



Mechanism of Price Anchoring in Dining Consumption Decision-Making: An Analytical Study on Pricing Strategies

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Abstract. The price anchoring distortion effect on restaurant dining choice has been a central topic of behavioral economics research. Empirical evidence proved that specially positioned expensive reference products in menu design will have a substantial impact on willingness to pay for consumers. Nevertheless, literature still leaves behind several research gaps concerning the numeric influence of an anchor in dining-in Chinese restaurants, its net gains as welfare impacts to middle-to-low earners, and the neurophysiology of decisions' processes. In the present study we explore empirically the behavioral intervention mechanism of an anchoring price in restaurants in real world settings. This study's methodology consists of: (1) the acquisition of 3000 orders from three mid-ranged Beijing restaurants in a span of four weeks that employ a high-anchored treatment item as a part of their daily routine as well as conducting an actual natural experiment; (2) applying DID and eye-tracking to a representative sample of 100 customers. It is theoretically implied that anchors behavior is purely welfare transfers through behavioral biases, therefore it needs to introduce a MATI. Reverse rebellion results of students' heterogeneity give evidence of micro-scale adjustments of the theory "nudge". This work proposes an innovative framework: an intersection point between behavioral economics and operational pricing is suggested. Because "fake anchors" could decrease the welfare of consumers.

Keywords: Price Strategy, Price Anchoring, Menu Engineering, Compromise Effect, Consumer Welfare.

1 Introduction

1.1 Research Background and Topic

The catering market in China has expanded in recent years and the industry scale increased to up to 5 trillion yuan in 2024 with unprecedentedly fierce market competition. However, in the consumer decision-making model, price information is always the greatest influencing factor. As one of the important concepts in behavioral economics, price anchoring has played an important role in catering enterprises' pricing strategies optimization. Price anchoring refers to the phenomenon that in

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terms of evaluating the worth of a product, consumers have a certain baseline price for reference (i.e., the "anchoring point"), which then affects their ultimate purchasing intention.

For the menu of the dining scene, as the primary channel of cost information, the pricing strategy design of the menu plays a direct role in prompting consumers' choices. For example, if the price of menu dishes has a higher value, then the sensitivity of consumers to the price of other dishes will weaken. In our reality, this is more common in the chain restaurant brands. Nevertheless, the specific mechanism of price anchoring in the catering market of China, the divergent response by different types of consumers and its real effects on consumer welfare are not systematically studied in the existing works, which is the core focus of this study.

1.2 Research Objectives and Significance

The purpose of this study is to trace the mechanism of price anchoring during the catering consumption decision with theoretical analysis and empirical examination, specifically to include: Explain the price anchoring points generated path of catering cases; Quantitatively analyze price anchoring points influence level of different groups of consumers in decision making; Compare price anchoring effect's dual nature of consumer happiness and operator; Finally, suggestions of an industry development strategy which considers the two factors of market performance and consumer well-being are presented.

At theoretical level, this study is an empirical research gap about price anchoring effect of domestic catering market in China. Theoretical research can provide the local revision basis of the "nudges theory" by introducing the analysis of socio-economic heterogeneity. In terms of practice, the research outcome can offer scientific cost-price reference for catering business entities [1].

1.3 Research Methods and Research Structure

This study adopts a three-dimensional research framework of "theoretical analysis - empirical testing - case verification":

The research employs several methodologies. Firstly, the literature research method involves systematically organizing theories pertinent to price anchoring and consumer behavior, leading to the establishment of an analytical framework. Secondly, an experimental research method was utilized, where a four-week natural experiment was conducted in three mid-range restaurants in Beijing, with the implementation of high-priced anchor dishes, resulting in the collection of 3,000 order data. Thirdly, data analysis was conducted using the difference-in-differences (DID) method to isolate anchor point effects, while also incorporating eye-tracking technology, with a sample size of 100, to analyze consumer decision-making paths. Lastly, a case analysis method was adopted, selecting typical brands such as Starbucks and Xiabei Noodle Village to validate the practical implications of the anchoring strategy [2].

This article first constructs an analytical framework through theoretical sorting. Secondly, by combining the cases of chain brands, analyze the current application status of price anchoring in the catering industry; Then, based on the experimental

data, quantitatively test the influence of anchor points on sales volume, consumer decision-making, and group differences; Then put forward targeted suggestions for the development of the industry; Finally, summarize the research conclusions and point out the future direction.

2 Literature Review

2.1 Definition and Formation Mechanism of Price Anchor Points

Price anchor point: A cognitive bias phenomenon that in an uncertain scenario, consumers adjust their opinions according to the first price information they receive and finally hold opinions heavily biased by the anchor value. For instance, imagine walking into a store and seeing a shirt priced at \$200; even if you're not interested in buying it, you might subconsciously use this price as a reference for judging other shirts in the store. Its formation mechanism originates from the "bounded rationality" theory: Due to the information asymmetry market environment, consumers are hard to effectively judge the actual value of catering products, and therefore, are inclined to obtain clear price information (e.g., expensive dishes on the menu) in order to complete the simplification of the decision-making behavior [3].

The intensity of the anchor point effect is influenced by three factors: the similarity between the anchor point and the target product (the anchoring effect of similar dishes is stronger); The significance of anchor points (for example, high-priced dishes at the top of the menu are more likely to become anchor points); Consumers' cognitive abilities (those with rich experience are less affected by anchoring). For instance, when consumers see the "Deluxe Double Set (688 yuan)" at the beginning of the menu, they will unconsciously use this price as a benchmark and think that the subsequent set priced at 388 yuan is "more cost-effective"[4].

