

## **Effects of Physical Environment on Brand Loyalty and Moderated Effects of Brand Image**

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### **ABSTRACT**

In this study, we will establish differentiated marketing strategies (Physical Environment) in saturated market and we analyzed the interrelation between Physical Environment and Brand Loyalty as well as moderating effect on brand image. We visited 50 screen golf range places in Daegu city and Gyeongbuk province, and then conducted a survey from 300 people, using Self-Legislation Period for the questionnaires. Collected questionnaires were analyzed by Hierarchical Regression Analysis.

As a result, the causal relationship between physical environment and brand loyalty has the partially positive effect, but moderating effect on brand image has not moderated between Physical environment and brand loyalty.

Therefore, we may build some strategies in Golf industry. First, High-brand-image (physical environment) strategies for increasing the brand loyalty must provide a feedback to customer for product and service aspects. Second, the enterprises have to select a target accordingly (high cost & luxury physical environment strategy or low cost & normal physical environment).

In further study, the research samples need to be collected within expanded scale. To understand customer needs, the factors of brand loyalty should be divided more specifically (including individual factors).

**Keywords:** Physical Environment, Brand Image, Brand Loyalty.

### **INTRODUCTION**

Golf, one of the popular sports around the world, has become a public sport for all ages, thanks to brilliant performance by world stars such as Kyung-Ju Choi, Se-Ri Pak, Ji-Yai Shin, Na-Yeon Choi, and In-Bee Park. This golf boom inspired the popularity of screen golf ranges which are available in near downtown areas at relatively low prices. With the advantage of low price and convenient location, now the scope of screen golf range users have been extended to various age groups and classes, especially for the age group of 30s-40s, resulting in the development of a screen golf culture (Shin and Yoon, 2009). In turn, screen golf range business transforms its market from the producer-centered aspect to user-centered one. Screen golf ranges are required to develop new marketing strategies for management innovation in terms of the renovation of business mindsets (Park, 2003), as screen golf range business introduce price competition based on the consumers' evaluation, compared to the past when it was the cash cow after initial investment.

Faced with this situation of the overheated competition, every firm has sought to form relationship marketing with its consumers to enhance consumer brand royalty regarding prices and physical environment. As Webster (1992) indicates, firms have to try to keep the relationship of their customers consistent, rather than to finish the relations after achieving certain goals.

Specifically, from marketing perspectives, researchers claim that marketing managers should analyze consumer behaviors systematically to establish sports marketing strategies to meet unique consumers' needs (Kim, 2003). However, it is difficult for indoor or screen gold range firms to motivate customers to come again and strengthen their leading positions in the market. That's because there are similar systems and settings, and they accept burden of using the space effectively. For these reasons,

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strategies to differentiate each screen golf range from each other is limited to improving physical environment, having competitive price, and enhancing personal or physical services.

The purposes of this research, which aims to overcome their unfavorable geographic and spatial environment, are as follows:

First, this research is to find that what factors in the physical environment have effects on customers' brand loyalty, regarding their behaviors of revisiting indoor or outdoor golf ranges,

Second, this intends to provide basic information to establish the customized differentiation strategy focusing on specific targets for the saturated indoor and outdoor golf ranges, by conducting a research on brand image control effects of screen gold ranges in terms of the relations between physical environment and brand loyalty.

## **BACKGROUND**

### **Brand Loyalty**

A growing number of people are getting interested in the utilization of leisure time. This has increased the sports service industry market size, and its business characteristics are changing to be consumer-oriented. Amid this changing situation, late comers' low pricing strategy for entering the market is losing its effects. Thus, sports service firms are researching on diverse marketing strategies to enhance customer brand loyalty by controlling pricing and physical environments.

Brand loyalty is the characteristic that a customer gets personal preference of a brand over others based on his or her purchasing experience and purchases the brand products repeatedly.

Oliver (1992) defined brand loyalty to mean the consistent, repeated and favorable purchase by customers of a specific brand. Also, consumers want to minimize the risk of buying products. Given this consumption psychology, brand loyalty raises consumer confidence in products.

