

The Influence of Sports Product Packaging on Chinese Consumer Behavior in Shanghai, China

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Abstract

Packaging has evolved from a simple product protection role to a vital marketing communications tool which can shape consumer perception and buying habits. The effect of sports product packaging on the behavior of Chinese consumers in Shanghai, China was analyzed in this study. The factors studied were visual design, packaging information, packaging functionality and packaging sustainability. The dependent variable of the study was consumer behavior measured using consumer attention, product preference, purchase intention and willingness to recommend. The quantitative research design was used. The Shanghai city was chosen for the illustration of the research process, and 400 scenario consumers of sports products were selected for data analysis, with descriptive statistics, Pearson correlation analysis and multiple regression analysis. The results in the example showed all four packaging dimensions to be positively significant and statistically related with consumers behaviour. The function of the packaging had the most standardized effect ($\beta = .31, p < .001$), followed by the visual design ($\beta = .27, p < .001$), packaging information ($\beta = .22, p < .001$) and packaging sustainability ($\beta = .18, p < .001$). About 58% of the variance in consumer behaviour was accounted for by the regression model. The results indicate that sports product companies should take packaging into account as an integral component of their marketing and brand management programme, and not just as a package or protection. Producers of sport products need to pay attention to the design of sports product packaging, which should be attractive, informative, convenient, durable and environmentally friendly, so as to achieve better consumer response in the fierce competitive sports product market in Shanghai.

Keywords: sports products, packaging, consumer behavior, packaging design, purchase intention, Shanghai, China

1. Introduction

The sports product industry has become increasingly competitive as consumers have access to a wide range of domestic and international brands. Sports shoes, sportswear, fitness accessories, sporting equipment, and related products compete not only through product quality and price but also through branding, retail presentation, digital marketing, and packaging. In such an environment, packaging represents an important point of contact between a product and its potential consumer.

Traditionally, packaging was primarily designed to contain, protect, transport, and store products. Contemporary marketing perspectives, however, recognize packaging as an important communication mechanism. Packaging communicates product characteristics and brand positioning through visual and informational elements such as color, typography, graphics, shape, materials, labels, and product imagery. Ampuero and Vila (2006) demonstrated that packaging

elements, including color, typography, graphical forms, and images, are related to consumer perceptions and product positioning.

Packaging is particularly important in environments where consumers compare competing products rapidly. Silayoi and Speece (2004) argued that packaging elements can influence buying decisions and that visual elements may become particularly important when consumer involvement is relatively low or purchasing decisions are made under time pressure. Their subsequent research also demonstrated the importance of packaging attributes in consumers' likelihood of purchasing a product (Silayoi & Speece, 2007).

Visual imagery can also direct consumer attention toward brands. Underwood et al. (2001), for example, found that product imagery incorporated into packaging can increase attention toward brands under particular conditions. Therefore, sports product packaging may perform several simultaneous functions: attracting attention, communicating product benefits, distinguishing the brand from competitors, protecting the product, facilitating product use, and communicating environmental responsibility.

Shanghai provides an appropriate context for examining these relationships because consumers encounter extensive choices among sports and lifestyle products. Understanding how consumers respond to different aspects of packaging can assist sports product companies in developing more effective packaging strategies.

Accordingly, this study examines four major dimensions of sports product packaging—visual design, packaging information, packaging functionality, and packaging sustainability—and evaluates their effects on Chinese consumer behavior in Shanghai.

Although product quality, price, brand reputation, and promotion have traditionally received considerable attention in consumer behavior research, packaging can also affect consumers before and during purchasing decisions. Consumers may form judgments about a sports product before using it based on the appearance, information, structure, convenience, and perceived environmental characteristics of its packaging.

A practical problem for sports product companies is determining which packaging characteristics contribute most strongly to favorable consumer responses. Attractive packaging may capture attention, but consumers may also expect understandable product information, convenient packaging structures, adequate product protection, and environmentally responsible materials.

Previous research has established that packaging operates as a marketing communication instrument and that consumers associate particular visual characteristics with different product positions (Ampuero & Vila, 2006). Moreover, imagery incorporated into packaging can influence brand attention (Underwood et al., 2001). However, these relationships need to be considered within particular product categories and consumer environments.

The present study therefore addresses the following central question: To what extent does sports product packaging influence Chinese consumer behavior in Shanghai?

