

Effects of VMD Elements in Sports Product Fashion Stores on Customer Attitude and Product Purchase Intention- Centering around Chinese College Students and Sports Product Stores

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Abstract

Background/Objectives: This study analyzed a relationship between consumer attitude and commodity purchase intention for VMD elements of the sports brand fashion stores in terms of Chinese female undergraduates, thereby having examined which significant influence the consumer attitude and the commodity purchase intention are given by a type & a commodity expression method in VMD elements and a development means in VMD elements. **Methods/Statistical Analysis:** For the empirical analysis, a questionnaire survey was conducted targeting female college students in Tianjin city of China during the period from May 1, 2015 to May 20, 2015. Totally 315 copies were utilized as the final analytical subjects. For the empirical analysis of this study, IBM SPSS Statistics 21.0 was used. To verify validity, a factor analysis of using the principal component was used. To inspect hypothesis of the research, a regression analysis was used. Summarizing the findings, they are as follows. **Findings:** Firstly, the findings for each grade represented that the lower grades were 162, 51.4% of the whole, and the higher grades were 153, 48.6% of the whole. The findings for each major represented that design related majors were 43.2% and non-design related majors were 56.8%. In addition, for the purchase place, the department store ranked the highest with 43.5%. Internet stores, brand shops, and flea markets ranked next in sequence. Secondly, a type and a commodity expression method in VMD elements and a development means in VMD elements had influence upon consumer attitude. Lastly, consumer attitude, a type and a commodity expression method in VMD elements and a development means in VMD elements had effect on commodity purchase intention. **Applications/Improvement:** This study will provide basic information for establishing proper VMD strategies in sports fashion stores. Moreover, it is expected to be useful data for the corporations which plan to establish sports fashion stores.

Keywords: Consumer Attitude, Commodity Purchase Intention, Sports Fashion Stores, VMD Elements

1. Introduction

Recently in China, the consumer attitude and purchase environment of sports products have been changing due to the increase of sports population and the change in sports life environment. These changes induce a variety of marketing strategies for developing fitted brands and products according to consumer needs with the prospect of sports-related business expansion and increase of

sports population. In this regard, internationally famous sports brands have been making a lot of efforts to hold a lead in the tensifying market competition by cooperating with national brands and distribution enterprises of various countries so that they can find a broader market and make more consumers their customers. In the meantime, the Chinese fashion industry has been rapidly growing by transfiguring it into a global fashion industrial system, which was driven by accelerating economic opening and

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globalization. Among others, the sports fashion industry has been remarkably growing and leading the age of sports fashion with the help of increasing sports population. Chinese sports fashion brands still have weakness in diversity of design and product developments reflecting consumer needs, compared to global brands.

Nevertheless, they are growing at a fast pace with the reasonable prices, fast turnover ratio and massive buying public on their back. With these industrial characteristics, each sports fashion brand is making a lot of efforts on VMD elements of stores that are used as a strong brand recognition strategy in terms of visually appealing to them and inducing their consumption. In the meantime, the Chinese fashion industry has been rapidly growing by transfiguring it into a global fashion industrial system, which was driven by accelerating economic opening and globalization. Among others, the sports fashion industry has been remarkably growing and leading the age of sports fashion with the help of increasing sports population. Chinese sports fashion brands still have weakness in diversity of design and product developments reflecting consumer needs, compared to global brands. Nevertheless, they are growing at a fast pace with the reasonable prices, fast turnover ratio and massive buying public on their back. With these industrial characteristics, each sports fashion brand is making a lot of efforts on VMD elements of stores that are used as a strong brand recognition strategy in terms of visually appealing to them and inducing their consumption. This paper analyzes the correlation of customer attitude and product purchase intention with VMD elements in sports fashion brand stores taking Chinese female college students as a case study subject, and shows how they affect each other.