Lee et al. (2003) states that brand loyalty is a customer's consistent preference of a particular brand or an item and satisfaction is the temporal liking while loyalty is the consistent preference. Paek and Park (2007) identifies brand loyalty as an essential factor in a brand and defines brand loyalty as the customer's deep immersion to repurchase his or her preferred product or service despite situational influences and marketing efforts. They also explain that as brand loyalty is an important indicator, which reflects the customer's preference over other brands, it becomes a predictable indicator of whether he or she switches to another brand, influenced by the higher prices or feature changes.

Brand Loyalty increases confidence in a consumer's purchasing, because he or she already has information about the product or service to be purchased from his or her previous experience. This allows the customer to look for the way to minimize the perceived risks when making a purchasing decision and to decrease the possibility of purchasing failures. So customer brand loyalty is a very important concept to expect cost reduction for creating new customers (Reicheld & Sasser, 1990) and an increase in purchase frequency and favorable words of mouth (Lee, 1999).

### **Physical Environment**

In the screen golf range industry as well as the golf industry, physical environment serves as the critical factor what not only simply creates the spatial image for a golf range but also further turns the spatial image into a cultural space. The excellent physical space affects consumer satisfaction through word-of-mouth or various channels of information, leading to customer brand loyalty. Wakefield & Blodgett (1996) discussed the importance of physical environments to boost brand loyalty. Physical environments bring about perception satisfaction, which in turn influences re-visit by customers (Hack Jae Kim, 2005). Also, as consumers experience products and services in the field, they perceive comprehensive quality. Physical environments influence not only customer pre-purchase decision but also post-purchase quality evaluation of and satisfaction with products and services (Bitner, 1992).

Consumers, while receiving services, continue to be exposed to physical environments, which can influence consumer purchase intention as consumers interact with and perceive such environments. Also, customer satisfaction had positive effects on brand loyalty, and this brand loyalty can be immensely influenced by brand image (Kotler, 1973).

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As shown above, physical environment influences customer satisfaction directly and/or indirectly. According to the empirical study of Kang and Kim (2004), customer satisfaction has positive effects on brand loyalty in the directive manner, and they argue that this brand loyalty is significantly influenced by brand image.

There are a lot of researches and research results which demonstrate physical environment has significant effects on customer satisfaction, and satisfied customers get to have higher brand loyalty.

However, contrary to a lot of studies on effects of physical environments on customer satisfaction as well as numerous studies on effects of customer satisfaction on brand loyalty, research is lacking on the effects of physical environments, namely, the direct determinant of customer satisfaction, on brand loyalty. Thus, this study established Hypothesis 1 to examine the effects of physical environments on brand loyalty as mentioned by Wakefield & Blodget (1996).

*H1: Physical environments will have positive effects on brand loyalty.*

*H1.1: Surrounding elements of physical environment will have positive effects on brand loyalty.*

*H1.2: Functionality of physical environment will have positive effects on brand loyalty.*

*H1.3: Aesthetics of physical environment will have positive effects on brand loyalty.*

*H1.4: Convenience of physical environment will have positive effects on brand loyalty.*

### **Brand Image**

Image, a picture which comes to mind, is like drawing what you feel about something in your mind. Personal impression of brand or general feeling that a person gets represents brand image.

Gardner and Levy (1955) defines brand image as consumers' thoughts, feelings, and attitudes toward a brand, and Keller (1998) identifies it as brand perception reflected by a customer's associations of a brand. Image here means a sense of identity which distinguishes or differentiates one company or product from another, and brand may be understood as common property although brand image which a firm has is different from that a customer has.

Research has been conducted, regarding brand image as one of the subfactors of brand loyalty. Brand image is an important motivational factor affecting consumer purchasing intention, which means association effects, one of the effects of brand image. These association effects play a role when a consumer remember image of a brand, repurchase the brand, and get loyal to the brand (Kim, 1999).

