.148	-.782	1.071	Not Supported	Not Supported	

*p < .05, **p < .01, ***p < .001

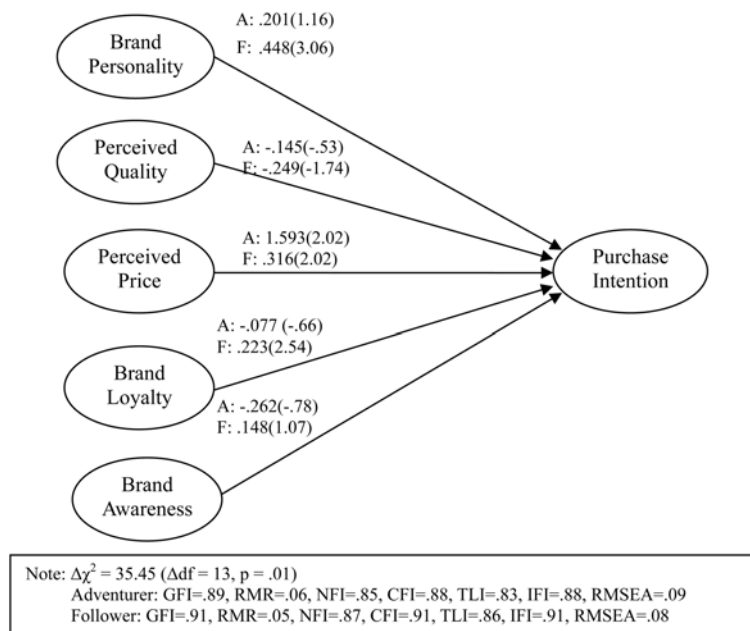


Figure 4. Results of Hypothesis 3 Testing for Adventurer and Follower Lifestyle Group

($\beta = 0.27$, t -value = 2.11) and brand loyalty ($\beta = 0.32$, t -value = 2.29) positively influenced the purchase intentions of Korean consumers. Brand personality ($\beta = 0.58$, t -value = 4.96), perceived price ($\beta = 0.52$, t -value = 2.59), and brand awareness ($\beta = 0.36$, t -value = 2.37) positively influenced the purchase intentions of Chinese consumers.

Testing Hypothesis 3 Correlation matrices for the two lifestyle groups are presented in Table 8.

To test the differences between various lifestyle groups, a multi-group analysis with AMOS 7.0 was used to assess the moderating variable effects on the structural model. In this study, the $\Delta\chi^2 = 35.45$ ($\Delta df = 13$, $p = 0.01$), thus the differences between the

Table 8. Correlation Matrix for Different Lifestyle-Adventurer and Follower

Division	Mean		SD		BP		PQ		PP		BL		BA		PI	
	A	L	A	L	A	L	A	L	A	L	A	L	A	L	A	L
Brand Personality	3.92	3.66	.73	.73	1.00	1.00										
Perceived Quality	3.92	3.78	.62	.75	.31**	.59**	1.00	1.00								
Perceived Price	3.60	3.49	.79	.83	.11	.40**	.19**	.33**	1.00	1.00						
Brand Loyalty	3.02	2.53	.89	.90	.22**	.10	.12	.08	.33**	.18**	1.00	1.00				
Brand Awareness	3.54	3.19	.87	.80	.21**	.27**	.35**	.30**	.31**	.13*	.30**	.31**	1.00	1.00		
Purchase Intention	3.63	3.13	.83	.81	.19*	.47**	.12	.27**	.34**	.36**	.25**	.36**	.15	.31**	1.00	1.00

* $p < .05$, ** $p < .01$ (A = Adventurer, F = Follower; BP = Brand Personality, PQ = Perceived Quality, PP = Perceived Price, BL = Brand Loyalty, BA = Brand Awareness, PI: Purchase Intention)

Adventurer and Follower lifestyle groups regarding the brand equity-purchase intention relationships were significant, which supports H_3 (see Figure 4). As shown in Table 7, only the perceived price ($\beta = 1.59$, t -value = 2.02) positively influenced the purchase intentions of consumers for Adventurer respondents. For Follower respondents, brand personality ($\beta = 0.20$, t -value = 3.64), perceived price ($\beta = 0.31$, t -value = 2.02), and brand loyalty ($\beta = 0.22$, t -value = 2.54) positively influenced the purchase intentions of consumers.

