

Evaluation of Sustainable Strategic Value of Clothing Brand Based on Maxdiff

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Abstract

With the increasing demand for sustainable strategic upgrades of clothing brands, this paper collects 201 consumers' evaluation data on brand sustainable strategies through questionnaire surveys, and analyzes and compares the sustainable strategies of typical environmental brands based on the Maxdiff measurement method. Through the analysis, the sustainable strategy recognized by consumers is obtained, which can provide a reference for the sustainable strategic upgrade of Chinese clothing brands.

Keywords: Sustainable strategy, clothing brand, Maxdiff measurement, fashion consumption

1. Introduction

In recent years, many internal and external factors promote the rapid development of domestic sustainable fashion brands. Scholars at home and abroad have made some researches on brand sustainable strategy, but there is no research on brand sustainable strategy from the perspective of consumers, therefore can not provide effective data to help our country sustainable fashion brand improvement strategy decision-making, enhance the brand added value.

In this paper, we obtain the evaluation data of consumers through questionnaire survey, construct and optimize the evaluation model of brand sustainable strategic value from the perspective of consumers, and compare and analyze the evaluation data of cases with MaxDiff analysis, then the evaluation model is tested and compared, revealing the importance of sustainable strategic factors from the perspective of consumers, and providing reference for promoting brand value and strategic upgrading of China's sustainable fashion brands.

1.1 Research on Brand and Sustainability Strategy

Following the publication of the landmark report "Our Common Future" by the United Nations World Commission on Environment and Development in 1987, the definition, philosophy and actions of sustainable development have spread throughout the world, to be the strategic first choice for guiding development (Wang & Wu, 2014). The sustainable development is one kind pays attention to the long-term development growth pattern. Sustainable brand is the type of enterprise brand which integrates the concept of sustainable development into enterprise management and practice, and realizes the accumulation of sustainable image among stakeholders (Yin, Lin, & Li, 2018).

From the results of previous literature studies, clothing brand sustainable strategy research focused on the case of sustainable clothing brand discussion. Li Shengnan (Li & Hao, 2018) takes Bosideng brand as an example to explore the brand's sustainable development strategy, and finds that Bosideng brand constructs a sustainable system of public responsibility, social welfare and moral behavior, and actively undertakes social responsibility. Yang Jie (Yang, 2019) takes the American outdoor sports brand Patagonia as an example to explore its sustainable strategy, the brand promotes sustainable strategies from four aspects: technological innovation, sustainable product development, consumption and use, and sharing best practices. The above research mainly focuses on the brand sustainable strategy analysis, has not been studied from the perspective of consumers, can not get the real views of consumers. This paper attempts to evaluate the sustainable strategy of two wellknown sustainable brands in China, in order to provide theoretical reference for improving the value of sustainable brands.

1.2 Consumer and Sustainable Consumption Research

From the point of view of consumers, the awareness of social responsibility and environmental protection of consumers has gradually increased, and their concepts and attitudes have a direct impact on sustainable fashion

consumption (Suo, 2019). Consumption is the main way to realize brand value. Therefore, it is very important for garment enterprises to understand consumer's concept, which can help guide enterprises to implement sustainable strategy and promote consumer's purchasing behavior. According to a 2018 survey by Nelson, willingness of consumers to buy sustainable products has grown dramatically, to 66%. Some authors (Chan & Wong, 2012) have found that consumers have a certain willingness to purchase sustainable fashion clothing, and are willing to pay higher prices, the quality of clothing products needs to meet requirements, and meet functional needs for clothing products. Consumers often associate sustainable fashion with environmental protection materials, but the connotation and denotation of sustainable fashion are rich, which shows their lack of cognition of sustainable fashion.

In the existing research, the domestic scholars have little cognition about the consumer to the sustainable product, and some foreign scholars study the sustainable consumption motive value. The research shows that the recognition, popularity and recognition of domestic consumers to sustainable garment products are not high, and the sustainable consumption behavior of consumers is usually affected by these factors, for example, the physical environment, the perspective of time, the social environment and the task of purchase, the situation of domestic consumers' purchase of sustainable clothing is not up to expectations (Shen, Wang, Lo, & Shum, 2012). Louise (Chan & Wong, 2012) studied the values and motivations behind sustainable fashion consumption, linking product attributes such as price, quality and environmental protection measures to individual interests, and building a hierarchical value map. Understanding consumers' real motivation for sustainable consumption can help sustainable brands understand their real needs and improve their sustainable strategies.

