Digital Marketing Context: The lmpact of Black Swan's 7P Marketing Mix on Customer Satisfaction Across Consumer Segments

Yihan Luo

International Chinese College, Rangsit University, Pathum Thani, Thailand
E-mail: 3150361375@qq.com

Abstract

Black Swan Cake stands as a premier brand within China's cake industry. This study, grounded in the 7P theory and digital marketing frameworks, examines how the product positioning of the high-end brand 'Black Swan' influences satisfaction levels across distinct consumer segments. A questionnaire survey was conducted among customers with prior purchasing experience of 'Black Swan' products. Findings indicate that all 7P elements exert a significant positive influence on customer satisfaction. Significant variations in satisfaction levels were observed across different consumer segments. The research clarifies the mechanisms influencing Black Swan customer satisfaction and identifies distinct consumption preferences among different groups. It provides actionable recommendations for the enterprise and offers valuable insights for comparable brands.

Keywords**:** *marketing mix positioning, digital marketing, consumer segmentation, customer satisfaction*

1. Introduction

Global consumption upgrades and digital technologies have propelled China's bakery market from survival-oriented to quality-driven. Between 2020 and 2023, the Chinese bakery industry grew at an annual rate exceeding 12%. By 2023, the bakery market surpassed RMB 300 billion in scale, with the premium segment accounting for nearly 20% of the market share, becoming the core engine of industry growth. Concurrently, digital transformation has reshaped the marketing ecosystem, shifting brand promotion from traditional one-way communication towards precision targeting and contextualised interaction (Ilieş, 2018). Digital marketing now occupies a pivotal position in brand development and market expansion within the premium bakery sector. Consequently, the increasingly granular segmentation of consumer groups imposes heightened demands on the adaptability of brand marketing strategies.

"Black Swan" is a premium brand established in 2010 under the Haolilai Group. Its competitive edge is built upon 'artistic design, luxury positioning, and personalised service.' Yet it remains vulnerable to homogenised competition from brands like Heytea and Lady M. The premium baking sector currently exhibits converging positioning strategies, while disparities in digital marketing capabilities intensify brand competition. Analysing the impact of its marketing mix on consumer satisfaction across different segments through the 7Ps framework could both help Black Swan consolidate its market advantage and provide insights for the industry's digital transformation.

The competitive focus within the premium baking market has shifted from the quality of individual products to the alignment of marketing mixes with consumer group demands. The proliferation of digital marketing has further amplified the complexity of this competition. For Black Swan brands, the pressing challenge lies in maintaining their premium positioning while enhancing satisfaction across diverse consumer segments through optimised 7P marketing mixes. Against the backdrop of digital marketing, this study addresses the following key questions:

RQ1: What differences exist in customer satisfaction with the premium bakery brand 'Black Swan' across the various elements of the 7P marketing theory?

RQ2: What are the core variables driving the enhancement of customer satisfaction with 'Black Swan'?

RQ3: Do consumer groups with differing demographic characteristics (age, region, income level) exhibit significant variations in their perceptions of each element within the Black Swan 7P marketing mix?

RQ4: Can these perceived differences lead to divergences in satisfaction levels between consumer groups?

RQ5: Based on the strength of influence exerted by the 7P elements on satisfaction and the variations in group preferences, how should Black Swan Cake adjust and optimise its marketing strategy?

2. Objectives

Based on the above research questions, the objectives of this study are as follows:

1) Within the context of digital marketing, and grounded in the 7P marketing theory, to identify the intensity of influence and core drivers of the 'black swan' 7P elements on customer satisfaction.
2) To analyse perceptual differences among consumer groups with varying demographic characteristics regarding the 'black swan' 7P elements, thereby clarifying consumption preferences.
3) Through questionnaire surveys and SPSS 27.0 data analysis, uncover the influence mechanisms of 'black swan' factors on customer satisfaction.
4) Provide theoretical reference and practical basis for formulating differentiated marketing strategies for premium bakery brands.

3. Literature Review

1) The Relationship Between the 7Ps and Customer Satisfaction

The 7Ps theory serves as a pivotal theoretical framework for analysing customer satisfaction (Kotler et al., 2017). Early research identified that elements such as the service environment, service personnel, and service processes significantly influence customers' perceptions and satisfaction with services (Bitner, 1992; Parasuraman et al., 1985). The 7P theoretical model, encompassing seven dimensions—'product, price, place, promotion, personnel, process, and physical evidence'—is regarded by scholars as the classic structural model for analysing the relationship between the marketing mix and customer satisfaction (Zeithaml et al., 1985).