DISCUSSION AND IMPLICATIONS

Discussion

The sportswear purchase behavior, favorite brand, purchased brand, purchased item, purchase location, and information usage was significantly different between Korean and Chinese consumers. Compared to the Korean sportswear market, the Chinese sportswear market is more competitive. Due to the consumption ability of Chinese consumers based on household income, Chinese consumers purchased domestic brands (e.g., Li-Ning, Anta) and world famous brands equally. Korean and Chinese consumers preferred to purchase sportswear in specialty stores, and Korean consumers particularly preferred other retailing outlets, such as the internet, as their next method for purchasing sportswear.

With the IT development in China, it can also be deduced that internet shopping will be one of the most important channels for sportswear shopping. Korean and Chinese consumers usually used media and sales employees as their main sources of information. Therefore, sportswear managers should continue investing in media advertisements and focusing on retail services.

The results of this study also applied brand equity to the sportswear market. Brand equity was proven to have a significant relationship with purchase intentions, as predicted by Cobby-Walgreen *et al.* (1995). Brand personality, perceived price and brand loyalty showed a positively significant relationship with purchase intentions across cultural groups. However, the influences of brand equity varied in the sportswear market and depended on the country of the consumer. For Korean consumers, the perceived price and brand loyalty showed a positive relationship with purchase intentions. Higher price and brand loyalty can stimulate Korean consumers to purchase specific products. For Chinese consumers, the sportswear purchasing decisions are influenced by more factors than for Korean consumers. Brand awareness, brand personality, and perceived price significantly influenced sportswear purchase intentions for Chinese consumers. Because China is a newly opened market, brand personality and brand awareness are important for young Chinese consumers when they

purchase sportswear. Being unique and pursuing famous brands are significant trends in China.

The third important finding is that Korean and Chinese consumer lifestyles can be separated into two groups: Adventurer and Follower. These two groups showed differences on sportswear purchase behavior. Especially adventurers prefer Adidas and rarely visit discount stores. There were significant differences between these two groups in the relationship between brand equity and purchase intentions. Since the Adventurer group had a positive attitude on all the lifestyle dimensions, they were more fashionable, independent and often more successful. Higher prices encouraged Adventurer consumers to purchase and try new products and brands. Follower consumers valued consistency, so brand personality and brand loyalty significantly affected purchase intentions.

Implications

To ensure success, it is important to build strong brands that can be marketed internationally. To achieve this, marketers must understand how to develop and maintain brand equity in target market (Jung & Sung, 2008). Marketing managers should consider brand equity when introducing a brand into a new market. Investment in advertising and high quality retail services may help build long-term relationships with consumers. Especially in the Chinese sportswear market, advertising can help the brand increase the brand awareness of consumers.

Marketing managers should also continue to concentrate on the different characteristics and perceptions of consumers. Marketing strategy should vary for different markets. It is important to understand existing brand knowledge and beliefs within a consumer group as a baseline, as well as the projected effects of marketing actions on that baseline (Pitta & Katsanis, 1995).

Limitations

Despite the significant contributions made by the present study in the area of brand equity, there are some limitations that remain for future research. First, the small sample sizes of Korean and Chinese consumers that may have influenced the results

revealed in this study. In addition, the results only reflect the sportswear purchasing behavior of college students and limit a general application. Future studies should be conducted among different consumer age groups in international markets. Second, although this paper found that lifestyle was a moderating factor that can influence the relationship between brand equity and purchase intentions, the lifestyle factor that showed the most influence was not determined. Future research should focus on determining which lifestyle dimension has the most important effects on the sportswear purchase intentions of consumers. Third, this research classified the lifestyles of Korean and Chinese consumers into two groups. However, it may be beneficial to classify lifestyles separately within each country, since lifestyles in different countries may show different consumer characteristics.