1.3 Evaluation System

Based on the existing research of sustainable strategy, combined with the implementation of brand sustainable strategy in China, this paper constructs eight types of sustainable strategy as evaluation indicators. Sustainable materials include natural environmental protection fabrics, renewable recycled fabrics, biodegradable synthetic fabrics and recycled fabrics. Sustainable processes include primary color process, full process, sustainable design includes zero-waste design, slow design, emotional persistence design and re-engineering design. Sustainable supply chains are modern supply chain management models that consider both environmental impacts and resource efficiency. Sustainable customer service refers to the establishment of customer satisfaction-oriented service model. Sustainable staff management refers to the health, interests and welfare of employees into the strategy. Energy Saving, emission reduction and energy management refer to the enterprises' consciousness of energy saving and emission reduction in daily production and office work. Social Welfare and charity refer to the enterprises' return to society. According to the eight kinds of evaluation indexes, this paper puts forward three values to evaluate the degree of satisfaction. The three values are not only the result of sustainable strategy, but also the motive of consumers to buy sustainable products. Functional value refers to the degree of consumer's approval of a certain dress. Emotional value refers to the degree of consumer's affection for a certain dress, and the degree of pleasure derived from wearing a certain dress. Social value refers to the extent to which a consumer gains self-worth by wearing a certain garment.

2. Research Design

2.1 Questionnaire Design

The main method of investigation is to fill out a questionnaire. The questionnaire design mainly has three parts, altogether 16 questions. The first part is about the basic information of the interviewees and their knowledge of sustainable fashion. The second part is about the situation design and the subjective evaluation of the sustainable strategies of JNBY and ERDOS, the third part is the satisfaction of the interviewees with the brand value, using likert 5 scale, using 1-5 to express very dissatisfied, more proud dissatisfied, general, more satisfied, very satisfied.

2.2 Sample and Data Collection

Three predictive tests were carried out before the formal investigation. Firstly, from April to May 2020, the words and structure layout of each measurement item were adjusted through literature collation and strategic research of garment enterprises, ensure that the interviewees do not misinterpret the questionnaire. Secondly, a second round of pre-survey was conducted. This presurvey randomly selected 20 respondents. It was found that since the second part of the strategic dimension evaluation was scored by using question 1-9 of the Matrix scale, there was not enough difference among the eight dimensions, and it was easy to be influenced by the use bias of individual scale. In the second part, Maxdiff is chosen to maximize the difference for the evaluation of the strategic dimension. Maxdiff is used to select the most difference preference from a group of objects.

The research phase begun in June 2020 and will be conducted through an online questionnaire. The survey

released a total of 230 questionnaires, 201 effective questionnaire recovery, effective recovery rate of 87.39% , the overall recovery was good. 119 were women and 82 were men. The age distribution showed that the sample mainly consisted of young consumers aged 18-30, accounting for 89.6% , 20.4% of the respondents had a master's degree or above, 7.5% had a college degree, and 2% had a secondary school or high school education. The samples were mainly from Shanghai, Jiangsu, Guangdong and Hebei.

2.3 Data Processing and Analysis

At the end of the survey, the survey was collected and checked. The results of the valid survey were recorded and sorted, and the data was analyzed according to MaxDiff result. If a dimension is selected as "most important" among the three tasks it appears on, its score is recorded as the highest score of 3. If it is selected as "least important" among the three tasks it appears on, its score is recorded as the lowest score of -3, the final score has only seven possibilities (- 3,-2,-1,0,1,2,3) , and the MaxDiff score obtained by this counting method has a normal distribution gene.

3. Result

3.1 Case I Analysis of the Evaluation of Sustainable Strategies

Case 1 selected the JNBY brand in the 2019 China 500 most valuable brands list, the brand's sustainable development strategy is closely around the sustainable development of economic factors, social factors and environmental factors. JNBY actively pursues multi-dimensional sustainable initiatives and adopts sustainable business management strategies, which assumes environmental and social responsibilities.

Table 1. Frequency and mean of sustainability strategy Scores of JNBY brand

MaxDiff Count Score	Sustainable design	Sustainable supply chain	Sustainable customer service	Energy conservation, emission reduction and energy management	Sustainable material	Social Welfare and charitable welfare	Staff Management	Sustainable Process	Average frequency
3	6.7%	1.0%	3.8%	1.0%	17.3%	1.0%	1.0%	6.7%	4.8%
2	22.1%	3.8%	8.7%	1.0%	36.5%	1.9%	1.0%	20.2%	11.9%
1	46.2%	17.3%	25.0%	3.8%	34.6%	11.5%	5.8%	34.6%	22.4%
0	15.4%	29.8%	31.7%	24.0%	7.7%	18.3%	26.0%	26.9%	22.5%
-1	6.7%	26.9%	24.0%	35.6%	1.9%	27.9%	31.7%	6.7%	20.2%
-2	2.9%	18.3%	5.8%	30.8%	1.0%	29.8%	26.9%	3.8%	14.9%
-3	0.0%	2.9%	1.0%	3.8%	1.0%	9.6%	7.7%	1.0%	3.4%
Average score	0.98	-0.44	0.15	-1.00	1.53	-0.98	-0.98	0.78	

By analyzing the data in the questionnaire, the scoring frequency and mean of the brand's sustainable strategy are obtained, which are shown in Table 1. The mean values of sustainable materials, sustainable design, sustainable process and sustainable customer service are all greater than 0, which are directly related to clothing products and related to consumer interests, consumers consider it of higher importance and select the most important frequency. Therefore, the sustainable brand should attach importance to the development of sustainable products and strengthen the relationship with consumers.