The core of the 7P theory lies in the combination of multiple marketing dimensions to collectively construct high-quality customer consumption scenarios. These dimensions are interconnected and mutually influential, ultimately converging to shape customer perceptions and evaluations (Gronroos, 2007). From the perspective of customer satisfaction theory, the multi-layered values delivered by enterprises—including product value, service value, and personnel value—constitute the core antecedents influencing customer satisfaction. Simultaneously, the various dimensions of the 7P theory represent the specific breakdowns of these values (Oliver, 1980). Consequently, enterprises can convey value to customers through the 7P elements. When customers perceive high value during transactions, they provide positive feedback, manifesting as satisfaction and recognition of the enterprise's products or services, thereby exerting a positive influence on customer satisfaction (Cropanzano & Mitchell, 2005). This study posits that all seven dimensions within the 7P theory exert a positive influence on customer satisfaction.

H1: The product has a significant positive impact on customer satisfaction.

The product is the core element of the 7P theory, serving as the primary vehicle for directly fulfilling consumer needs and forming the foundation for customer-perceived value and satisfaction (Kotler & Keller, 2012). For the "Black Swan", characteristics such as product innovation, refined design aesthetics, and quality control represent the pivotal starting points for conveying value and influencing satisfaction. Perceived product quality stands as one of the most direct and potent predictors of customer satisfaction (Sánchez-Fernández & Iniesta-Bonillo, 2007).

H1a: There exists a significant positive influence between the product dimension and "Black Swan" customer satisfaction.

Reasonable pricing constitutes a pivotal factor influencing customers' perceived value and purchase intent (Zeithaml, 1988). Price serves not only as a key reference point in decision-making but also as a primary basis for customers to evaluate the 'input-output' relationship. However, the mechanism through which price affects purchase intent varies across product categories and consumer characteristics. In high-involvement product contexts, perceived value acts as a mediating factor (Völckner, 2008). The positive influence of price on perceived quality further correlates with the formation of customer satisfaction.

H1b: Price has a significant positive impact on customer satisfaction.

The convenience, accessibility and digital experience of places have become significant factors influencing consumer satisfaction. Within omnichannel retail strategies, place integration and seamless

experiences can markedly reduce customer decision-making difficulty and enhance satisfaction (Neslin et al., 2014). Against the backdrop of digital marketing, integrated online and offline purchasing places can accommodate diverse consumer purchasing habits, thereby elevating customer satisfaction.

H1c: Place has a significant positive impact on customer satisfaction.

Promotions serve as a pivotal tool for enhancing brand recognition and stimulating consumer motivation. Innovative promotional strategies can heighten customer attention and identification with the brand, thereby deepening brand image. As a vital marketing instrument, promotions ignite customer interest and reinforce purchasing motivation. Within the digital marketing landscape, integrating online and offline promotional activities effectively elevates consumers' immediate satisfaction and future purchase intent (Palmer, 2021).

H1d: Promotion has a significant positive impact on customer satisfaction.

The service attitude, professional knowledge, and communication skills of personnel constitute the core factors influencing customers' perceived value (Parasuraman et al., 1985). Within the digital context, the collaborative approach between AI customer service and human agents can enhance the efficiency of resolving customer issues, thereby increasing customer satisfaction. The professional competence and empathetic care demonstrated by service personnel form the core elements in building service quality and driving customer satisfaction (Hennig-Thurau, 2004).

H1e: People has a significant positive impact on customer satisfaction.

The service process serves as the primary vehicle for customer experience, encompassing every stage from appointment booking and designer consultations to cake production, delivery, and post-sales follow-up (Gronroos, 2007). Key factors enhancing customer satisfaction within this process include operational fluidity, client engagement, and transparency of information. Should errors occur during service delivery, an efficient and equitable resolution process can not only restore satisfaction but potentially generate even greater customer loyalty than before (Tax et al., 1988).

H1f: Process has a significant positive impact on customer satisfaction.

Tangible displays (product packaging, store environments, delivery vehicles, etc.) serve as physical vehicles conveying product quality and brand image. Such vehicles cultivate a perception of premium, refined consumption experiences in consumers' minds (Bitner, 1992). Black Swan's premium tangible displays reinforce customers' perception of the brand's high-end positioning. The aesthetic attributes, cleanliness, and design symbols within the physical environment exert a powerful influence on customers' emotional responses and satisfaction ratings, demonstrating the positive impact of tangible displays on customer satisfaction (Rosenbaum & Massiah, 2011).

H1g: Physical Evidence has a significant positive impact on customer satisfaction.