Keller (2001) claims that positive brand image improves brand loyalty on brand equity pyramid, and highlighted the importance of brand loyalty as a antecedent variable. Studies that positive brand image enhances brand loyalty has been proceeded, and it is shown that positive brand image positively affects customer revisit, word-of-mouth intention, and management which are outcome variables (Kang and Kim, 2004)

As such, in the competition of the same business, the pleasantness, safety and aesthetic image of facilities should be created to trigger a differentiated brand image. Also, positive effects of brand image will create market leadership, differentiation of strategies, and performance enhancement, which in turn boosts customer brand loyalty. With this consumption, Hypothesis 2 was established as follows.

*H2: Brand image will positively moderate the relation between physical environment and brand loyalty.*

*H2.1: Brand image will positively moderate the relation between surrounding elements and brand loyalty.*

*H2.2: Brand image will positively moderate the relation between functionally and brand loyalty.*

*H2.3: Brand image will positively moderate the relation between aesthetics and brand loyalty.*

*H2.4: Brand image will positively moderate the relation between convenience and brand loyalty.*

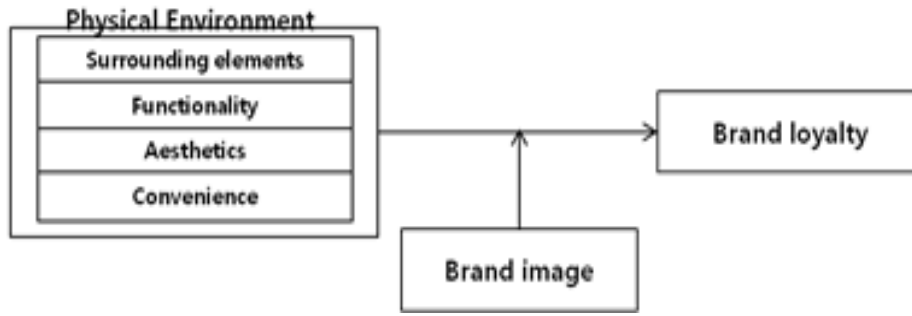


Figure1. Research Model

As shown in Figure 1, a research model was established based on Keller’s (2001) study on brand image, as well as on the effects on physical environments on brand loyalty as mentioned by Wakefield & Blodgett (1996).

## METHODOLOGY

A survey was conducted targeting 50 screen golf ranges located in Daegu area with a total of 300 questionnaires.

We visited 50 screen golf ranges, and surveyed 300 screen golf range users using self-legislation period.

All of distributed 300 questionnaires (return rate=100) were collected. To reduce errors about personal variables, we put a subsection in respondent selection questions in order respondents to choose whether they had ever visited the range more than 5 times. We considered that those who had visited less than 5 times were not aware of its physical environment and their perception of brand loyalty is too low to measure. In that case, we quit the survey or had the questionnaire returned so that we could increase the reliability and the validity of our research. 226 questionnaires were used to be analyzed, with 50 insincerely answered or unanswered questionnaires and 24 interrupted ones (from those who don’t possess their own clubs) removed.

## Operational Definition

### Brand Loyalty

Measurement questions from Kim et al. (2007) were revised and complemented for this research to identify how loyal golfers were to the brands they were using now. Measurement questions for reliability, preference, and word-of-mouth of the brands they used were composed with 2 questions. To evaluate the relations between physical environment and brand loyalty, not specific subfactors in brand loyalty, we replaced the mean value of subfactors with the value of brand loyalty.

### Physical environment

We think of physical environmental space image as a critical factor which transforms the space into cultural space, attracts consumer satisfaction and loyalty, and further brings financial results to firms. And we supplemented the concepts of physical environment by Ko et al. (2009) with surrounding elements (proper temperature, proper indoor space, proper lighting, pleasant air, proper circulation area for users), functionality (proper door opening, the location of swing capturing cameras, screen clarity), aesthetics (colors of facilities, interior design features, aesthetic design, beautiful design, exclusive design), and convenience (convenient rest area and parking area).