REFERENCES

- Aaker, D. A. (1991). *Managing brand equity: Capitalizing on the value of a brand name*. New York: Free Press.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
- Atilgan, E., Aksoy, S., & Akinci, S. (2005). Determinants of the brand equity: A verification approach in the beverage in Turkey. *Marketing Intelligence & Planning*, 23(3), 237-248.
- Bae, H. J., Kang, Y. J., Kim, D. O., & Chung, I. H. (2005). Lifestyle of male college students and their preference of casual wear style. *Journal of the Korean Society of Costume*, 55(1), 86-100.
- Boedeker, M. (1995). New-type and traditional shoppers: A comparison of two major consumer groups. *International Journal of Retail & Distribution Management*, 23(3), 17-26.
- Brockman, B. K., & Morgan, R. M. (2003). The role of existing knowledge in new product innovativeness and performance. *Decision Science*, 34(2), 385-491.
- Byrne, B. M. (2001). *Structural equation modeling with*

- amos - basic concepts, applications and programming. Mahwah: Lawrence Erlbaum Association.
- China Economic Net (2008). China becomes major consumer in sportswear market. Retrieved August, 2008, from http://en.ce.cn/Industries/Consumer-Industries/200808/04/t20080804_16379638.html
- Cobb-Walgren, C. J., Ruble, C. A., & Donth, N. (1995). Brand equity, brand preference, and purchase intent. *Journal of Advertising*, 24(3), 25-40.
- Domzal, T., & Unger, L. (1987). Emerging positioning strategies in global marketing. *Journal of Consumer Marketing*, 4(4), 23-37.
- Douglas, S. P., & Craig, C. S. (1992). Advances in international marketing. *International Journal of Research in Marketing*, 9(4), 291-318.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobserved variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Fraj, E., & Martinez, E. (2005). Environmental values and lifestyle as determining factors of ecological consumer behavior: An empirical analysis. *Journal of Consumer Marketing*, 23(3), 133-144.
- Giddens, A. (1999). *Runaway world: How globalization is reshaping our lives*. London: Profile Books.
- Jain, S. C. (1987). *International marketing management* (2nd ed.). Boston: Kent Publishing.
- Jung, J. H., & Sung, E. Y. (2008). Consumer-based brand equity: Comparison among Americans and South Koreans in the USA and South Koreans in Korea. *Journal of Fashion Marketing and Management*, 12(1), 24-35.
- Kaiser, S. B. (1990). *The social psychology of clothing* (2nd ed.). Macmillan: New York, NY.
- Kamakura, W. A., & Russell, G. J. (1993). Measuring brand value with scanner data. *International Journal of Research in Marketing*, 10(1), 9-22.
- Kang, S. J. (2001). Effect of the influential factors on brand equity. *Journal of Global Academy of Marketing Science*, 8, 1-35.
- Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57(1), 1-22.
- Keller, K. L. (1998). *Strategic brand management: building, measuring and managing brand equity*. Englewood Cliffs: Prentice-Hall.
- Keller, K. L., & Sood, S. (2003). Brand equity dilution. *MIT Sloan Management Review*, 45(1), 12-15.
- Kim, H. (2005). A comparative study on the lifestyle trait of local city resident. *Journal of Global Academy of Marketing Science*, 15(2), 203-225.
- Kim, Y. M., & Kang, S. J. (1999). Influencing factors of elements of brand equity. *Journal of Global Academy of Marketing Science*, 4, 53-86.
- Ko, E. J., & Yun, S. Y. (2004). Impact of fashion brand personality on brand preference and purchase intention-comparison among formal, casual, sports brands. *Journal of Global Academy of Marketing Science*, 14, 59-80.
- Ko, E. J., Kim, E. Y., Taylor, C. R., Kim, K. H., & Kang, I. J. (2007). Cross-national market segmentation in the fashion industry. *International Marketing Review*, 24(5), 629-651.
- Ko, E. J., Kim, K. H., & Zhang, H. (2008). A cross cultural study of antecedents of purchase intention for sports shoes in Korea and China. *Journal of Global Academy of Marketing Science*, 18(1), 157-177.
- Ko, E. J., Kim, K. H., Kim, S. H., Li, G., Zou, P., & Zhang, H. (2009). The relationship among country of origin, brand equity, and brand loyalty: Comparison among USA, China and Korea. *Journal of Global Academy of Marketing Science*, 19(1), 47-58.
- Krishnan, B. C., & Hartline, M. D. (2001). Brand equity: Is it more important for service. *Journal of Service Marketing*, 15(5), 328-342.
- Lasser, W., Mittal, B., & Sharma, A. (1995). Measuring customer-based brand equity. *Journal of Consumer Marketing*, 12(4), 11-19.
- Lattin, J., Carroll, J. D., & Green, P. E. (2003). *Analyzing multivariate data*. London: Thomson Learning, Inc.
- Lazer, W. (1963). Lifestyle concept and marketing in toward scientific marketing. *Proceedings of the American Marketing Association Winter Conference*, 130-131.
- Lee, O. H., & Kim, J. K. (2004). A study on the Japanese university students' clothing buying behavior.