2) Relationship between Consumer Segmentation Variables and Marketing Mix Elements

Differences in how consumer groups with distinct characteristics perceive marketing mix elements fundamentally stem from the combined influence of group attributes and environmental factors. Theoretically, consumers' evaluations of marketing elements are not isolated but closely intertwined with their own characteristics (Kotler & Keller, 2012). Age determines generational differences in consumption attitudes, while geography shapes distinct cultural and economic environments that foster divergent consumer preferences. Income levels directly dictate purchasing power. Collectively, these factors create pronounced variations in the focus of attention towards the 7Ps. Such perceptual differences are not isolated individual phenomena but represent patterns observable at the group level (Schiffman & Kanuk, 2018).

H2: Significant differences exist in the 7Ps of the marketing mix across consumer segment variables.

Age is a quintessential demographic variable that holds significant discriminatory value in consumer cognitive patterns, value orientations, and consumption behaviour. East et al.(2016) systematically elucidated the systematic differentiation across generations in values, media habits, and consumption preferences. These findings demonstrate that consumers at different age stages place varying emphasis on marketing elements such as product design, service responsiveness, promotional content, and place preferences, which consequently influences their satisfaction with products.

H2a: Significant differences exist among consumers of different age groups regarding each element of the 7Ps marketing mix.

Consumers' regional identities significantly influence their perception of product value and willingness to pay, primarily due to differences in cultural and economic environments shaped by distinct geographical contexts (Panzone et al., 2016). Geographical variables such as cultural and economic

environments are key determinants of consumer responses. Consumers in economically developed regions exhibit a greater preference for premium brands, prioritising service speed and omniplace integration experiences. Conversely, consumers in relatively less developed areas place greater emphasis on price advantages and localisation suitability (Panzone et al., 2016). This study categorises customer groups by geographical location into tier-one cities, new tier-one cities, and tier-two cities and other regions, investigating the moderating effect of regional economic and cultural levels on consumer brand perceptions and product demands.

H2b: Significant differences exist among consumers in different geographical segments across the various elements of the 7Ps marketing mix.

When evaluating purchasing outcomes, consumers weigh the benefits gained from a product against its cost, based on their personal payment capacity. Higher-income groups tend to prioritise brand value, personalised experiences, and service integrity, whereas lower-income groups are more sensitive to price, basic functionality, and fundamental services. This influences their satisfaction ratings for different marketing elements (Zeithaml, 1988). Within the luxury goods sector, high-income consumers exhibit reduced price sensitivity towards luxury brands, prioritising brand prestige and exclusive experiences (Godey et al., 2013). This research categorises customer income levels into high, medium and low tiers, grouping individuals by annual earnings. Significant disparities emerge in purchasing preferences and habits across these income brackets, suggesting that income levels may influence consumer motivations and brand perceptions.

H2c: Significant differences exist among consumers of varying income levels across the elements of the 7Ps marketing mix.

This study, grounded in the 7P theory, examines the seven variables of product, price, place, promotion, people, process, and physical evidence. By integrating customer satisfaction and consumer segmentation theory, it constructs a research model that combines the analysis of influencing factors' correlations with consumer group differentiation. The research framework is illustrated in Figure 1.

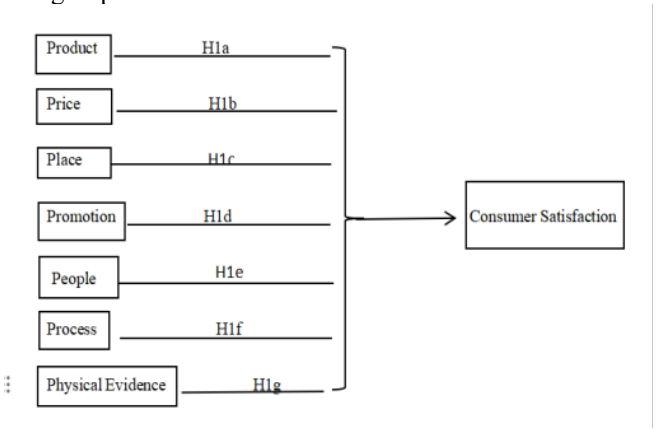

Figure 1 Research Framework

4. Materials and Methods

4.1 Research Methodology

Quantitative analysis methods: employing SPSS 27.0 as the analytical tool, were utilised to quantify the impact of the 7P elements on satisfaction. This was achieved through descriptive statistics, reliability and validity testing, correlation analysis, regression analysis, one-way analysis of variance (ANOVA), and LSD post-hoc tests. The study further examined differences in perceptions of the 7P elements and satisfaction levels across distinct demographic groups.