2. Theoretical Background

As VMD is an abbreviation of Visual Merchandising and a word of compounding V (Visual: Visualization as delivery technology) + MD (Merchandising: Commodity planning policy), it can be called visual presentation of MD. In other words, VMD implies 'commodity planning policy of appealing to a sight'. That is to say, it can be said to be a method on how a commodity is directed, and to be a visually commodity directive technique of increasing a purchase intention by expressing so that customers can easily know the product presentation visually¹. Defined VMD as "combination of the display function, as a

part of design, and as a visual communication tool for boosting image in a store and a commodity, for offering pleasant shopping atmosphere, for forming efficient store, for improving efficiency of sale, and for applying as a strategy of differentiation"². Defined VMD as "strategy of raising a consumer's purchasing desire by directing a product visually, effectively and sensibly"³. This implies that VMD is an expression strategy of delivering it to customers by making it image through many elements of creating store environment, thereby corresponding to visual elements that are used in the distribution process in order to pursue differentiation from a rival company. In a study focusing on a concept of previous researches in this way, a concept of VMD is defined as "a method of attractively directing a commodity and simultaneously an important marketing means of raising a purchase desire for a product by allowing a consumer to be capable of visually knowing a character and a feature of the commodity". In the corporate aspect, a role of VMD increases trust in enterprise and commodity (service) by obtaining a customer's sympathy in the marketing dimension through proposing lifestyle to consumers through merchandising. In the aspect of store, it notifies a feature in commodity and the efficiency in life through presenting a commodity in line with a customer's need, and also makes a store that is easy for selling and managing owing to the rationally-arranged display. In the aspect of a customer, it makes a store that is desired to be visited again by making it available for easily choosing a commodity of meeting lifestyle in a customer oneself in the pleasant atmosphere and for feeling proud of the purchased commodity⁴. In this way, VMD becomes an effective means of facilitating a purchase because of having direct influence upon a consumer's buying psychology in the store environment that a commodity is bought. Thus, in a fashion enterprise, VMD is used as diverse strategic tools in the aspects of managing store image and brand image and of promoting sale, thereby being able to be said to be important beyond a comparison to any other promotion tool. Attitude is involved the favorable, unfavorable, positive, and negative responses together to any object and may be the useful guideline available for predicting any action, thereby becoming an important element in understanding the consumer behavior. That is because the consumer attitude can connect consumers' thought and response to commodity with the consumer behavior of being created in a market. In particular, the attitude toward VMD of any commodity, trademark and store can be said to

be the consumer evaluation on a specific commodity, thereby becoming important information in establishing a marketing strategy⁵. Oliver mentioned that because the consumer attitude generally forms an expectation for the commodity performance before buying, an intention before purchasing is influenced by an attitude before buying and is formed again by an expectation before purchasing⁶. Society of today is being gradually grown the importance of a strategy for implementing the differentiated store image owing to a change in the diversified distribution structure. Accordingly, there is an emphasis on a suggestion of effectively directing a commodity within a store based on understanding about a consumer's lifestyle, shopping propensity, and shopping motivation. In this context, VMD is used as one of the differentiation strategy from other brand, thereby playing a great role in which own company's brand or product holds a dominant position in the sales competition. Hence, in the fashion retail field according to the rapidly changing distribution environment, the importance of VMD is helpful for differentiation in the corporate position and gives help to forming the individual buying mood and reinforcing service function of store in the position of store. And in the position of customer, it enhances awareness on brand and increases preference for brand and product, thereby contributing to making it available for the re-purchase.

3. Research Design and Model

3.1 Analysis Design

For the empirical analysis, we conducted a survey targeting female college students in Tianjin City, China from May 1 through May 20, 2015. The total of 315 questionnaires was used for the analysis. The frequency test, Cronbach's Alpha verification, factor analysis and regression analysis were made by utilizing SPSS Statistics 21.0.

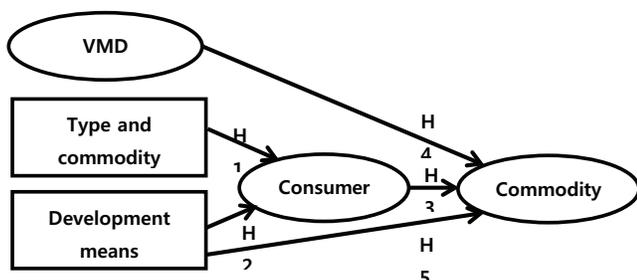


Figure 1. Research model.

3.2 Research Model

To figure out a problem about which influence the VMD elements in a sports commodity store have upon the consumer attitude and commodity purchase intention, this study conducted an empirical research targeting China's female undergraduates. A research model for verifying the research is as Figure 1.

