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Social Stratification of Coffee consumption Groups in Guangxi, Research on the Mechanism of Influence on Consumption Behavior: The Moderating Role of Price Sensitivity

by

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Abstract

With the rapid growth of China's coffee market and the increasing popularity of coffee in regions like Guangxi, understanding consumer behavior has become essential for both researchers and practitioners. While existing studies often emphasize the health benefits, cultivation processes, or emotional motivations for coffee consumption, the role of socio-economic factors remains underexplored. This study aims to investigate the influence of social stratification on coffee purchasing behavior, with price sensitivity examined as a moderating variable. Grounded in the theories of Karl Marx and Max Weber, and supported by domestic research on social stratification, the study identifies education level, occupation, income, and vehicle ownership as indicators of social class. Lewin's behavior model provides the theoretical framework, positioning consumer behavior as the dependent variable and price sensitivity as a moderating factor. Data were collected through a survey of 412 coffee consumers in Guangxi and analyzed using correlation analysis, cross-tabulation, and regression models. The findings reveal that while social stratification alone does not significantly impact coffee purchasing behavior, price sensitivity plays a significant moderating role. Individuals with high price sensitivity demonstrate clearer behavioral differences across social classes. Age and income were found to significantly influence coffee preferences and price tolerance, while occupation and education showed more limited effects. Interestingly, consumers with greater coffee awareness tend to be more price-sensitive, reflecting a higher level of evaluative involvement. This research contributes to the literature by linking social stratification with price sensitivity in shaping consumer decisions. It provides practical insights for coffee brands in terms of market segmentation, branding strategies, and ethical pricing. Recognizing the nuanced role of price perception can help brands engage more effectively with diverse consumer groups in China's evolving coffee culture.

Keywords: Social Stratification, Consumer Behavior, Price Sensitivity, Coffee Consumption, Market Segmentation

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1. Introduction

1.1 Background and Importance of the Problem

Since the introduction of coffee into the Chinese market over a century ago, the industry has experienced substantial growth, and coffee consumption has become a fashionable trend avidly embraced by consumers. According to data from iResearch, the market size of China's coffee industry reached 381.7 billion RMB in 2021. During the first half of 2022, the growth rate of coffee shops in Guangxi surged by 265%, with a total of 7,993 coffee-related businesses registered across 14 cities in the region. Influenced by Western lifestyles, coffee, as an imported product, has long been regarded as a symbol of a refined, high-quality lifestyle. Over time, coffee consumption has evolved into a means of savoring the moment. From the early sentiment of "No matter how busy, let's share a coffee together" to the contemporary humor of "Coffee is the cure for the daily grind, a cup of cold brew to get by," coffee has transitioned into a habitual consumer product, often placing a notable financial demand on consumers. Despite the popularity and growth of coffee consumption in Guangxi and the consistent interest from industry and academia alike, most research on coffee has focused on health impacts, both positive and negative, as well as agricultural aspects like cultivation, preservation, sorting, and roasting, or on consumer behavior issues such as motives and emotional responses. This study aims to fill a gap by investigating the relationship between social stratification and purchasing behavior among coffee consumers in Guangxi, assessing the moderating role of price sensitivity, supplementing prior research findings, and contributing new insights into consumer behavior analysis.

1.2 Research Question

The study seeks to address two core questions: first, how to model the social stratification profile of coffee consumers in Guangxi; and second, how different social strata perceive and accept varying price ranges for coffee. Additionally, it examines the moderating effect of price sensitivity on the relationship between social stratification and purchasing behavior within coffee consumer groups.

1.3 Research Objective

This study aims to investigate the influence of social stratification on coffee purchasing behavior among consumers in Guangxi, while also assessing how price sensitivity moderates this relationship. The objective is to provide valuable insights for consumer behavior research and market segmentation in the Guangxi region, supplementing existing research by exploring the underlying social and economic drivers of coffee consumption patterns.