4.2 Research Instruments

The questionnaire encompasses two core dimensions: independent variables and dependent variables. Independent variables are categorised into seven dimensions based on the 7P marketing mix theory: product, price, place, promotion, people, process, and physical evidence. The dependent variable is customer satisfaction. Item design for each dimension draws upon established scales developed by scholars, ensuring the measurement tools' academic rigour and suitability. The product dimension focuses on product quality

and packaging. The price dimension explores price-quality alignment and personalised pricing. The distribution dimension encompasses online purchasing convenience, store layout, and pre- and post-sales service. The promotion dimension addresses social media promotion, willingness to participate in interactive activities, and brand story identification . The people dimension examines service attitude and professional competence. The process dimension encompasses purchasing process fluidity and logistics delivery punctuality. The tangible display dimension focuses on physical store décor and online platform experience. The customer satisfaction dimension is measured across two levels: overall consumption experience and repurchase intent, comprehensively covering key observational indicators of the core research variables.

This study employs a five-point Likert scale: each dimension and indicator of the 7Ps is scored as 1, 2, 3, 4, or 5. (‘Very dissatisfied’ scores 1 point, ‘Somewhat dissatisfied’ scores 2 points, "Neutral" scores 3 points, ‘Somewhat satisfied’ scores 4 points, and ‘Very satisfied’ scores 5 points). A higher score indicates greater satisfaction among respondents.

4.3 Research Participants and Data Collection

The questionnaire survey targeted diverse consumer groups who had previously purchased Black Swan products. This cohort comprised individuals from the upper-middle income bracket, encompassing varied genders, age groups, occupations, geographical locations, and income levels.

This study employed a questionnaire survey method, distributed via the Wenjuan Xing platform. The questionnaire comprised 18 measurement items in total (covering 16 items across the seven dimensions of the 7P marketing mix and two items for the customer satisfaction dimension). To measure the group characteristics of the three differential variables, the study covered geographical areas (Tier 1/New Tier 1/Tier 2 cities), income levels (five groups ranging from ¥100,000–200,000 to ¥1,000,000 and above), and age (four groups from 20–30 years to over 55 years). The minimum sample size was calculated using a dual approach combining scale item requirements and multi-group statistical needs, based on the formula $n = k \times m$. Here, n denotes the baseline minimum sample size, k represents the total number of measurement items, and m is the empirical coefficient (ranging from 5 to 10). This is combined with multi-group validation rules (minimum sample size per group ≥ 30). Consequently, the final minimum sample size was determined to be no less than 360 respondents.

4.4 Sample

In January 2025, 523 questionnaires were successfully collected, with 510 deemed valid, yielding a valid response rate of 97.51%. Female respondents constituted 84.70% of the sample, with males accounting for 15.30%, indicating women as the core consumer demographic. The 20-40 age bracket comprised 75.30% of respondents, representing the primary consumer group for Black Swan cakes. Over 60% of respondents belonged to the high-income bracket earning above ¥400,000 annually, aligning with the brand's premium positioning. Geographically, first-tier cities accounted for 40.20%, with new first-tier and second-tier cities representing 29.6% and 30.2% respectively. Online purchasing places significantly enhanced coverage in non-first-tier cities. The overall sample characteristics closely align with the target consumer profile for Black Swan's premium bakery brand, laying the groundwork for subsequent differentiated analysis.

5. Results and Discussion

Based on the contents of the following scale, it is evident that the questionnaire is divided into eight dimensions. The Cronbach's alpha coefficients for the seven elements within the 7P framework and customer satisfaction all fall between 0.973 and 0.974, with an overall Cronbach's alpha coefficient of 0.975. This indicates excellent reliability of the scale, demonstrating high internal consistency between each item and its respective dimension. CITC values exceed 0.6, and removing any item does not significantly improve the alpha coefficient. The questionnaire exhibits high homogeneity and reliable measurement direction.

Table 1 Summary of Reliability Analysis

Variable	Number of topics	Cronbach’s a
Product	2	0.974
Price	2	0.973
Place	3	0.973
Promotion	3	0.973
people	2	0.974
process	2	0.973
Physical Evidence	2	0.974
Consumer Satisfaction	2	0.974

To assess suitability for factor analysis, Kaiser-Meyer-Olkin (KMO) measurements and Bartlett's sphericity test were conducted, summarised in Table 2. The KMO value was 0.979, the approximate chi-square value was 9477.646, with degrees of freedom at 153 and significance at 0.000. The research questionnaire proved highly suitable for factor analysis.

Table2 Summary of KMO and Bartlett's test

KMO		0.979
Bartlett's test of sphericity	appoximate chi-square	9477.646
	Degrees of freedom	153
	significance	0.000

As shown in Table 3, the maximum variance method yielded seven common factors following rotation of the factor loading matrix. The commonality values for each item exceeded 0.6, confirming the scale's validity and reliability. Each common factor corresponds to a research topic, with the commonality values for the respective items exceeding 0.4. This indicates a strong association between the research items and factors, demonstrating that the factors effectively capture the intended information.