4. Hypothesis Verification through the Analytical Result

4.1 Analytical Result

This study collected data by using questionnaire method and inspected a relational model among VMD elements, consumer attitude, and commodity purchase intention in a sports commodity store. This survey was used by which this researcher modified and supplemented questionnaire items that were used in a previous research. The whole questions are composed of a 5-point Likert scale. For an empirical analysis of the research, IBM SPSS Statistics 21.0 was used. To examine the composition of demographic characteristics in a sample, a frequency test was used. To verify reliability in the variables that were used, Cronbach's α coefficient was used. To inspect validity, a factor analysis of using the principal component was utilized. And to verify hypothesis of this study, a regression analysis was used.

To confirm the conceptual validity, a factor analysis was carried out. Factor analysis is a method of presenting fewer factors as variables based on association among variables by examining correlation in many variables. A model analysis was used a principle component analysis method. A rotation method was used varimax method. In a factor analysis, it was regarded as having significance if the factor loadage is more than 0.4. Number of factors was based on more than 1.0 in eigenvalue (eigen = value). To identify whether the dimension of the VMD elements in a store, which are aimed to be used in this study, is divided into independent factor, a factor analysis was conducted.

In terms of a factor-analysis result on the VMD elements of a store, the items, which were used as Table 1, were clearly bound to 2 variables, which were elicited conceptually. The factor loadage was indicated to be more than 0.4. Eigenvalue stood at more than 1.0 in all. Thus, the validity of all variables was proved. Also, to verify

reliability, the reliability in the measurement items was inspected by using Cronbach's α coefficient by each factor. The reliability can be generally considered to be high if Cronbach's α coefficient is more than 0.6 in an exploratory research field and if Cronbach's α coefficient is more than 0.8 in a basic research field. Thus, in this survey outcome, Cronbach's α coefficient on a factor of the VMD elements in a store exceeds 0.6 in all, thereby being indicated to be high in reliability. The results, which carried out a factor analysis on the consumer attitude, were as shown in Table 2, Table 3. The factor loadage was indicated to be over 0.4. The eigenvalue reached more than 1.0 in all. Hence, the validity in all variables was proved.

Table 1. Factor analysis on VMD elements and consumer attitude

Factor nam	Item	Component			Cronbach's α
		1	2	3	
VMD element type and expression method	Q6	.743	.164	.076	.851
	Q3	.697	.144	.206	
	Q7	.674	.196	.095	
	Q1	.645	.274	.189	
	Q11	.629	.264	.245	
	Q10	.619	.304	.077	
	Q4	.602	.251	.284	
	Q9	.599	.333	.332	
Development means in VMD elements	Q19	.272	.847	.198	.852
	Q15	.277	.773	.267	
	Q20	.059	.771	.351	
	Q17	.403	.602	.157	
	Q14	.276	.563	.047	
	Q12	.456	.510	.214	
	Q13	.413	.495	.193	
Consumer attitude	Q21	.790	.168	.781	.768
	Q23	.788	.213	.700	
	Q22	.781	.226	.668	
	Q24	.714	.224	.649	
Eigenvalues		7.592	1.464	1.1153	
% of variance		39.958	7.705	6.066	
cumulative % of variance		39.958	6.066	53.729	

The eigenvalue of a type and an expression method in the VMD elements as Factor 1 is 7.592. The variance ratio is 39.958%. The eigenvalue of a development means in the VMD elements as Factor 2 is 1.464. The variance ratio is 7.705%. The eigenvalue of consumer attitude in the VMD elements as Factor 3 is 1.153. The variance ratio is 6.066%. The following are the results that conducted a factor analysis on a type and expression method in VMD elements, a development means in VMD elements, and consumer attitude.