2. Literature Review

2.1 Related Concepts and Theories

2.1.1 Social Stratification

Social stratification refers to the hierarchical ordering of social relationships, categorized into various levels across different eras based on diverse criteria. The theoretical foundations trace back to Karl Marx's class theory and Max Weber's multidimensional stratification theory. Lu Xueyi

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proposed a social stratification system for China based on occupational classification, dividing society into ten tiers across five levels. Li Li simplified social stratification into three broad classes (upper, middle, and lower) using occupation, education, and income scores. Other scholars, such as Xie Jianshe and Huang Jiangquan, focus on household registration emphasizing the rural-urban divide, especially concerning migrant workers. With societal changes, stratification criteria have diversified, incorporating social and cultural influences. This study adopts education level, occupation, income, and household vehicle ownership as variables for stratification.

2.1.2 Consumer Behavior

Consumer behavior is shaped by individual cognitive patterns, which can vary with different situations, making a single model difficult to apply universally. Following Watson's stimulus-response (S-R) theory, Kurt Lewin introduced the behavioral formula B = f(P, E), where behavior (B) results from the interaction between the person (P) and environment (E). Personal factors such as age, education, occupation, and income significantly influence consumer behavior. Products' attributes are categorized as internal (usability, quality, functionality) and external (price, packaging, brand, reputation).

2.1.3 Price Sensitivity

Price sensitivity refers to how consumers perceive and respond to price changes or differences. Factors affecting price sensitivity are divided into consumer factors (age, product familiarity, product cost proportion in budget, price expectations, perceived value) and product factors (availability of substitutes, product significance, uniqueness, usability, switching costs). Marketers may tailor strategies based on different consumer price sensitivities.

2.2 Literature Surveys

Previous research indicates a positive correlation between price sensitivity and the proportion of product cost within consumer groups, showing that higher-income groups tend to have lower price sensitivity, while lower-income groups exhibit higher sensitivity. Coffee, originally valued mainly for its stimulating effects, has evolved into a product with unique emotional significance and daily life importance.

Studies also highlight that social stratification influences consumption patterns, and that price sensitivity plays a moderating role in how social strata engage with consumer products. These findings suggest that consumer behavior, especially in the coffee market, is shaped by both social hierarchy and economic factors, with price sensitivity acting as a key variable.

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2.3 Conceptual Framework

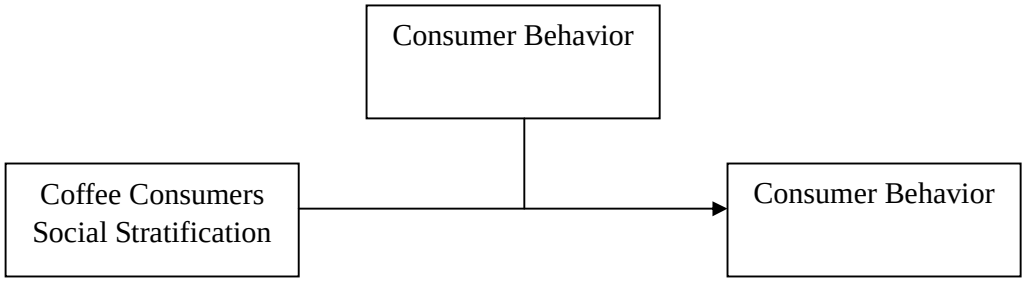

Figure 1 Conceptual Framework

2.4 Research Hypothesis

Based on the reviewed theories and literature, the study proposes the following hypotheses:

H1: There is a positive correlation between social stratification and consumer behavior.

H2: Social stratification positively influences consumer behavior through price sensitivity.

H3: Price sensitivity negatively moderates the role of coffee's importance within consumer group stratification.

Table 1 Relationship between Price Sensitivity and Consumer-Related Factors

Consumer Factor	**Age**	**Product Familiarity**	**Price Proportion**	**Price Change Expectation**	**Value Perception**
Price Sensitivity	Negative	Positive	Positive	Negative	Negative

Table 2 Relationship between Price Sensitivity and Product-Related Factors

Product Factor	**Substitutes**	**Importance**	**Uniqueness**	**Usability Attributes**	**Switching Costs**
Price Sensitivity	Positive	Negative	Negative	Positive	Negative

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3. Research Methodology

3.1 Research Design

This study employs a quantitative research design using a structured questionnaire developed based on established scales and surveys. The questionnaire was customized to reflect the developmental level of the Guangxi region and the current status of the coffee industry. Measurement variables include nominal, ordinal, and ratio types, with responses recorded on a five-point Likert scale where 1 represents “strongly disagree” and 5 represents “strongly agree.” To ensure the reliability and validity of the instrument, a pilot survey was conducted with 10 randomly selected coffee consumers. Feedback from this pilot was analyzed and used to refine the questionnaire, resulting in the finalized version used for the formal survey.