Table 3 Summary table of the rotated component matrix

	ingredient						
	1	2	3	4	5	6	7
Product1	0.862						
Product2	0.837						
Price1		0.882					
Price2		0.861					
Place1			0.856				
Place2			0.843				
Place3			0.817				
Promotion1				0.884			
Promotion2				0.866			
Promotion3				0.841			
People1					0.889		
People2					0.871		
Process1						0.877	
Process2						0.845	
Physical Evidence1							0.895
Physical Evidence2							0.869

Subsequently, the mean values of relevant items under each variable were employed as modified numerical indicators. Pearson correlation coefficients were used to analyse the relationships between various factors, with results presented in Table 4: The correlation coefficients between each 7P element and customer satisfaction ranged from 0.770 to 0.859, falling within the range of strong correlations, and all exhibited significant positive relationships; ($P < 0.01$). However, the correlation coefficients between variables were generally high, with most exceeding 0.7, indicating potential multicollinearity among variables. This necessitates further examination within the regression model.

Table 4 Summary of Correlation analysis matrix

	1	2	3	4	5	6	7
1.consumer Satisfaction	1						
2.product	0.770**	1					
3.price	0.821**	0.812**	1				
4.place	0.808**	0.728**	0.808**	1			
5.promotion	0.827**	0.773**	0.843**	0.815**	1		
6.people	0.850**	0.787**	0.833**	0.820**	0.850**	1	
7.process	0.859**	0.779**	0.824**	0.849**	0.861**	0.896**	1
8.physical Evidence	0.838**	0.760**	0.820**	0.808**	0.826**	0.842**	0.875**

According to Table 5, the R value is 0.899, indicating a strong linear relationship between the various elements of 7P and customer satisfaction. The R^2 value is 0.808, demonstrating that the regression

effect of this model is significant and possesses strong explanatory power. The F value is 301.724 and the P value is 0.000, signifying that the model as a whole is statistically significant. The P-value for each variable is less than 0.05, indicating that all seven variables exert a significant positive influence on customer satisfaction. Notably, the "People" and "Process" variables exhibit high VIF scores (6.442 and 7.963respectively), suggesting a high degree of correlation between these two factors: thus their individual predictive power should be interpreted cautiously.

The Beta value for the Product dimension is 0.083 (P=0.023 < 0.05, t=2.276). Hypothesis H1a is supported; The Beta value for the price dimension is 0.116 (P=0.010＜0.05, t=2.596), supporting H1b; The Beta value for the promotion dimension is 0.103 (P=0.024＜0.05, t=2.271), supporting H1c;

The Beta value for the place dimension is 0.102 (P=0.013＜0.05, t=2.496), supporting H1d;The Beta value for the personnel dimension is 0.189 (P=0.000＜0.05, t=3.799), supporting H1e; The Beta value for the process dimension is 0.191 (P=0.001 < 0.05, t=3.469), supporting hypothesis H1f; The Beta value for the tangible display dimension is 0.187 (P=0.000 < 0.05, t=4.189), supporting hypothesis H1g.

Table 5 Summary of Regression Analyses

Variable	β	t	p	VIF	R^2	F
Product	0.083	2.276	0.023	3.449		
Price	0.116	2.596	0.010	5.243		
Place	0.102	2.496	0.013	4.355		
promotion	0.103	2.271	0.024	5.387	0.808	301.724
People	0.189	3.799	0.000	6.442		
Process	0.191	3.469	0.001	7.963		
physical Evidence	0.187	4.189	0.000	5.185		

Verifying hypotheses H2a–c.

1)Age Group Analysis

Dividing the age groups into four segments (20–30, 31–40, 41–55, and 55+) for differential analysis, Table 6 indicates that the significance level for all dimensions is below 0.05. thereby supporting the validity of Hypothesis H2a. Within the 7P dimensions, satisfaction levels generally decline with increasing age, particularly in dimensions closely linked to digitalisation such as place, process, and tangible presentation.

