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Consumer Preference and Product Differentiation in the Chinese Tea Market: A Conjoint Analysis Approach

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Abstract

As tea consumption in China continues to diversify, understanding the key factors influencing consumer preferences is essential for effective market positioning. This study employs a conjoint analysis approach to evaluate the relative importance of product attributes in tea purchasing decisions. A structured online survey of 325 respondents assessed preferences across four attributes: tea type, brand, packaging, and price. Using SPSS’s orthogonal design, nine product profiles were generated and ranked. Linear regression was applied to estimate part-worth utilities, yielding a strong predictive fit (Pearson’s R = 0.992). Results indicate that tea type has the greatest impact on consumer choice, with green tea and the Bama brand being most preferred. Large bag packaging was also favored, while price showed the lowest relative importance. Despite limitations such as sampling bias and restricted attribute levels, the findings offer actionable insights for product development and differentiated marketing strategies. This study contributes to the empirical understanding of consumer behavior in the evolving Chinese tea market.

Keywords

consumer preference, conjoint analysis, product differentiation, utility value, tea market

1. Introduction

The Chinese tea market is increasingly diversified, with evolving consumer preferences driving demand for differentiated products. Understanding which attributes most influence purchasing decisions is essential for effective product development and market positioning. This study employs a conjoint analysis approach to quantify consumer preferences across four key attributes: tea type, brand, packaging, and price. By analyzing data from 325 respondents, the study provides empirical insights into the relative importance of these attributes and offers practical implications for product strategy in the tea industry.

While prior research has examined consumer attitudes toward tea, most studies have focused on individual factors or demographic correlations, often neglecting how consumers make trade-offs between multiple attributes in real purchasing scenarios. Conjoint analysis enables a more realistic simulation of decision-making by capturing the relative value consumers place on product features. This study addresses that gap, providing evidence-based recommendations to help tea producers and marketers tailor offerings to specific consumer segments in a competitive and culturally dynamic market.

2. Methodology

To enhance robustness, this study could integrate alternative estimation techniques such as Hierarchical Bayes (HB) modeling, which allows for individual-level utility estimation rather than relying solely on aggregate preferences. HB conjoint analysis has gained popularity due to its ability to better reflect

heterogeneity among respondents (Orme, 2010). Additionally, latent class models could be used to segment consumer groups based on shared preference patterns. Incorporating these models in future work would provide deeper insights into subgroup-specific behaviors, especially across different regions or income levels. Moreover, to improve external validity, a mixed-methods approach could complement the quantitative findings by integrating qualitative interviews with key tea consumers or retailers. Such triangulation would contextualize the numerical results and reveal motivations behind preference structures.

Conjoint analysis is a statistical technique used to measure consumer preference across multiple attributes. It assumes products are composed of features (e.g., type, brand, price) that contribute to overall utility.

Nine product profiles were generated using SPSS's orthogonal design function. Respondents were asked to rank these profiles. SPSS was used to analyze the data, with part-worth utility values and attribute importance scores computed. It is grounded in marketing research theory and consumer decision modeling (Kotler and Keller, 2016).

A structured online questionnaire was developed based on a fractional factorial orthogonal design. The questionnaire included an introductory section, demographic questions (age, gender, income, tea drinking frequency), and a ranking task involving nine product profiles. The sample consisted of 325 valid responses, primarily collected via social media platforms and tea-related communities. Respondents were aged between 18 and 60, with a balanced gender distribution and diverse geographic representation from urban and semi-urban regions in China.

Attributes and Levels:

Type: Green tea, White tea, Black tea

Brand: Bama, Xiaoguan tea, Kansan

Packaging: Large bag, Small can, Gift box

Price: 888 RMB, 1088 RMB, 1288 RMB

A linear regression model estimated the effects of each attribute, and Pearson's R was used to assess model validity.

3. Results

3.1 Model Description

The regression model indicates all four attributes significantly influence consumer preferences. The Pearson correlation between predicted and observed preferences is R = 0.992 with Sig. = 0.002, confirming model reliability.