Table 2. Result of factor analysis on commodity purchase intention

Factor name	Item	Component	Cronbach's α
		1	
Purchase intention	Q27	.860	.735
	Q26	.798	
	Q25	.766	
Eigenvalues		1.962	
% of variance		65.410	
cumulative % of variance		65.410	

Table 3. Result of correlation analysis on factors

	Type and expression method in VMD elements	Development means in VMD elements	Consumer attitude	Purchase intention
Type and expression method in VMD elements	1			
Development means in VMD elements	.693**	1		
Consumer attitude	.509**	.571**		
Purchase intention	.603**	.619**	.715**	

The results, which carried out a factor analysis on commodity purchase intention, were shown as Table 4, Table 5. The factor loadage was indicated to be over 0.4. Eigenvalue was more than 1.0 in all. Thus, the validity of all variables was proved. The eigenvalue in commodity purchase intention is 1.962. The variance ratio is 65.410%.

As a result of correlation analysis, a type and expression method in VMD elements, a development means in VMD elements, consumer attitude, and purchase intention are entirely showing statistically significant (+) correlation at the significance level of 0.01. Accordingly, it can be known that there is no problem about the face validity among variables given generally seeing correlation among the whole variables.

4.2. Hypothesis Verification

Examining the result of multiple regression analysis on a relationship between VMD elements and consumer

attitude, it was indicated to be statistically significant with 201.002 in F value of the multiple regression formula and 0.000 in the significance probability by having an independent variable as type and expression method, development means, and a dependent variable as consumer attitude.

Table 4. Relationship between VMD elements and consumer attitude in sports fashion stores

B		Consumer attitude			
		β	t	Significance probability	
(Constant)		.705		5.179	.000
VMD elements	Development means	.453	.423	9.954	.000***
	Type and expression method	.293	.255	5.989	.000***
R ² = .391		F = 201.002	p = .000		

Table 5. Relationship between consumer attitude and commodity purchase intention in sports fashion stores

	Commodity purchase intention			
	B	β	t	Significance probability
(Constant)	.877		9.166	.000
Consumer attitude	.740	.728	26.602	.000***
R ² = .530	F = 707.652		p = .000	

***p<0.01

Type and expression method ($p = 0.000$) in VMD elements, and development means ($p = 0.000$) were shown to be statistically significant at the significance level (α) of 0.01. In consequence of the hypothesis verification on an effect on consumer attitude, the value of R-squared (R^2), which shows explanation power of regression formula, stands at .391, thereby having the explanation power of 39.1%. All the factors in VMD elements were indicated to be $p < 0.01$, there by having been shown to have a very significant analytical outcome statistically.

Also, it could confirm the influence that each of the factors has upon a regression line through the standardized β coefficient. A development means in VMD elements can be identified to have the greatest influence upon consumer attitude. Hypothesis H1: A type and an

expression method in VMD elements will have influence upon consumer attitude. Hypothesis H2: A development means in VMD elements will have influence upon consumer attitude.

In consequence of the hypothesis verification on an effect on consumer attitude as seen in Table 4, the value of R-squared (R^2), which shows explanation power of regression formula, stands at .391, thereby having the explanation power of 39.1%. All the factors in VMD elements were indicated to be $p < 0.01$, thereby having been shown to have a very significant analytical outcome statistically. Also, it could confirm the influence that each of the factors has upon a regression line through the standardized β coefficient. A development means in VMD elements can be identified to have the greatest influence upon consumer attitude. Accordingly, the hypotheses H1, H2 in this study were entirely indicated to have very significant influence statistically. Hypothesis H3: Consumer attitude will have influence upon commodity purchase intention. As seen in Table 5, the research hypothesis H3 was shown to have very significant effect statistically in consequence of the analysis. In addition, the value of R-squared (R^2), which shows explanation power of regression formula, stands at .530, thereby having the explanation power of 53.0%. And it was indicated that there is even no problem of multicollinearity. Hence, H3, which is the research hypothesis of this study, was shown to have very significant impact statistically as a result of the analysis. Hypothesis H4: A type and an expression method in VMD elements will have influence upon commodity purchase intention. Hypothesis H5: A development means in VMD elements will have influence upon commodity purchase intention. As seen in Table 6, Table 7, Table 8, the research hypotheses H4, H5 were entirely shown to have very significant effect statistically in consequence of the analysis. In addition, the value of R-squared (R^2), which shows explanation power of regression formula, stands at .586, thereby having the explanation power of 58.6%. It was indicated that there is even no problem of multicollinearity.