Table 6 Age Group LSD Post hoc test results (By Dependent Variable)

dependent variable	Group comparisons with significant differences(*p＜0.05）	Difference from the corresponding mean	P
product	20-30VS41-55	0.457*	<.001
	20-30VS aged 55 and over	0.739*	<.001
	31-40VS41-55	0.414*	<.001
	31-40VS aged 55 and over	0.696*	<.001
Price	20-30VS41-55	0.590*	<.001
	20-30VS aged 55 and over	0.972*	<.001
	31-40VS41-55	0.628*	<.001
	31-40VS aged 55 and over	1.010*	<.001
	41-55VS aged 55 and over	0.381*	<.001
Place	20-30VS41-55	0.900*	<.001
	20-30VS aged 55 and over	1.145*	<.001
	31-40VS41-55	0.816*	<.001
	31-40VS aged 55 and over	1.061*	<.001
Promotion	20-30VS41-55	0.632*	<.001
	20-30VS aged 55 and over	0.857*	<.001
	31-40VS41-55	0.654*	<.001
	31-40VS aged 55 and over	0.880*	<.001
People	20-30VS41-55	0.030*	<.001
	20-30VS aged 55 and over	1.251*	<.001
	31-40VS41-55	0.699*	<.001
	31-40VS aged 55 and over	1.119*	<.001
	41-55VS aged 55 and over	0.420*	<.001

Table 6 Age Group LSD Post hoc test results (By Dependent Variable) (continued)

dependent variable	Group comparisons with significant differences(*p＜0.05）	Difference from the corresponding mean	P
Process	20-30VS41-55	0.829*	<.001
	20-30VS aged 55 and over	1.172*	<.001
	31-40VS41-55	0.707*	<.001
	31-40VS aged 55 and over	1.050*	<.001
	41-55VS aged 55 and over	0.342*	<.001
physical Evidence	20-30VS41-55	0.860*	<.001
	20-30VS aged 55 and over	1.144*	<.001
	31-40VS41-55	0.735*	<.001
	31-40VS aged 55 and over	1.019*	<.001

*Denotes a significance level of 0.05 for the difference in mean values.

2)Regional Grouping Analysis

Regions were categorised into three groups: tier-one cities, new tier-one cities, and tier-two cities. Table 7 demonstrates significant differences (P < 0.001) across all seven elements of the 7Ps between these regions, supporting the validity of H2b. Region exerts a significant moderating effect on customer satisfaction, with consumers across different city tiers exhibiting systematic differences in their perceptions of each 7P dimension. These disparities are most pronounced in the dimensions of price, place, people, and physical evidence.

Table 7 Summary of Post-Event LSD Inspections by Region

dependent variable	Group comparisons with significant differences(*p＜0.05）	Difference from the corresponding mean	P
Product	Tier-1 Cities vs Tier-2 Cities	0.664*	<.001
	New 1-tier cities vs Tier-2 Cities	0.678*	<.001
Price	Tier-1 Cities vs Tier-2 Cities	0.889*	<.001
	New 1-tier cities vs Tier-2 Cities	0.910*	<.001
Place	Tier-1 Cities vs Tier-2 Cities	1.146*	<.001
	New 1-tier cities vs Tier-2 Cities	0.917*	<.001
Promotion	Tier-1 Cities vs Tier-2 Cities	0.953*	<.001
	New 1-tier cities vs Tier-2 Cities	0.917*	<.001
People	Tier-1 Cities vs Tier-2 Cities	1.077*	<.001
	New 1-tier cities vs Tier-2 Cities	1.007*	<.001
Process	Tier-1 Cities vs Tier-2 Cities	1.133*	<.001
	New 1-tier cities vs Tier-2 Cities	1.042*	<.001
physical Evidence	Tier-1 Cities vs Tier-2 Cities	1.015*	<.001
	New 1-tier cities vs Tier-2 Cities	1.045*	<.001

*Denotes a significance level of 0.05 for the difference in mean values.

3)Income Level Grouping Test

Investigating satisfaction differences across seven factors among consumers of varying income levels, income brackets were categorised into five groups: ¥100,000–200,000, ¥200,000–400,000, ¥400,000–600,000, ¥600,000–1,000,000, and over ¥1,000,000. Analysis results are summarised in Table 8 Key Findings. Significant differences (P < 0.001) were observed across all seven dimensions between income groups. Hypothesis H2c holds.

The overall trend indicates that higher income correlates with more positive overall satisfaction ratings for the Black Swan brand, most notably in the areas of price, places, and process.

Table 8 Summary Table of Key Results from LSD Post-hoc Tests for Income Groupings

dependent variable	Typical Group Comparison	Difference from the corresponding mean	P
Product	CNY100000-CNY200000VSover CNY1000000	-1.294*	<.001
Price	CNY100000-CNY200000VSover CNY1000000	-1.877*	<.001
Place	CNY100000-CNY200000VSover CNY1000000	-1.497*	<.001
Promotion	CNY100000-CNY200000VSover CNY1000000	-1.542*	<.001
People	CNY100000-CNY200000VSover CNY1000000	-1.471*	<.001
Process	CNY100000-CNY200000VSover CNY1000000	-1.606*	<.001
physical Evidence	CNY100000-CNY200000VSover CNY1000000	-1.653*	<.001

*Denotes a significance level of 0.05 for the difference in mean values.