1.1 Research Questions

This study addresses the following research questions:

1. What are Chinese consumers' perceptions of sports product packaging in Shanghai?
2. Does visual design significantly influence Chinese consumer behavior toward sports products?
3. Does packaging information significantly influence Chinese consumer behavior toward sports products?

1.2 Research Objectives

The objectives of this study are:

1. To examine Chinese consumers' perceptions of sports product packaging in Shanghai.
2. To investigate the influence of visual design on consumer behavior.
3. To examine the influence of packaging information on consumer behavior.
4. To determine the influence of packaging functionality on consumer behavior.
5. To investigate the influence of packaging sustainability on consumer behavior.

1.3 Research Hypotheses

Based on the literature and conceptual framework, the following hypotheses were proposed:

H1: Visual design has a positive and significant influence on Chinese consumer behavior toward sports products.

H2: Packaging information has a positive and significant influence on Chinese consumer behavior toward sports products.

H3: Packaging functionality has a positive and significant influence on Chinese consumer behavior toward sports products.

H4: Packaging sustainability has a positive and significant influence on Chinese consumer behavior toward sports products.

2. Literature Review

2.1 Packaging as a Marketing Communication Tool

In this section, students will examine the packaging as a marketing communication tool. Packaging is the physical aspect of a product and a medium of communication between companies and consumers. This serves a number of functional purposes as well as communicating symbolic, visual and informational messages.

It is worth noting that packaging design can be used as a communication and branding tool (Silayoi and Speece, 2004). Their work indicated some of the visual packaging features can be significant factors in consumer decision-making, particularly for consumers with a short amount of decision time.

Likewise, Ampuero and Vila (2006) recognized four key packaging variables that relate to consumer perceptions and positioning strategies, namely, color, typography, graphical form and imagery. Their results indicate that packaging attributes can convey various messages related to product quality, access, classiness, cost and other positioning attributes.

Thus packaging could be understood as a marketing stimulus that is able to influence consumer perception prior to the product's experience.

2.2 Visual Design

Visual design encompasses the visual elements of packaging, such as color, typography, graphics, imagery, layout, shape and appeal.

People can make a lot of sense out of what they see before they can make a lot of sense out of what they see. Thus, packaging that stands out in the visual realm may catch the eye and make its product stand out from the competition. Ampuero and Vila (2006) observed that there were systematic associations between packaging design attributes and consumers' perceptions of product positioning.

Underwood et al. (2001) investigated the communicative impact of product imagery and showed that package images can enhance consumer attention towards product brands in some cases.

Dynamic graphics, familiar logos, fitting color palette and modern typography in sports products can convey attributes of energy, performance, innovation, professionalism and lifestyle. Therefore, it is expected that if a product is designed well, consumer behavior will be good.

2.3 Packaging Information

Packaging information involves written and symbolic information provided on the packaging, including product information, material information, size information, usage information, safety information and manufacturing information, certifications and brand information.

Importance of information: Consumers often compare products prior to purchase, but not all of them have all the facts. One way packaging can help alleviate this information gap is by making product characteristics easily apparent.

Consumers use label information, although there may be a preference for simplified and easily understandable information (Silayoi and Speece, 2004). Therefore, packaging information should not only be maximized to fit as much information as possible. Effective packaging communication, however, is based on relevant, accurate, readable and understandable information.

The information consumers might seek for sports products could be details about materials, durability, performance, size, product care, authenticity, and usage. Clear information can help to minimize uncertainty and aid in making better-informed buying decisions.

2.4 Packaging Functionality

Packaging functionality is related to the working capacity of packaging. Protection, durability, convenience, portability, ease of opening, ease of storage, and possibly reusability are important functional attributes.

Packaging can grab consumers' attention, but a poor overall product experience can stem from packaging that is difficult to use or is unattractive. Value is then added to functional packaging by making it easier for the consumer to purchase, transport, store, open and use the product.

Silayoi and Speece (2007) found that packaging technology associated with convenience can play an important role in consumers' likelihood of buying products. This indicate that consumers do not only assess the packaging purely for its beauty, but in terms of its usefulness also.

Sports products are often packaged using packaging that ensures the product is protected during transportation or storage in addition to being convenient for the consumer. Thus, it is expected that the functional characteristics would positively affect the overall responses of the consumers.