### Brand Image

Min (2004) assessed 7 attributes of higher pricing, design, higher quality, brand reputation, advertising, events and service, all of which are important determinants to be judge to affect golf club image, based on previous studies. In their study of the effects of brand image on brand attitude and selection intention, Kim et al. (2009) used emotional adjectives from the viewpoint of Keller’s (1998) definition that brand image is the perception of a brand which is reflected by brand associations that are stored in consumer’s memory.

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Independent and dependent variables for this study were adjusted and supplemented from the results from Y. M. Kim et al. (2005) We adopted and used only familiarity, creativity, reliability, and professionalism among factors used in C. S. Kim (2005) as the subfactors in brand image which are our moderating variables, with those factors that were expected to have multicollinearity problems with subfactors in brand preference excluded.

**Moderating Variables**

Demographic factors from Choi et al. (2003) were adjusted and supplemented, and then were selected as control variables.

**Sampling and Data Collection**

300 sports service businesses, which are recently rising sharply in South Korea, were sampled, and surveyed from March 2012 to June 2012 (self-legislation period) by visiting them and distributing one copy of questionnaire to each of them.

To reduce errors of variables by firm for enhancing the reliability and validity of responses, those subjects were eliminated who had no perception of physical environments or whose brand loyalty was too low to be measured.

226 effective answered copies were collected, and their reliability and validity was examined by conducting Cronbach's  $\alpha$  and factor analysis using the SPSS WIN 18.0 statistical program. Also, to examine the influence of the research model, Hierarchical Regression Analysis was conducted.

**Table1.** Demographic Characteristics of Sample

		Frequency	Ratio(%)			Frequency	Ratio(%)
Gender	Male	171	75.6	Age	10~19	0	0
	Female	55	24.4		20~29	24	10.6
Marital Status	Married	210	92.9		30~39	64	28.3
	Single	16	7.1		40~49	72	31.9
Education	Middle school	0	0		Over 50	66	29.2
	High school	22	9.8	Career	Less than 1 year	0	0
	Undergraduate	16	7.1		1~5 years	38	12.4
	Graduate	124	54.8		5~10 years	82	36.3
	Postgraduate	64	28.3		10~15 years	86	38.0
Occupation	Professional	40	17.7		More than 15 years	20	8.8
	Administrative	6	2.7		Income (Won)	Less than 1 million	0
	Office job	77	34.1	1~2 million		3	1.3
	Self-employed	65	28.8	2~3 million		24	10.6
	Blue-collar	4	1.8	3~4 million		79	34.9
	Student	12	5.3	4~5 million		72	31.9
	Etc.	20	8.9	More than 5 million		48	21.2

**Common Method Variance**

To define problems of Common Method Variance, this study, using Harman’s one-factor-test(Podasakoff & Organ, 1986), applied it to each variable, revealing that six variables with the eigen value being one or greater were induced. This suggested that there were no problems of common method variance.

**RESULTS**

**Reliability & Validity Analysis of Each Factor**

Table 2 shows the results of each variable’s reliability and validity. The factor analysis of dependent variables revealed that they were an integrated factor of forecasted brand loyalty. Measured factors

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formed a range of .742~.931(factor loading, .60 or higher). Cronbach's  $\alpha$  coefficient for evaluating the internal consistency between items was .907, which was higher than the ordinary reliability criteria of .60 necessary for securing internal validity, thus pointing out suitability. The results of independent variable reliability and factor analysis revealed that cronbach's  $\alpha$  was .875, surrounding element item, .923, functionality item, .716, aesthetic item, .830, and convenience item, .926, suggesting that independent variables are suitable variables as the number of dependent variables and moderated variables. The factor analysis of moderated variables found that they were found according to the forecasted sub-variables of brand image; cronbach's  $\alpha$  coefficient for evaluating internal consistence between items was .884. The factor analysis for verifying validity found that for factors by item, reliability item was .952, friendliness item, .952, professionalism item, .776, and creativity item, .760 (factor loading, .60).

