

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

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Abstract. This study sought to examine the effects of physical environments (surrounding elements, functionality, aesthetics, and convenience) on customer brand loyalty as well as the moderated effects of brand image in the sports service industry. 300 service businesses, which are recently booming rapidly in South Korea, were sampled for the study. Hierarchical Regression Analysis was conducted to examine causation and moderation effects. The research findings revealed that the sub-factors of the physical environment, namely, surrounding elements, functionality, aesthetics, and convenience, had positive effects on brand loyalty and that the moderated effects of brand image were not verified. The implications of this study are this: First, investment must be made in surrounding elements to meet customer needs and secure flexibility. Second, the business operator functionality should be secured to provide services suitable for customers' visitations. Third, high pricing strategy should be adopted to boost the effect of aesthetics, thus meeting customer satisfaction. Fourth, amenities should be provided to offer customers a sense of belonging. Future studies need to examine diverse industries according to characteristics of nations.

Keywords: Physical Environment, Brand Image, Brand Loyalty.

1. Introduction

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.

[1] defines brand loyalty to mean the consistent, repeated and favourable 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.

Customer brand loyalty is a very important concept to expect cost reduction for creating new customers [2] and an increase in purchase frequency and favourable words of mouth [3]. Also, brand loyalty is an important index designed to indicate the level of customer preference for a specific brand, so when changing brand price and characteristics, it is an index designed to forecast customer behaviours of switching to other brands [4].

[5] discussed the importance of physical environments to boost brand loyalty. Physical environments bring about perception satisfaction, which in turn influences re-visits by customers [6]. 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 [7].

Yet another factor to enhance customer brand loyalty is brand image. [8] argued that in the brand asset pyramid, a positive brand image would enhance brand loyalty, and emphasized that it is important as a prior variable of brand loyalty.

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This study aimed to examine the effects of physical environment elements (surrounding elements, functionality, aesthetics and convenience) on customer brand loyalty, and to verify the moderated effects of brand image. 300 sports service firms were sampled with their services recently expanding into diverse groups of age and classes.

2. Hypotheses & Research Model

2.1. Hypotheses

2.1.1. Physical Environment and Brand Loyalty

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 [9]. Also, customer satisfaction had positive effects on brand loyalty, and this brand loyalty can be immensely influenced by brand image [10].

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 [5].

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.

2.1.2. Moderated Effects of Brand Image

Brand image, a prior determinant of brand loyalty, has important effects on customer repurchase intention. Brand image plays an important role in the whole process of memorizing the brand image, repurchasing, and fostering brand loyalty. Also, [10] found that a positive brand image had positive effects on the brand loyalty outcome variables, namely, customer revisiting, intention to spread words of mouth, and business performance.

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 functionality 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.

2.2. Research Model

As shown in Figure 1, a research model was established based on [8] study on brand image, as well as on the effects on physical environments on brand loyalty as mentioned by [5].

3. Measure

3.1. Operational Definition

To examine customer brand loyalty, based on measurement questions used by [11], two questions each for reliability, preference, and word of mouth were measured. For physical environments, they were defined as a determinant of cultural spaces more than creating spatial images. Thus, this study revised and complemented the physical environment concept used by [12], in their studies as follows: surrounding factors (indoor temperature suitability, interior space suitability, interior lighting suitability, indoor air pleasantness, and user flow suitability), functionality (door opening suitability, swing-capture camera location, and screen clarity), aesthetics (facility colours, interior design characteristics, design aesthetics, design beauty, and design elegance), and convenience (relaxation and parking space convenience).

Brand image definition was used after amending and complementing its concept by [13]. 13 sub-variables of brand image, used by [11], were changed and complemented to measure friendliness, creativity, reliability and professionalism.

Control variables (gender, education, occupation and income) were used after amending and complementing them to be demographically suitable to this study.

3.2. 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 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.

3.3. Common Method Variance

To define problems of Common Method Variance, this study, using Harman's one-factor-test[14], 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.

3.4. Reliability and Validity Analysis

Table 1 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 formed a range of .742~.931(factor loading, .60 or higher). Cronbach's α 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 α 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 α 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).

Table1: 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)
R²	.053	.877	.884	.885
ΔR²	.053	.825	.007	.001
Adjusted R²	.031	.872	.879	.878
F	2.439**	171.684***	163.837***	125.910***
ΔF	2.439**	363.161***	12.311***	.824
<i>β</i> (t-value).p* <.1, p** <.05, p*** <.01, (n=226)				

3.5. Hierarchical Regression Analysis

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 2>, revealed that of control variables (modell1), factors except age .190(p<.05) did not have a significant relation with brand loyalty. The verification of Hypothesis 1 and detailed hypotheses revealed that surrounding elements ($\beta=.749$, $p<.01$), functionality ($\beta=.410$, $p<.01$), aesthetics ($\beta=.334$, $p<.01$), and convenience ($\beta=.380$, $p<.05$) had all strong positive relation with brand loyalty (model 2).

In model 3, the relation between moderated variables was verified, revealing that brand image influenced brand loyalty ($\beta=.087$, $p<.01$), but the moderated effects of model 4 were not verified, thus dismissing Hypothesis 2.

4. Conclusion

This study analyzed 300 sports service businesses in order to examine the effects of physical environments (surrounding elements, functionality, aesthetics, and convenience) on customer brand loyalty as well as the moderated effects of brand image in the sports service industry. The research findings revealed this: First, in order to enter the market, sports service firms should create diverse, flexible elements that meet customer needs, namely, the surrounding elements that customers basically feel, so as to provide services. Second, consumers' purpose of visitations should be identified. Strategies should be devised to identify customer needs in detail and provide differentiated services tailored to customer types. Third, high pricing strategies should be implemented to meet customers' physical and psychological satisfaction. Fourth, amenities such as expanded parking spaces and lockers should be provided to customers to maximize their convenience and sense of belonging.

This study has the limitations of focusing on certain Korean industry, making it difficult to generalize the research findings to be applied to nations of different cultures and their entire sports service industry. Thus, future research should study the effects of physical environments and brand image on brand loyalty according to nations and service industries.

5. Reference

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