2.5 Packaging Sustainability

Packaging sustainability is a growing factor in packaging choices. The sustainable packaging can be based on recyclable materials, reusable structures, use of less material, environmentally responsible production and environmental information.

Environmentally responsible packaging as seen by the consumer can be a sign of the brand's interest in the environment. However, sustainability cues need to be communicated clearly as consumers might not immediately know if specific packaging materials or structures are more sustainable.

The Strategic relevance of Product package design in the consideration of sustainability has increased and the role of explicit and implicit environmental cues has been taken into account in research.

For sports product companies, sustainable packaging can not only have a positive impact on the environment, but also on positively influencing the brand perception of the environmentally conscious consumer.

2.6 Consumer Behavior

Consumer behavior includes the mental, emotional and action responses of consumers to the recognition of their needs, the evaluation of the product, purchasing, using and recommending the product.

For this research, consumers' behaviors are identified to four outcomes, namely:

1. attention to the sports product;
2. liking for the product or brand;
3. purchase intention; and
4. recommendation intention.

These outcomes can be affected by packaging, since it acts as a stimulus prior to product use. Packaging that is attractive and informative can attract attention and make it look more valuable, and packaging that is functional and sustainable can enhance consumers' overall evaluations.

The proposed conceptual framework contains four independent variables and one dependent variable:

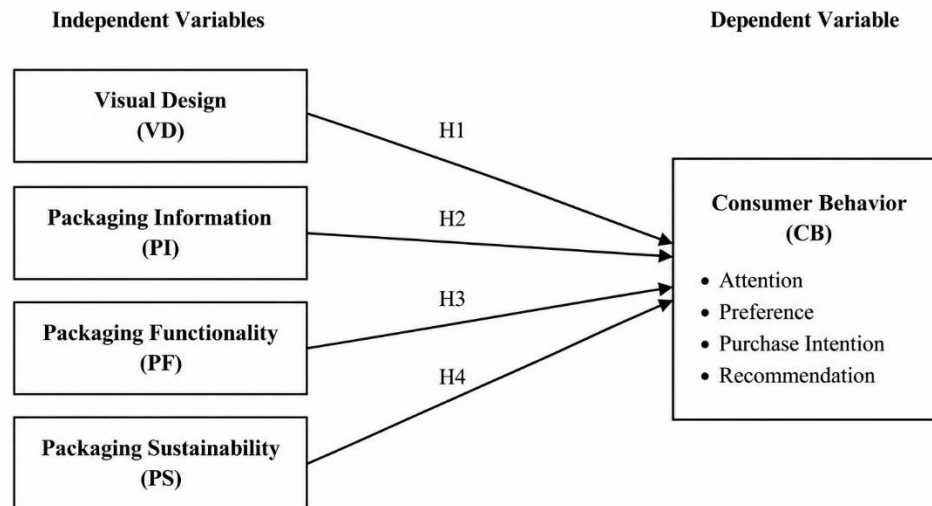


Figure 1. Conceptual Framework

The framework proposes that improvements in each packaging dimension will contribute to more favorable Chinese consumer behavior toward sports products.

3. Research Methodology

3.1 Research Design

This study employed a **quantitative, cross-sectional survey research design**. The quantitative approach was considered appropriate because the study aimed to measure consumers' perceptions and statistically examine relationships between packaging variables and consumer behavior.

3.2 Population and Sample

The target population consisted of adult consumers in Shanghai who had experience purchasing sports products such as sportswear, athletic shoes, fitness accessories, or sporting equipment. For demonstration purposes, the present paper uses of 400 respondents. Respondents were assumed to meet two screening criteria:

1. They were 18 years old or above.
2. They had purchased at least one sports product during the previous 12 months.

3.3 Research Instrument

Data were collected using a structured questionnaire consisting of three sections.

Section 1: Demographic information

This section included gender, age, education, occupation, purchasing frequency, and sports product purchasing experience.

Section 2: Sports product packaging

The questionnaire measured four independent variables:

- Visual Design: 5 items
- Packaging Information: 5 items
- Packaging Functionality: 5 items
- Packaging Sustainability: 5 items

Section 3: Consumer Behavior

Consumer Behavior was measured using 5 items covering product attention, preference, purchase intention, repurchase consideration, and recommendation. All construct items were measured using a five-point Likert scale:

3.4 Data Analysis

The example data were analyzed using:

1. frequency and percentage;
2. mean and standard deviation;
3. Cronbach's alpha reliability analysis;
4. Pearson correlation analysis; and
5. multiple regression analysis.