**Table2.** Reliability & Validity Analysis of Each Factor

Variables	Items	Factor1	Factor2	Factor3	Reliability
(Dependent) Brand Loyalty	I believe the brand I am using is the best one.	.745		-	.907
	I think it is best to purchase the brand I am using.	.837			
	I like the brand I am using.	.931			
	I will boast of the brand I am using.	.742			
	I will purchase the brand I am using, even though it is much more expensive than other brands.	.931			
	I will recommend the brand I am using to other people.	.766			
(Moderating) Brand Image	Reliability		.952	-	.884
	Familiarity		.952		
	Professionalism		.776		
	Creativity		.760		
(Independent) Physical Environment	Surrounding elements			.923	.875
	Functionality			.716	
	Aesthetics			.830	
	Convenience			.926	
Eigen Value	-	4.126	2.993	2.912	-
Explained Variance(%)	-	68.77	74.81	72.79	-
Accumulated Explained variance (%)	-	68.77	74.81	72.79	-

**Variables Correlation Analysis**

**Table3.** Summary statistics and correlation matrix

	N	Mean	Standard Deviation	Brand Loyalty	Surrounding Elements	Functionality	Aesthetics	Convenience	Brand Image
Brand Loyalty	226	3.13	.56	1					
Surrounding elements	226	3.20	.83	.773***	1				
Functionality	226	3.12	.70	.772***	.462***	1			
Aesthetics	226	3.07	.79	.811***	.624***	.604***	1		
Convenience	226	3.21	.82	.760***	.987***	.447***	.625***	1	
Brand Image	226	3.00	.81	-.310***	-.175***	-.194***	-.278***	-.161***	1

$p^* < .1, p^{**} < .05, p^{***} < .01, (n=226)$



Table 3 shows means and standard deviations for all the variables used. Regarding correlation between brand loyalty and each factor, the correlation with surrounding elements was .773\*\*\*, with functionality .772\*\*\*, with aesthetics .811\*\*\*, and with convenience .760\*\*\*. The correlation between physical environment, one of independent variables, and brand loyalty, one of dependent variables, appeared very high ( $p < .01$ ). In addition, The correlation between brand image and brand loyalty was -.310\*\*\* ( $p < .01$ ), which means brand image is very strongly related with brand loyalty.

**Hierarchical Regression Analysis**

**Table 4.** Hierarchical Regression Analysis

dependent variable	Brand loyalty			
Variable of In put	Model1	Model2	Model 3	Model 4
1 stage : control variable				
Gender	.079(.263)	.029(.269)	.033(.196)	.031(.216)
Age	.190(.039)**	.025(.454)	.034(.298)	.039(.245)
Education	-.030(.677)	-.006(.835)	-.007(.789)	-.007(.802)
Occupation	.038(.654)	-.026(.396)	-.039(.206)	-.038(.208)
Income	.058(.437)	.041(.148)	.056(.047)**	.054(.058)*
2 stage : independent variable				
surrounding elements		.749(.000)***	.684(.000)***	.722(.000)***
functionality		.401(.000)***	.395(.000)***	.396(.000)***
aesthetics		.334(.000)***	.311(.000)***	.309(.000)***
convenience		.380(.018)**	.313(.047)**	.353(.030)**
3 stage : moderated variable				
Brand image			.087(001)***	.068(.533)
4 stage : moderated effects				
surrounding elements × Brand image				.037(.762)
functionality × Brand image				.162(.196)
aesthetics × Brand image				.146(.225)
Convenience × Brand image				.149(.232)
$R^2$	.053	.877	.884	.885
$\Delta R^2$	.053	.825	.007	.001
<i>Adjusted R<sup>2</sup></i>	.031	.872	.879	.878
<i>F</i>	2.439**	171.684***	163.837***	125.910***
$\Delta F$	2.439**	363.161***	12.311***	.824

$\beta(t\text{-value})$ ,  $p^* < .1$ ,  $p^{**} < .05$ ,  $p^{***} < .01$ , (n=226)

To verify the hypotheses herein, Hierarchical Regression Analysis was used. In Stage 1 model, the control variable demographic factors (gender, age, education, occupation and income) were measured. In Stage 2 model, independent variables (surrounding elements, functionality, aesthetics and convenience) were measured. In Stage 3 model, the moderated variable brand image was measured. In Stage 4 model, the interaction between independent variables and moderated variables was measured. The results of Hierarchical Regression Analysis, as shown in <Table 4>, revealed that of control variables (model 1), factors except age .190( $p < .05$ ) did not have a significant relation with brand loyalty.