The value of JNBY brand in the evaluation of satisfaction is shown in figure 1, satisfaction is between the general and more satisfaction, indicating that consumers for the brand attitude more satisfaction, follow-up still need to be improved. Among them, social value is the highest in the average score, consumers in the brand of sustainable clothing fully feel the increase in Self-worth. Research has shown that when consumers are aware of the personal benefits of sustainable clothing, such as the social self esteem that can be enhanced by wearing sustainable clothing, this value will stimulate a shift in consumer attitudes towards sustainable consumption (Ha-Brookshire & Norum, 2011).

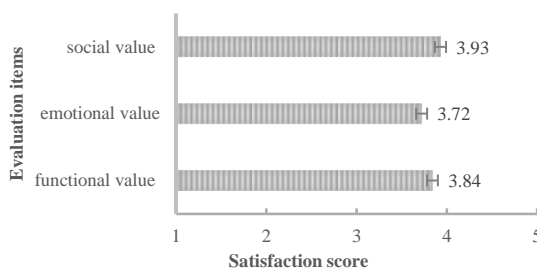


Figure 1. Evaluation of value satisfaction

3.2 Case II Analysis of Sustainability Strategy Evaluation

Case 2 selects ERDOS from the 2019 China 500 most valuable brands list. The brand's sustainable development strategy is planned from three dimensions: supply chain, brand and employee, carefully build from the herder to consumers, from the raw material end, manufacturing end to the brand retail cashmere industry chain. Guided by the United Nations Sustainable Development Goals (SDGs), the brand has pioneered a great deal of research and practice in green sustainable development and created a green production system.

Table 2. The frequency and average value of ERDOS sustainable strategy score

MaxDiff Count Score	Sustainable design	Sustainable supply chain	Sustainable customer service	Energy conservation, emission reduction and energy management	Sustainable material	Social Welfare and charitable welfare	Staff Management	Sustainable Process	Average frequency
3	8.2%	1.0%	1.0%	1.0%	9.3%	1.0%	1.0%	2.1%	3.1%
2	22.7%	1.0%	23.7%	1.0%	42.3%	1.0%	4.1%	25.8%	15.2%
1	37.1%	14.4%	37.1%	2.1%	33.0%	2.1%	9.3%	43.3%	22.3%
0	16.5%	29.9%	25.8%	13.4%	11.3%	11.3%	33.0%	16.5%	19.7%
-1	9.3%	37.1%	9.3%	46.4%	2.1%	33.0%	25.8%	9.3%	21.5%
-2	4.1%	12.4%	2.1%	26.8%	1.0%	34.0%	20.6%	2.1%	12.9%
-3	1.0%	4.1%	1.0%	9.3%	1.0%	17.5%	6.2%	1.0%	5.3%
Average score	0.87	-0.55	0.71	-1.21	1.38	-1.46	-0.65	0.85	

The scoring frequency and mean of the brand's sustainable strategy are obtained, which are shown in Table 2. The dimensions of sustainable materials, sustainable design, sustainable process and sustainable customer service, which are more important to the ERDOS brand, are the dimensions of the brand's sustainable strategy with an average score of more than 0.

The evaluation of the satisfaction degree of the implied value in the ERDOS brand is shown in Figure 2. The social value and the emotional value are all in the range from average to relatively satisfactory, and the functional value is the highest among these items, between a relatively satisfactory and a very satisfactory section. ERDOS brand main products for cashmere clothing, natural cashmere material with sustainable design practices, so that the brand products better meet the needs of consumers to wear.