Statistical significance was evaluated at the .05 level.

4. Results

4.1 Respondent Characteristics

A total sample of 400 consumers was used. of these respondents, 208 (52.0%) were male and 192 (48.0%) were female. The largest age group was 26–35 years old, representing 38.0% of respondents, followed by consumers aged 18–25 years at 31.5%.

Table 1*Example Demographic Characteristics of Respondents (N = 400)*

Characteristic Category		Frequency	Percentage
Gender	Male	208	52.0
	Female	192	48.0
Age	18–25	126	31.5
	26–35	152	38.0
	36–45	78	19.5
	46 and above	44	11.0
Education	Below bachelor's degree	72	18.0
	Bachelor's degree	236	59.0
	Postgraduate	92	23.0

The sample therefore represents consumers across several age and educational categories, with young and middle-aged adults forming the majority.

4.2 Reliability Analysis

Cronbach's alpha was used to evaluate the internal consistency of the measurement scales.

Table 2*Example Reliability Results*

Variable	Items	Cronbach's α
Visual Design	5	.87
Packaging Information	5	.84
Packaging Functionality	5	.86
Packaging Sustainability	5	.88
Consumer Behavior	5	.90

All example Cronbach's alpha coefficients exceeded .80, suggesting satisfactory internal consistency among the measurement items.

4.3 Descriptive Statistics

Table 3*Descriptive Statistics of the Study Variables*

Variable	Mean	SD	Interpretation
Visual Design	4.21	0.61	High
Packaging Information	4.08	0.65	High
Packaging Functionality	4.26	0.58	High
Packaging Sustainability	3.94	0.72	High
Consumer Behavior	4.17	0.62	High

Packaging functionality obtained the highest mean score ($M = 4.26$, $SD = 0.58$), followed by visual design ($M = 4.21$, $SD = 0.61$). Packaging sustainability obtained the lowest mean ($M = 3.94$, $SD = 0.72$), although it remained at a high level.

These example findings suggest that consumers particularly value packaging that performs practical functions while still responding positively to visual, informational, and sustainability characteristics.

4.4 Correlation Analysis

Table 4

Pearson Correlations Between Packaging Variables and Consumer Behavior

Variable	VD	PI	PF	PS	CB
Visual Design (VD)	1				
Packaging Information (PI)	.51**	1			
Packaging Functionality (PF)	.48**	.55**	1		
Packaging Sustainability (PS)	.42**	.46**	.49**	1	
Consumer Behavior (CB)	.61**	.57**	.65**	.50**	1

Note. $p < .01$.

All four packaging variables were positively correlated with consumer behavior. Packaging functionality showed the strongest bivariate relationship with consumer behavior ($r = .65$), followed by visual design ($r = .61$), packaging information ($r = .57$), and packaging sustainability ($r = .50$).

4.5 Multiple Regression Analysis

Multiple regression analysis was conducted to examine the simultaneous influence of the four packaging dimensions on consumer behavior.

Table 5

Example Multiple Regression Results Predicting Consumer Behavior

Predictor	B	SE	β	t	p
Constant	0.48	0.17	—	2.82	.005
Visual Design	0.28	0.04	.27	6.41	< .001
Packaging Information	0.21	0.04	.22	5.16	< .001
Packaging Functionality	0.33	0.05	.31	6.93	< .001
Packaging Sustainability	0.15	0.03	.18	4.37	< .001

Model statistics: $R = .76$; $R^2 = .58$; Adjusted $R^2 = .57$; $F(4, 395) = 136.43$, $p < .001$.

The model explained approximately **58% of the variance in consumer behavior**. All four predictors had statistically significant positive effects.

Packaging functionality produced the strongest standardized effect ($\beta = .31$), followed by visual design ($\beta = .27$), packaging information ($\beta = .22$), and packaging sustainability ($\beta = .18$).