The verification of hypothesis 1 and specific hypotheses was presented in Model 2, and Model 2, which demonstrated the relation between brand loyalty and physical environment, showed a significant relation between them ( $R^2 = .877$ ,  $\Delta F = 363.161$ ,  $p < .01$ ). When it comes to the detailed items in Model 2, surrounding factors ( $\beta = .749$ ,  $p < .01$ ) presented a very significant positive (+) relation, and functionality ( $\beta = .410$ ,  $p < .01$ ) and aesthetics ( $\beta = .334$ ,  $p < .01$ ) also had strongly positive (+) effects like surrounding factors as well.

In contrast, convenience ( $\beta=.380$ ,  $p<.05$ ) showed a negative (-) relation with brand loyalty.

In Model 3, brand image (familiarity, creativity, reliability, and professionalism), a moderating variable, affected negatively ( $\beta=.087$ ,  $p<.01$ ), and the suitability of Model 3 showed the significant effects ( $R^2=.884$ ,  $\Delta F=123.311$ ,  $p<.01$ ). However, hypothesis 2 that brand image would moderate the relationship between physical environment and brand loyalty was dismissed.

In Model 4, we added independent variables of physical environment (surrounding factors, functionality, aesthetics, and convenience) and interacting variables of brand image (familiarity, creativity, reliability, and professionalism) and considered brand image as a single variable, the results of which revealed that there were no significant effects in interaction items except main effects of independent variables. In other words, there did not appear any brand image moderating effects ( $\Delta R^2=.885$ ,  $\Delta F=12.311$ ,  $p<.1$ ),

In short, whereas the effect relations between the dependent variable of brand loyalty and each variable all represented significant effects – physical environment (+) and brand image (-), hypotheses 1-1, 1-2, and 1-3 were adopted because convenience among physical environment items influenced negatively, but hypothesis 1-4 was dismissed. Thus, hypothesis 1 was partially adopted. Besides, brand image and interaction items of independent variables did not show any significant effect on brand loyalty, so that hypotheses 2-1, 2-2, and 2-3, including hypothesis 2, were all dismissed. Hypothesis 2-4, which verify that brand image has moderating effects on convenience and brand loyalty, was ruled out because there were a strong relation among variables.

The direct relations between brand loyalty and each variable appeared to have very strong effects, while the moderating operation of brand image did not show further effects.

## **CONCLUSIONS**

This research aims to analyze the relation between physical environment of screen golf ranges and brand loyalty; to analyze the control action of brand image considering that relation; to establish strategic management plans for screen golf range firms to help them cope with sharply increasing extension and business change of the golf range industry; and to provide essential basic information which is necessary to meet consumers' needs and to provide a differentiated physical environment to each firm. Moreover, the research intends to understand brand image traits that customers perceive; to comprehend preferences and values of customers who visit screen golf ranges; and to lay the foundation for relationship marketing between firms and customers.

When it comes to the results of this research, the correlation between physical environment and brand loyalty was partially positive, which is different from those of previous studies. This is because there are differences in screen golf range facilities and the perception of brand loyalty among users. What makes the functional traits of screen golf ranges distinct from those of service companies is that screen golf is kind of leports not to be served but to transport the service into activities, so that there are differences in the relationship between physical environment and brand loyalty, unlike that of other service companies.

Surrounding elements, the first one in subfactors of physical environment, are the settings that customers to screen golf ranges perceive fundamentally and the environmental features they consider most important. It includes proper temperature, quiet space, proper lighting, pleasant air, circulation area for swing play and watching, and security of the wide space. Appropriateness of physical environment is the factor that customers react to most sensitively when assessing the screen range. And it plays an important role in customers moving to other ranges and building constant relationship with loyal customers. Now that inferiority of small space cannot be replaced by superior design and interior decorations and while enjoying screen golf, customers should utilize the maximum spatial advantage with the minimum circulation area, you should give a special attention to arranging customers' circulation area.