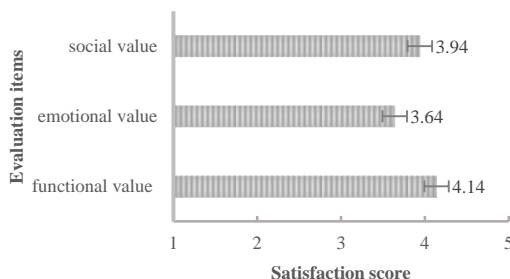


Figure 2. Evaluation of value satisfaction

3.3 Comparative Analysis of Cases

According to the analysis above, JNBY and ERDOS both rank among the 500 most valuable brands in China in 2019, and these two brands are committed to integrating sustainable strategy into the company's development concept. Overall, the eight dimensions of JNBY 's sustainable strategy were rated as "most important" by 39.1% and 40.6% for ERDOS brand, in both cases, the eight dimensions were rated as "most important" with an overall similar frequency. Among the two brands, the four dimensions of sustainable materials, sustainable design, sustainable process and sustainable customer service were all more than 0. These dimensions belong to the general strategy of Brand Sustainable Strategy, which is worthy of reference for other domestic clothing brands. When consumers buy sustainable products, they expect the products to be of good quality. Products with sustainable design tend to be simple and classic, not easily outdated, and can be worn for a long time, thus achieving their functional value, when wearing comfort and good-looking and sustainable fashion products unique style, can directly affect the internal psychology of consumers. Sustainable materials, sustainable design and sustainable process are directly related to the use function of the product, and indirectly affect the emotional value of the product.

In both cases, the four dimensions of sustainable supply chain, sustainable employee management, social welfare and philanthropy, energy conservation and emission reduction, and Energy Management All scored below zero on average, it can be seen that "least important" is chosen more frequently. Thus, consumers pay less attention to these four strategies, which confirms the lack of sustainable fashion knowledge of consumers mentioned above. Brand should strengthen consumer sustainable fashion education, with the help of membership service platform, can convey to consumers awareness of environmental protection, enhance consumer awareness of sustainable strategy.

With the progress of the times, people pay more attention to corporate social responsibility and environmental awareness, consumers pay more attention to the environmental benefits of clothing products. The implementation of sustainable strategy is one of the manifestations of the sense of social responsibility, reflecting the corporate ethics and brand value of the enterprise, and corporate values are directly linked. Consumers will respond to the brand that fulfills the social responsibility, transfer the emotion to the brand to the consumer behavior, indirectly enhance the brand value of the intangible asset, through the accumulation of emotional value, enhance brand identity.

4. Summary

In order to promote the sustainable strategic upgrading and value orientation of clothing brands, this paper puts forward the following suggestions from the perspective of consumers. The brand needs to focus on strengthening the four sustainable strategies of sustainable materials, sustainable design, sustainable process, and sustainable customer service, to enhance consumer's satisfaction with sustainable products. Making a reasonable sustainable strategy is helpful to excavate consumer's emotional needs. Sustainable supply chains, sustainable workforce management, social and philanthropic benefits, energy efficiency and emissions reduction and energy management are all important components of sustainable strategies, brands should help consumers understand more fully the connotation and denotation of sustainable fashion.

References

- Chan, T., & Wong, C. W. Y. (2012). The consumption side of sustainable fashion supply chain: Understanding fashion consumer eco - fashion consumption decision. *Journal of Fashion Marketing and Management*, 16(2), 193-215. <https://doi.org/10.1108/13612021211222824>
- Ha-Brookshire, J. E., & Norum, P. S. (2011). Willingness to pay for socially responsible products: case of cotton apparel. *Journal of Consumer Marketing*, 28(5), 344-353. <https://doi.org/10.1108/07363761111149992>
- Li, S. N., & Hao, S. L. (2018). Analysis of the social responsibility of textile and apparel enterprises—Taking Bosideng Group as an example. *Shopping Mall Modernization*, (2), 18-19. <https://doi.org/10.14013/j.cnki.scxdh.2018.02.009>
- Shen, B., Wang, Y., Lo, C. K. Y., & Shum, M. (2012). The impact of ethical fashion on consumer purchase behavior. *Journal of Fashion Marketing and Management*, 16(2), 234-245. <https://doi.org/10.1108/13612021211222842>
- Suo, S. (2019). The evolution and prospect of the sustainable development strategy of Chinese apparel companies—Taking Li Ning as an example. *Renewable Resources and Circular Economy*, 12(2), 29-31.
- Wang, J., & Wu, J. (2014). The Initiative and Significance of "Sustainable Development" Concept: A Review of "Our Common Future". *Journal of Tongren University*, 16(6), 62-65

- Yang, J. (2019). Patagonia clothing brand sustainable development strategy analysis. *Renewable Resources and Circular Economy*, 12(5), 41-44.
- Yin, G. F., Lin, B., & Li, Y. K. (2018). Sustainable Brand Value Evaluation Model—Brand Value Evaluation Method Based on Optimization of Brand Strength. *WTO Economic Guide*, (12), 40-41.

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Authors contributions

Yuyilan Chen is responsible for study design and revising. Prof. Xiaogang Liu was responsible for supervising this paper. Yuqian Dai provides great help to the study. All authors read and approved the final manuscript.

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