- ior according to their lifestyle. *Journal of the Korean Society of Clothing and Textiles*, 29(2), 298-306.
- Lee, S. H. (2000). A study on conspicuous consumption and clothing shopping motives according to life style. *Journal of the Korean Society of Costume*, 8(6), 842-852.
- Lee, Y. D. (1998). Study of factors analysis on the purchasing behavior of sportswear consumers. *The Korean Journal of Physical Education*, 37(4), 594-604.
- Lim, K. B., & Lim, S. J. (1993). A study on clothing purchasing behavior and lifestyle. *Journal of the Korean Society of Clothing and Textiles*, 17(3), 359-366.
- Moorman, C., & Rust, R. T. (1999). The role of marketing. *Journal of Marketing*, 63(4), 180-197.
- Myers, C. A. (2003). Managing brand equity: A look at the impact of attributes. *Journal of Product & Brand Management*, 12(1), 39-51.
- Ourusoff, A. (1993). Who said brands are dead. *Brandweek*, 34(9), 20-33.
- Phinney, J. S. (1992). The multi-group ethnic identity measure: A new scale for use with diverse group. *Journal of Adolescent Research*, 7(2), 156-176.
- Pitta, D. A., & Katsanis, L. P. (1995). Understanding brand equity for successful brand extension. *Journal of Consumer Marketing*, 12(4), 51-64.
- Roth, M. S. (1995). The effects of culture and socio-economics on the performance of global brand image strategies. *Journal of Marketing Research*, 32(2), 163-175.
- Sethi, S. P. (1971). Comparative cluster analysis for world markets. *Journal of Marketing Research*, 8(4), 348-54.
- Shim, S., & Bickle, M. C. (1994). Benefit segments of the female apparel market: Psychographics, shopping orientations, and demographics. *Clothing and Textiles Research Journal*, 12(2), 1-12.
- Shufeldt, L., Oates, B., & Vaught, B. (1998). Is lifestyle an important factor in the purchase of OTC drugs by the elderly?. *Journal of Consumer Marketing*, 15(2), 111-124.
- Simon, C. J., & Sullivan, M. W. (1993). The measurement and determinants of brand equity: A financial approach. *Management Science*, 12(1), 28-53.
- Slater, S. F., & Narver, J. C. (1994). Does competitive environment moderate the market orientation-performance relationship?. *Journal of Marketing*, 58(1), 46-55.
- Van Osselaer, S. M. J., & Alba, J. W. (2000). Consumer learning and brand equity. *Journal of Consumer Research*, 27(1), 1-16.
- Wang X., Yang, Z., & Liu, N. R. (2009). The impacts of brand personality and congruity on purchase intention: Evidence from Chinese Mainland's automobile market. *Journal of Global Marketing*, 22, 199-215.
- Yasin, N. M., Noor, M. N., & Mohamad, O. (2007). Does image of country-of-origin matter to brand equity. *Journal of Product & Brand Management*, 16(1), 38-48.
- Yoo, B., Donthu, N., & Lee, S. (2000). An examination of selected marketing mix elements and brand equity. *Journal of the Academy of Marketing Science*, 28(2), 195-211.

Received October 23, 2009

Revised November 27, 2009

Accepted December 1, 2009