The second factor is functionality. Many people visit screen golf ranges, because they can check their swing motions while playing and correct their postures. As they express their discomfort mostly over swing recognizer, portable/fixed footing, the location and deterioration of cameras, it is necessary to maintain and replace them continuously and upgrade them with improvements. Replacing lenses and filters of projectors and new functions introduced newly serve as important functionality factors to



make customers revisit the place, because they appeal inconvenience over lack of screen clarity and when you offer inferior functional services to those of your competitors, you will fall behind in the market competition.

The first and the second factors are about basic physical environment that firms should observe, while the third and the fourth ones are about options that imply distinction strategies of each firm.

The third physical environment feature is space aesthetics. It includes colors of facilities, design traits, the beauty of design, exclusivity of design. When customers visiting screen golf ranges feel satisfied with basic factors (the first and the second ones), they turn to aesthetic aspects. Given that all screen golf ranges are available at a similar price, they choose the range whose atmosphere they like. This forces screen golf businesses to face opportunity cost issues: should they adopt the VIP marketing strategy to highlight exclusive facilities, or should they conduct predominance of cost strategy while complying with the basics customers ask.

The last factor in physical environment is convenience. This includes convenient rest and parking areas. As many other service companies are located in multiplex facilities or run the stores separately, they have enough parking spaces, which show the differences from other companies. However, it is rare to see a screen golf range apart from other facilities and there is no screen golf business complex. Screen golf ranges are situated in a apartment store near consumers' houses, in the company complex, or near restaurants which have their own parking spaces. Although one parking space per 1-2 persons is needed because caddie bags should be carried with cars, convenience of parking spaces does not affect brand loyal much for screen golf ranges which they don't have their own parking spaces, when we consider the traits of surrounding parking environment.

Screen golf business can be considered complex leisure space available for anyone, and so it should build the physical space which are more comprehensive and emphasize each feature, compared to other service companies targeting a specific age group or class.

### **Implications and Limitations**

Service companies are influenced by brand loyalty and care about it. The screen golf industry, being in the spotlight nowadays, pays attention to brand loyalty to build relationship with customers, and it appeared that physical environment of screen golf ranges have great effects on brand loyalty. This research examined the effects of physical environment on brand loyalty and also identified the control effect of brand image. The implications of the research are as follows:

First, those companies which start screen golf business or seek to make breakthroughs need to be equipped with various and flexible surrounding elements – the basic elements that customers perceive basically when evaluating companies - to meet customers' needs; and identify and improve the problems about supplying services.

Second, you should notice the reason why customers come to screen golf ranges. You are required to identify consumers' needs specifically regarding improving swing trajectory, filming and watching swing shots, a gradient similar to the real one, the quality of tee shots, direction, spin experiences; and to establish strategies to select equipment by comparing functions of each equipment from each company and provide services. Furthermore, you should inspect and upgrade equipment regularly so as not to fall behind in the competition against your existing competitors and new ones equipped with new equipment.

Third, each company should select a target group and establish marketing strategies and build spaces. You should choose whether you are going to create relations with customers by offering lower prices with the predominance of cost strategy or you are going to adopt higher price policy, invest in physical aesthetics, and offer customers improved spaces even though they have to pay more. The choice is influenced by regional or geographical characteristics, and the floating population per day. If you form the interface with your customers without recognizing those above, due to the nature of the golf population, customers move to the more suitable interface and settle down there to be loyal customers.

There are limitations in terms of subjects, measurement tool, and variables relations, which are in the following:

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First, to generalize subjects, the research conduct the survey with golf ranges divided according to districts. However, due to geographical constraints, it may not be possible to generalize for the nationwide golf population.

Second, we did not take subjects’ mental states of the survey day and personal psychological traits of local golf players into account, and so it may not represent all the golf players.

Third, if you assess consumers’ mentality in the long term using cross-sectional research in the future, you can identify the factors that have effects on brand loyalty. And then you need to deal in more detail with brand loyalty and analyze it specifically.

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