3.2 Population and Sample

The target population for this study comprises coffee consumers in the Guangxi region. The formal survey was distributed online via Wenjuanxing, a widely used survey platform in China. A total of 413 questionnaires were issued, with 412 deemed valid after excluding one response due to significant logical inconsistencies. This resulted in a valid response rate of 99.76%. Among the respondents, 39.8% were male and 60.2% were female. Regarding educational background, 5.1% had attained a high school education or below, 74.5% had a college degree or equivalent, and 20.4% held graduate degrees or higher. Occupational classifications followed standards set by the Ministry of Human Resources and Social Security, with respondents distributed across various professions including government agency heads, professionals, clerical staff, service workers, students, and retirees. The annual personal income levels of respondents varied widely, ranging from below 10,000 RMB to above 200,000 RMB. Compared to the general population of Guangxi, this sample reflects relatively higher education and income levels, indicating a strong purchasing power that aligns well with the typical profile of coffee consumers.

3.3 Research Instruments

The research instrument consisted of a questionnaire that measured social stratification and consumer behavior variables. Social stratification was assessed using criteria such as education level, occupation, income, economic source, employment status, and household vehicle ownership. Consumer behavior was measured through variables including purchasing frequency, reasons for purchase, product characteristics, purchasing context, product price, and factors influencing consumption decisions. All items were scored on a five-point Likert scale to capture the degree of agreement or importance. The reliability of the questionnaire items was tested using Cronbach’s alpha, and the validity of the scale was examined through the Kaiser-Meyer-Olkin (KMO) test and Bartlett’s test of sphericity to ensure the appropriateness of factor analysis.

3.4 Data Collection

Data collection was conducted through an online survey distributed via the Wenjuanxing platform. The survey was designed to be user-friendly to encourage honest and accurate responses. A pilot test preceded the formal data collection to verify and improve the questionnaire’s clarity and reliability. After the pilot adjustments, the formal survey collected 412 valid responses, providing a robust dataset suitable for analysis of consumer behavior and social stratification in Guangxi’s coffee market.

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3.5 Statistics Used for Data Analysis

The data analysis included reliability testing using Cronbach's alpha to assess the internal consistency of the measurement scales. Validity was confirmed through the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity, which evaluated the adequacy of the data for factor analysis. Descriptive statistics were used to summarize demographic information, while inferential statistics, including correlation and moderation analyses, were applied to examine the relationships among social stratification, price sensitivity, and consumer behavior. These statistical methods allowed for a rigorous evaluation of the study's hypotheses and research questions.

4. Data Analysis and Findings

4.1 Introduction

Reliability Testing: Cronbach's alpha was used to assess the reliability of the scales employed in this study. The Cronbach's alpha values for social stratification, consumer behavior, and price sensitivity ranged from 0.74 to 0.82, all exceeding the threshold of 0.7, indicating satisfactory reliability.

Validity Testing: Convergent validity was assessed using standardized factor loadings, with all loadings exceeding 0.5 and p-values less than 0.001. The t-values were above 2, and the Average Variance Extracted (AVE) values exceeded 0.5, with AVE square root values ranging from 0.817 to 0.986 and Composite Reliability (CR) values from 0.855 to 0.991. These results indicate strong convergent validity for the scales used.