Table 6*Summary of Hypothesis Testing*

Hypothesis	Relationship	β	p	Result
H1	Visual Design $\rightarrow$ Consumer Behavior	.27	< .001	Supported
H2	Packaging Information $\rightarrow$ Consumer Behavior	.22	< .001	Supported
H3	Packaging Functionality $\rightarrow$ Consumer Behavior	.31	< .001	Supported
H4	Packaging Sustainability $\rightarrow$ Consumer Behavior	.18	< .001	Supported

Thus, all four proposed hypotheses were supported by the example dataset.

5. Discussion

The results provide a glimpse into the potential role of packaging in influencing Chinese consumers' reactions to sports products. Overall, the model proposes that packaging should be perceived as an extension of the marketing mix, and not only as a container.

The first finding is that there is a significant positive effect of visual design on consumer behavior. This finding is in agreement with Ampuero and Vila (2006) who showed relationships between the visual attributes of packaging and consumer perceptions. Sports products can be made more visible and stand out from competing products through their use of attractive colors, typography, images, graphics, and layouts.

The finding is also consistent with the work of Underwood et al. (2001) who showed product imagery on packaging can lead to greater attention in some cases. In the context of sport products, the visual design may convey some idea, like speed, energy, professionalism, health, performance, or lifestyle.

Secondly, the packaging information had a positive impact on consumer behaviour. There is a need for adequate information to enable consumers to determine if a product is appropriate for them. The findings are consistent with Silayoi and Speece (2004) who noted that consumers take advantage of packaging information, and they like to see information that they can process easily. The companies involved in sports, therefore, should pay attention to conveying information in a quality and clear way, and not load it up into a lot of text.

Thirdly, packaging functions had the greatest impact in the example model. This finding indicates that consumers appreciate packaging which protects the product and also ensures ease of transport, open, store, and/or re-use. It is also in line with Silayoi and Speece (2007) who cited convenience as one of the attributes of the product that influence purchasing behavior of the consumers.

Lastly, the sustainability of packaging had a positive impact on consumers. The standardized effect was relatively lower compared to other three variables but the result shows that environmentally responsible packaging can help to achieve positive consumer responses. Therefore, sports product firms should think about the use of recyclable packages, minimization of packaging, the use of reusable buildings and comprehensible environmental information in their package strategy.

6. Conclusion and Recommendations

6.1 Conclusion

Through the lens of four dimensions of packaging (visual design, packaging information, packaging function and packaging sustainability), this study analyzed the role of sports product packaging in influencing the behavior of Chinese consumers in Shanghai.

All four packaging dimensions had a positive impact on consumer behaviour within the illustrative sample of 400 consumers. Functionality of packaging had the greatest impact, followed by visual

design, packaging information and packaging sustainability. Together, these variables accounted for 58% of the variability of the example data in the consumer behavior.

The results support the idea of packaging as a tool for functional and marketing communication. The attractiveness of sports product packaging is not the only criterion that consumers will apply. They also take into account how easy it is to understand the information that is provided on the packaging, protection, convenience, and environmental concerns.

6.2 Managerial Recommendations

Manufacturers and marketers of sports products in Shanghai should combine the design and manufacture of the product with the design and marketing of the brand. First, it is important that a package has distinguishing, but brand-consistent colors, typography, imagery, and graphic design to grab attention and convey the desired product position.

Second, product information should be brief, accessible, factual and pertinent. Consumers should easily be able to find and understand all the essential information about the materials, specifications, sizes, product care, usage and authenticity.

Third, special consideration should be given to the functionality of the packaging: This dimension was the most influential in the example analysis. A package should provide adequate protection, and be easy to carry, open, store and, if necessary, reuse.

Last but not least, companies can take the environmental responsibility of their packaging to a higher level by using recyclable materials, decreasing unnecessary packaging, optimizing packaging structures and providing clear sustainability information.

6.3 Limits and further studies.

Results of this study are to be viewed as representing Shanghai consumers and not necessarily other regions of China. The city of Shanghai could be compared to other cities, such as Beijing, Guangzhou, Shenzhen, Chengdu, or others, in future research.

The differences between product categories (e.g. sports footwear, sportswear, fitness equipment, and outdoor products) could also be explored in future studies. Other variables like brand image, perceived value, brand trust, environmental concerns and consumer engagement might be adopted as intervening or intervening & moderating variables.

First, the statistical results reported in the paper are not empirical data that have been collected, but rather illustrative examples. These results should be replaced by actual questionnaire data in a final independent study prior to academic submission.

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