Table 1: 3.2 Utility Values by Attribute

Attribute	Level	Utility
Tea Type	Green Tea	0.503
	White Tea	0.455
	Black Tea	-0.958
Packaging	Large Bag	0.275
	Medium Box	-0.021
	Small Can	-0.254
Brand	Bama	0.225
	Menghai	0.171
	Kansan	-0.396
Price	¥888	0.666
	¥1088	-0.444
	¥1288	-0.222

Table 2: 3.3 Attribute Importance

Attribute	Importance (%)
Type	47.81

Brand	20.33
Packaging	17.32
Price	14.54

3.4 Potential Biases and Model Limitations

Although the conjoint model demonstrated a strong Pearson's R, several biases may affect the interpretation:

Design Bias: The orthogonal design assumes attribute independence, which may not reflect real-world correlations (e.g., premium brands may prefer premium packaging).

Response Bias: Some participants may have ranked choices arbitrarily or without deep thought.

Attribute Range Bias: The levels chosen may not reflect the full market variety.

Utility Assumption Bias: The additive linear model does not capture interactions between attributes.

Sampling Bias: The sample of 325 may not be fully representative of the entire Chinese tea-drinking population.

These factors should be considered in strategy implementation.

4. Key Findings

• Green tea is the most favored tea type with the highest utility value (+0.503).

• Bama is the most preferred brand (+0.225), while Kansan is least favored.

• Large bag packaging is preferred over gift boxes or small cans.

• Consumers are price-sensitive, favoring 888 RMB products, though price has the least overall importance.

• Overall, tea type is the most critical factor influencing purchase decisions.

5. Conclusion and Recommendations

5.1 Conclusion

Conjoint analysis effectively identifies the relative influence of product attributes on consumer choices. Tea type ranks highest, followed by brand and packaging. These insights help companies refine marketing, product design, and pricing strategies. These results are consistent with prior studies in consumer behavior that highlight the dominance of sensory and cultural preferences in food and beverage decisions (Solomon, 2018).

5.2 Recommendations

1. Enhance Product Variety and Quality:

Offer a wider range of tea types (e.g., pu'er, fruit tea) and maintain high quality. Consider in-store bundling (tea + snacks) to increase consumer engagement.

2. Leverage Social Media Channels:

Establish presence on platforms like RED notes, Tiktok, and WeChat. Collaborate with influencers and share promotions, new products, and user experiences.

3. Adopt Differentiated Pricing:

Develop pricing strategies tailored to product types and customer segments. Differential pricing can help tap into various market tiers.

6. Limitations and Future Work

Another limitation is that the study was conducted through an online platform, which may bias the sample toward younger, tech-savvy respondents. Older or rural populations, who may have distinct preferences, could

be underrepresented. Moreover, cultural identity and environmental concern were not included as attributes. Given the rising popularity of sustainability in consumer decision-making, these dimensions deserve future exploration.

While the survey provides valuable insights, limitations remain:

Sample representation may be skewed.

Response reliability cannot be fully verified.

Only four attributes were analyzed; future studies may include origin, aroma, or health benefits.

Future work could adopt Hierarchical Bayes estimation or mixed-methods research to gain deeper consumer insights.

References

Baker, D. P. and Letendre, G. K. (2005). *National differences, global similarities: World culture and the future of schooling,* Redwood, CA: Stanford University Press.

Dang, H.-A. and Rogers, F. H. (2008). The growing phenomenon of private tutoring: Does it deepen human capital, widen inequalities, or waste resources? *The World Bank Research Observer,* vol. 23**,** no.2, pp. 161-200.

Dunne, M. and Ananga, E. D. (2013). Dropping out: Identity conflict in and out of school in Ghana. *International Journal of Educational Development,* vol. 33**,** no.2, pp. 196-205.

Louviere, J. J., Hensher, D. A. and Swait, J. D. (2000). *Stated choice methods: analysis and applications,* Cambridge, MA: Cambridge University Press.

Oecd (2012). *Equity and Quality in Education: Supporting Disadvantaged Students and Schools,* Paris, France: OECD Publishing.

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Conflicts of Interest

The authors declare no conflict of interest.

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