Table 3 Reliability and Validity Testing

Variable	Measurement Item	Standardized Factor Loading	p-value	t-value	AVE	AVE Square Root	CR
Social Stratification Cronbach's α=0.739	Q11	0.86	0.000***	12.189	0.667	0.817	0.855
	Q12	0.923	0.000***	14.237			
	Q13	0.641	0.000***	29.431			
Consumer Behavior Cronbach's α=0.982	Q19	0.692	0.000***	6.91	0.860	0.927	0.991
	Q32	0.798	0.000***	6.425			
	Q3101	0.914	0.000***	7.780			
	Q3102	0.911	0.000***	6.452			
	Q3103	0.92	0.000***	5.239			
	Q3104	0.915	0.000***	4.434			
	Q3105	0.946	0.000***	7.784			
	Q3106	0.946	0.000***	7.784			
	Q3107	0.966	0.000***	9.874			
	Q3108	0.957	0.000***	3.808			
	Q3109	0.917	0.000***	3.784			
	Q31010	0.979	0.000***	9.422			

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	Q31011	0.953	0.000***	8.483			
	Q31012	0.985	0.000***	9.344			
	Q31013	0.987	0.000***	8.943			
	Q31014	0.976	0.000***	3.843			
	Q31015	0.950	0.000***	3.234			
	Q31016	0.933	0.000***	8.700			
Price Sensitivity Cronbach's α=0.963	q3301	0.945	0.001***	3.422	0.971	0.986	0.872
	q3302	0.945	0.000***	9.629			
	q3303	0.959	0.000***	12.236			
	q3304	0.891	0.000***	6.015			
	q3305	0.927	0.000***	10.349			

Note: *p < 0.05, **p < 0.01, ***p < 0.001, same applies below.*

4.2 Data Analysis of the Quantitative Data

4.2.1 Correlation Analysis

The correlations among key variables are presented in Table 4. Spearman's correlation analysis indicates a significant positive correlation between social stratification and price sensitivity ($r = 0.124$, $0.01 < p < 0.05$), showing a one-star level of significance. Additionally, a strong positive correlation is observed between consumer behavior and price sensitivity ($r = 0.915$, $p < 0.01$), with a two-star level of significance. These results provide preliminary support for the hypotheses proposed in this study.

Table 4 Correlation Analysis among Key Variables

Variable	Social Stratification	Consumer Behavior	Price Sensitivity
Social Stratification	1	.129**	.124*
		0.009	0.012
Social Stratification		1	.915**
			0.000
Price Sensitivity			1

Note: *Pearson Correlation, Significant Level. (Two-Tailed)

From the perspective of social stratification, this study uses age, educational level, occupation, and individual and household annual income as independent variables. A cross-tabulation analysis was conducted for these variables against six coffee purchasing factors: personal preference, coffee price, coffee quality, tendency to purchase coffee at regular price, tendency to purchase coffee at promotional price, and acceptable coffee price range. Table 5 presents the results of the Pearson Chi-square values and p-values for these associations.

The results in Table 5 indicate significant differences across age groups concerning the six coffee purchasing factors, suggesting notable variance in purchasing considerations and acceptable price ranges among different age groups. Educational level shows a one-star significance with personal preference, indicating a difference between the two. Occupation displays a two-star

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significance with regard to coffee price consideration, implying a relatively significant difference. Individual annual income shows a one-star significance for personal preference and regular price purchase tendency, suggesting discernible differences for both factors. Furthermore, both individual and household annual income exhibit three-star significance with acceptable coffee price range, underscoring substantial differences in coffee price acceptability based on income levels.

Table 5 Correlation Analysis of Social Stratification Variables

Variable	Age Group	Educational Level	Occupation	Individual Income	Household Income
Personal Preference	87.640***	38.108*	53.313	44.544*	30.478
Price	66.329***	29.717	67.564**	28.030	34.634
Quality	51.174*	18.905	37.360	21.452	15.600
Tendency to Buy at Regular Price	55.130**	21.461	51.520	44.364*	26.977
Tendency to Buy at Promotional Price	55.719***	20.624	36.563	23.418	24.962
Acceptable Coffee Price Range	77.373*	42.291	82.612	87.366***	89.594***

4.2.2 Hypothesis Testing Analysis

Main Effect Test**:** Models 1 and 2 in Table 6 were used as the tools for hypothesis testing. Model 1 is the baseline model, including only control variables for the dependent variable, while Model 2 builds on Model 1 by incorporating the independent variable, social stratification. In Model 2, the coefficient $\beta1 = 0.033$, with $p > 0.1$, indicating that H1 is not supported.