5. Conclusion and Suggestion

With the competition getting fierce recently among fashion enterprises, a fashion store tends to reinforce VMD elements in a fashion store with a strategy for how it will attract consumers and expand brand aware-

Table 6. Relationship between consumer attitude and commodity purchase intention in sports fashion stores

B		Purchase intention			
		β	t	Significance probability	
(Constant)		.193		1.652	.099
Consumer attitude		.554	.545	16.549	.000***
VMD elements	Development means	.132	.121	3.209	.001***
	Type and expression method	.238	.204	5.647	.000***
R ² = .586		F = 209.506		p = .000	

***p<0.01

Table 7. Result of correlation analysis on factors

	Type and expression method in VMD elements	Development means in VMD elements	Consumer attitude	Purchase intention
Type and expression method in VMD elements	1			
Development means in VMD elements	.693**	1		
Consumer attitude	.509**	.571**		
Purchase intention	.603**	.619**	.715**	

Table 8. Result of hypothesis verification

Hypothesis	Contents	Result
H1	A type and an expression method in VMD elements will have influence upon consumer attitude.	Adopted
H2	A development means in VMD elements will have influence upon consumer attitude.	Adopted
H3	Consumer attitude will have influence upon commodity purchase intention.	Adopted
H4	A type and an expression method in VMD elements will have influence upon commodity purchase intention.	Adopted
H5	A development means in VMD elements will have influence upon commodity purchase intention.	Adopted

ness. Accordingly, VMD elements are positioning as an important strategy for fashion marketing. According to this fashion environment, this study also tried to survey and analyzed the consumer attitude and the commodity purchase intention on VMD elements in sport fashion stores focusing on China's female undergraduates who are showing high interest in sports these days. And mutual influence was examined among a type and a commodity expression method in VMD elements of fashion stores, a development means, consumer attitude and commodity purchase intention. To achieve this research objective, first of all, the questionnaire was prepared by quoting,

modifying and supplementing items that were used in a previous research. This survey was carried out through a questionnaire answer style. Summarizing the findings, they are as follows.

First, figuring out general characteristics of the whole survey subjects, it is being indicated to be 162 people (51.4%) in lower grades and 153 people (48.6%) in higher grades by school year. By major, it was shown to be 43.2% in design department and 56.8% in non-design department. A place for a purchase was the largest in department store with 43.5%. The next was shown to be in order of internet and brand speciality store. Monthly

pocket money was mostly given an answer as saying of being 1000-1500 Yuan (200,000-300,000 won). A person who gives the greatest influence when buying fashion commodity is being shown to be oneself.

A medium of being influenced the most when buying fashion commodity was internet. A store element of being thought most importantly when buying fashion commodity was the largest in a clerk's kindness with 27.9%. The next was indicated to be in order of store fashion, proximity, exchange, and payment method.

Second, as a result of carrying out a factor analysis on VMD elements in sports fashion stores, 3 elements such as a type and an expression method in VMD elements, a development means in VMD elements were formed. Third, in consequence of analyzing the influence of a type and an expression method in VMD elements, a development means in VMD elements upon consumer attitude, a development means in VMD elements could be confirmed to have the greatest influence upon consumer attitude. Fourth, the consumer attitude and the development means in VMD elements were indicated to have effect on commodity purchase intention as a result of the analysis. This study surveyed and analyzed mutual relationship on the influence of VMD elements in sports fashion stores upon commodity purchase intention and re-visit targeting female college students in China. However, proposing the limitation and the future research direction that this study has in light of progressing a research, they are as follows. First, this study was conducted targeting China's female undergraduates. Thus, the results of this study are judged to be unreasonable to be generalized or broadly interpreted in male undergraduates and other age groups. Hence, if a future research is progressed a comparative research targeting diverse age groups, occupational clusters, and brackets, it is regarded as being likely available for grasping a little more segmented consumer attitude

and commodity purchase intention and the gripping VMD elements. Second, a research survey of using questionnaire, which is carried out targeting foreigners, is judged to necessarily pay attention to the prudent translation of questionnaire and to the accurate communication of technical terms and question sentences, which are used in VMD. Finally, this study was short of enough verification and analysis on VMD elements due to the lack of previous researches, and was difficult to be found out various elements. A follow-up research is understood to be likely to be necessarily progressed an additional research focusing on a little more delicate and precise verification on a type and a development means in VMD elements.

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