The empirical analysis results in Table 9 confirm all proposed hypotheses. H1a–H1g demonstrate that all seven marketing elements exert a significant positive influence on customer satisfaction. H2a–H2c reveal that consumer characteristic variables—age, geographical distribution, and income level—exhibit distinct differential effects on satisfaction across various marketing mix dimensions.

Table 9 Summary of research hypothesis results

	Hypothesis	Result
H1a	The product has a significant positive impact on customer satisfaction.	Accept
H1b	Price has a significant positive impact on customer satisfaction.	Accept
H1c	Place has a significant positive impact on customer satisfaction.	Accept
H1d	Promotion has a significant positive impact on customer satisfaction.	Accept
H1e	People has a significant positive impact on customer satisfaction.	Accept
H1f	Process has a significant positive impact on customer satisfaction.	Accept
H1g	Physical Evidence has a significant positive impact on customer satisfaction.	Accept
H2a	Significant differences exist among consumers of different age groups regarding each element of the 7Ps marketing mix.	Accept
H2b	Significant differences exist among consumers in different geographical segments across the various elements of the 7Ps marketing mix.	Accept
H2c	Significant differences exist among consumers of varying income levels across the elements of the 7Ps marketing mix.	Accept

6. Conclusion

6.1 Analysis of the Impact of 7P Marketing Elements on Customer Satisfaction

All elements of the 7P marketing mix exert a significant positive influence on customer satisfaction, though the degree of impact varies. Among these, personnel, process, and physical evidence exert the most pronounced effect on customer satisfaction, while product and price have a comparatively lesser influence. This finding indicates that for Black Swan Cake, the professionalism of service procedures and the quality of staff service represent key factors in enhancing customer satisfaction.

The reasons for the product's limited influence can be explained from three perspectives:

1) Black Swan Cake's premium brand positioning leads customers to implicitly assume its products are of superior quality. Consequently, product quality becomes a foundational attribute in satisfaction assessments, with customers placing greater emphasis on innovation and variety.

2) Within the digital marketing landscape, consumer purchasing decisions are increasingly driven by a product's ‘social value’ and ‘status symbol’ attributes, which take precedence over product quality.

3)digital marketing relies heavily on visual communication and social media sharing. However, the quality of the product and the superiority of its raw materials are difficult to fully convey through visual means alone, thereby diminishing their direct impact on satisfaction levels.

6.2 Analysis of Differences in Satisfaction Levels According to Demographic Characteristics

The validation results for H2 reveal significant differences in satisfaction levels across the 7Ps of marketing among consumer groups with varying demographic characteristics, specifically manifested as follows:

From an age perspective, satisfaction levels generally decline among older consumer groups, with particularly pronounced differences observed in dimensions closely linked to digitalisation, such as places, processes, and tangible displays. This may be attributable to older individuals' lower level of adaptation to digital tools.

From a geographical perspective, there exists a positive correlation between urban development levels and satisfaction ratings, with consumers in tier-one and emerging tier-one cities exhibiting higher satisfaction than those in tier-two and tier-three cities. This suggests that Black Swan Cake should adopt tailored regional strategies and implement differentiated management approaches when formulating market tactics.

From the perspective of income levels, consumers with higher incomes express more positive overall satisfaction ratings towards Black Swan brands, particularly in terms of price, distribution places, and the purchasing process. High-income groups demonstrate lower price sensitivity, placing greater emphasis on the quality assurance and service experience delivered by the brand, whereas low-income groups are more focused on price and the convenience of distribution places.

7. Limitations and future research directions

The representativeness of the sample has limitations: Black Swan Cake's physical stores and delivery coverage span a relatively narrow range of cities. The geographical concentration of this study's sample sources primarily encompasses first-tier cities such as Shanghai, Chengdu, Hangzhou, and Shenyang, failing to adequately cover consumer groups in second- and third-tier cities and broader regions. This may limit the generalisability of the research conclusions. Future studies could expand to include more cities and regions with varying levels of economic development, ideally covering all major tiers of cities nationwide.

Measurement metrics exhibit subjectivity: Certain metrics assessing customer satisfaction and marketing elements within this research rely on consumers' subjective feedback. Whilst data reliability was ensured through validity and reliability testing, subjective evaluations may still be influenced by individual emotions, cognitive biases, and other factors. Future research could collect data from diverse demographic groups to enrich the model's applicability scenarios, thereby expanding its operational boundaries and enhancing its explanatory power within complex market environments.