Moderating Effect Test**:** Model 3 extends Model 2 by adding the moderating variable, price sensitivity. Here, the coefficient $\beta2 = 0.916$, with $p < 0.001$, indicating significant regression and supporting H2. This result suggests that higher price sensitivity strengthens the positive relationship between consumer social stratification and consumer behavior.

Table 6 Main Effect Test Results and Moderating Role of Price Sensitivity

Variable	Consumer Behavior		
	Model 1	**Model 2**	**Model 3**
Control Variables			
Gender	.042	.033	.033
Age	-.159	-.143	.002
Education	.046	.054	-.066
Years of Employment	-.073	-.069	.041
Individual Annual Income	-.063	-.179	-.017
Household Annual Income	.093	-.079*	.016
Independent Variable	.042		
Social Stratification		.033	.015
Moderating Variable			

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Price Sensitivity			.916***
R^2	.031	.049	.842
ΔR^2	.031	.018	.793
F	2.134	2.965	267.619***
ΔF	2.134	7.741	2016.648***

4.3 Summary of the Results

The results of this study provide important insights into the relationship between social stratification and consumer behavior in coffee consumption, with price sensitivity acting as a key moderating factor. Reliability and validity testing confirmed that all measurement scales used in the study were statistically sound and met established thresholds. Correlation analysis revealed a weak but statistically significant relationship between social stratification and price sensitivity, and a strong, highly significant relationship between consumer behavior and price sensitivity. These results suggest that consumers' sensitivity to price is closely tied to their behavioral choices, and to a lesser extent, their social status. Cross-tabulation analysis highlighted age and income as the most influential social stratification variables, showing significant associations with all six coffee purchasing factors, including acceptable price range and preference for promotional pricing. Educational level and occupation had limited but notable effects on specific factors like personal preference and coffee price considerations. Hypothesis testing showed that social stratification alone does not have a significant direct effect on consumer behavior. However, the inclusion of price sensitivity as a moderating variable revealed a strong and significant positive effect, indicating that individuals from different social strata exhibit varied consumer behaviors when price sensitivity is high. These findings underscore the importance of considering both socioeconomic characteristics and psychological price perceptions in understanding consumer decision-making in the coffee market.

5. Conclusion, Discussion, and Recommendation

5.1 Conclusion

This study identifies that age significantly impacts coffee consumption, with older individuals, who generally have higher income, being more willing to accept higher-priced coffee and placing greater importance on quality and personal preference. Education level and occupation do not strongly correlate with coffee consumption behavior, though occupational differences influence consumers' perceptions of coffee and their price sensitivity. Notably, consumers with higher coffee awareness tend to be more price-sensitive. Despite demographic differences, coffee remains a popular stimulant and emotional value source in modern social and professional life, leading to generally low price sensitivity toward coffee. While social stratification alone does not significantly affect coffee consumer behavior, price sensitivity positively moderates this relationship.

5.2 Discussion

Building on Marx's and Weber's theories of social stratification, along with domestic research post-reform, this study used educational attainment, occupation, income, and vehicle ownership as indicators of social stratification. Lewin's behavior formula guided the framework by treating consumer behavior as dependent on both individual and environmental factors, with price sensitivity as a moderating variable. The empirical analysis based on 412 coffee consumers revealed

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that social stratification does not directly influence coffee consumption behavior but interacts with price sensitivity to affect outcomes. The positive correlation between price sensitivity and consumer awareness suggests that knowledge plays a crucial role in shaping price responses. The results highlight coffee's multifaceted role beyond mere consumption, as a stimulant and social symbol, explaining the overall low sensitivity to price despite stratification differences.

5.3 Recommendation

Coffee brands should recognize the moderating role of price sensitivity and tailor marketing strategies to accommodate consumers with varying price sensitivities.

Brands are encouraged to enhance product uniqueness through specialty products, quality improvements, innovative formats, and enriched brand meaning, while fostering a strong corporate culture and positive industry environment.

Ethical practices are essential: brands should set fair prices, avoid exploiting information asymmetry to justify high prices, and build a reputable corporate image to gain consumer trust.

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