Research depth requires enhancement: Due to limited access to details regarding the implementation of marketing strategies, operational data, and management models within the Black Swan Cake enterprise, coupled with the absence of in-depth interviews with internal personnel (such as R&D staff, sales personnel, and managers), the analysis of the intrinsic mechanisms through which marketing elements influence customer satisfaction remains insufficient. failing to fully reveal the practical challenges and optimisation potential during strategy implementation. Methods such as stepwise regression analysis and common method bias testing could be introduced to validate the model's robustness and the reliability of the hypotheses from multiple dimensions, thereby enhancing the persuasiveness of the research conclusions.

8. Acknowledgements

I would like to express my sincere gratitude to my supervisor, Professor Guo, for his attention and guidance throughout the writing process, which enabled me to complete the thesis on schedule. I would also like to thank my other advisors for their suggestions, which have allowed me to continuously learn and improve my professional knowledge. Finally, I thank my family for their unwavering support and encouragement, supporting every choice I have made.

References

Bitner, M J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing*, *56*(2): 57-71. https://doi.org/10.1177/002224299205600205

Cropanzano, R., Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management, 31*(6): 874-900. https://doi.org/10.1177/0149206305279602

East, R., Singh, J., Wright, M., & Vanhuele, M. (2016). *Consumer behaviour: Applications in marketing*(3rd ed.). London: Sage Publications Ltd.

Godey, B., Pederzoli, D., Aiello, G., Donvito, R., Wiedmann, K. P., & Hennigs, N. (2013). A cross-cultural study of the role of income and price in the marketing of luxury brands. *Journal of Global Marketing, 26*(5), 273–287. https://doi.org/10.1080/08911762.2013.818886

Gronroos, C. (2007). Service management and marketing: Customer management in service competition (3rd ed.). Chichester, England: John Wiley & Sons.

Hennig-Thurau, T. (2004). Customer orientation of service employees: Its impact on customer satisfaction, commitment, and retention. *International Journal of Service Industry Management, 15*(5), 460-478. https://doi.org/10.1108/09564230410564944

Ilieș, V. I. (2018). Digital communication strategies in horeca industry. *Professional communication and translation studies*, (11), 21-31. https://doi.org/10.59168/PZAP7609

Kotler, P., & Keller, K. L. (2012). *Marketing management (14th ed.)*. Upper Saddle River, NJ: Pearson.

Kotler, P., Kartajaya, H., & Setiawan, I. (2017). *Marketing 4.0: Moving from traditional to digital*. Hoboken, NJ: Wiley.

Neslin, S. A., Jerath, K., & Bodapati, A. (2014). The interrelationships between brand and channel choice. *Marketing Letters, 25*(3), 319-330. https://doi.org/10.1007/s11002-013-9256-z

Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of marketing research*, *17*(4), 460-469. https://doi.org/10.1177/002224378001700405

Palmer, A. (2021). *Principles of services marketing*(8th ed.). McGraw-Hill Education.

Panzone, L., Di Vita, G., Borla, S., & D'Amico, M. (2016). When consumers and products come from the same place: preferences and WTP for geographical indication differ across regional identity groups. *Journal of International Food & Agribusiness Marketing*, *28*(3), 286-313. https://doi.org/10.1080/08974438.2015.1110549

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, *49*(4), 41–50. https://doi.org/10.1177/002224298504900403

Rosenbaum, M. S., & Massiah, C. A. (2011). An expanded servicescape perspective. *Journal of Service Management, 22*(4), 471-490. https://doi.org/10.1108/09564231111155088

Sánchez-Fernández, R., & Iniesta-Bonillo, M. Á. (2007). The concept of perceived value: a systematic review of the research. *Marketing Theory, 7*(4), 427-451. https://doi.org/10.1177/1470593107083165

Schiffman. L. G., & Kanuk, L. L. Kanuk L L. (2018). Consumer behavior. Pearson.

Tax, S. S., Brown, S. W., & Chandrashekaran, M. (1988). Customer evaluations of service complaint experiences: Implications for relationship marketing. *Journal of marketing*, *62(1)*, 60-76. https://doi.org/10.1177/002224299806200205

Völckner, F. (2008). The dual role of price: Decomposing consumers' reactions to price. *Journal of the Academy of Marketing Science, 36*(3), 359-377. https://doi.org/10.1007/s11747-008-0098-9

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1985). Problems and strategies in service marketing. *Journal of Marketing*, *49*(4): 33-46. https://doi.org/10.1177/002224298504900403

Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *Journal of marketing*, *52*(3), 2-22. https://doi.org/10.1177/002224298805200302