2.2 Research Status and Existing Problem

In recent years, the catering industry pricing strategy changed from cost plus to the idea based on behavioral economics. Now the popular methods are below.

Value-oriented pricing: For instance, Haidilao enhances consumers' acceptance of prices through service value-added. Its per capita consumption is 30% higher than that of similar hot pot brands, yet it still maintains a high repurchase rate.

Price discrimination: For example, for the same hamburger, McDonald's charges different prices depending on whether it is breakfast time or a main meal (time differential anchors).

Anchors point combination strategy: It guides consumption through a ternary structure of " high-price anchor points + main products + low-price traffic-attracting items". The penetration rate of this model for chain brands is up to 76%.

Recent studies have shown that the anchor point strategy has a significant effect on increasing the average transaction value: for restaurants with reasonable anchor points, the average payment willingness of consumers will increase by 15% to 25%.

However, this conclusion is mostly based on Western markets, and local research in China still needs to be deepened.

The current research has three limitations: The current research has focused on the field of consumer behavior and pricing strategies, particularly within the context of the food and beverage industry. However, it has faced several limitations that this study aims to address. First, there is insufficient adaptability. The standardized products in the Western catering market (such as hamburgers) and the diversity of Chinese catering (such as the differences in Chinese cuisine) lead to differences in anchoring effects. Second, there is a lack of research on group heterogeneity, with insufficient attention paid to sensitive groups such as students and low-income groups. Thirdly, there is a lack of welfare impact analysis, and there is no definite conclusion on the controversy over whether the anchor point harms consumers' rights and interests. These gaps provide space for exploration for this study.

3 Current Application Status and Case Analysis of Price Anchor Points in the Catering Industry

3.1 Practice of Price Anchor Points for Chain Restaurant Brands

Top brands' anchor point strategies are already mature. The typical Starbucks' menu design is its best-seller, latte (RMB32) and America-no (RMB28), revenues exceeded 70%, the menu always has the 'Select Series' coffee price fluctuates between RMB48—68 as the anchor point. The comparative test results indicated that the number of consumers who selected the products with a price over 30 yuan decreased by 19% after we removed the high-price anchor point, thus verifying the effect of anchor points on price acceptance.

Xibei Oat Noodle Village adopts a "scenario-based anchor point": it prominently marks "Boss's Recommendation Scallion Braised Sea Cucumber (99 yuan)" on the menu, and its main dishes such as Oat Noodle Fish (46 yuan) and Grilled Lamb Chops (69 yuan) form a price gradient with it. Data shows that this strategy has raised per capital consumption from 65 yuan to 77 yuan, and the monthly order rate of the high-price anchor point itself is only 3.2%, indicating that its core function lies in serving as a "reference benchmark" rather than direct sales.

3.2 Differences in anchor Point Settings for Different business Formats

The anchor points strategies of fast food and high-end catering show differentiated characteristics:

The fast-food business model primarily relies on a "low-price anchor point + package premium" strategy, such as KFC's 9.9-yuan spicy chicken leg burger that guides consumers to choose a 29.9-yuan package including a burger, fries, and drink, with the package premium contributing 40% of the profit. In contrast, high-end dining establishments build anchor points on "high-priced individual items + service value-added," exemplified by a two-Michelin-starred restaurant offering a "private chef customized banquet" at 2,888 yuan per person, making a 1,288-yuan standard

meal appear cost-effective and accounting for 65% of sales [5]. Chinese-style main courses often employ a "middle anchor point" strategy, like Meizhou Dongpo Restaurant's "Dongpo Pork Elbow" at 88 yuan, complemented by "Sichuan-style Stir-fry" at 58 yuan and "Specialty Seafood" at 128 yuan, creating a balanced price range.

3.3 Analysis of Existing Problems

Some brands have the phenomenon of "overusing anchor points": A certain popular hot pot brand set "King Crab Platter (688 yuan)" in its menu, but the actual inventory only met the daily demand of two servings. The real purpose was to set off the ordinary seafood platter priced at 298 yuan. This "false anchor point" has led to a disconnection between consumers' expectations and their actual experiences. Within half a year, the number of related complaints has increased by 37%, and the brand's reputation has declined significantly. In addition, small and medium-sized restaurants in the lower-tier markets generally lack scientific anchor point design. Either the anchor point prices are too high, causing resistance, or the price difference between the anchor point and the main products is too small (less than 50%), resulting in the failure of the effect.

4 Analysis of Experimental Results

4.1 The Impact of Anchor Points on Sales Volume

Experimental data shows that after introducing high-price anchor points (with prices 2.2 times that of the main dishes), the sales structures of the three restaurants have undergone significant changes:

(1) High-priced anchor dishes: The average daily sales volume is only 1.2 servings, accounting for 1.8% of the total sales volume, indicating that its core function is for reference rather than sales.

(2) Main dishes (mid-price range): The average sales figure was 17.3%. Among them, a restaurant specializing in Sichuan cuisine saw its sales of dishes priced between 58 and 88 yuan increase by 22%.

(3) Low-priced dishes (under 30 yuan): Sales dropped by 8.5%, indicating that the anchor point has led some consumers to shift from the low-price range to the middle range.

Total sales: Average growth of 13.6%, with the average transaction value rising from 86 yuan to 98 yuan, verifying the positive impact of anchor points on revenue.

Table 1. Analysis of classified dishes sales data based on anchoring effect

Dish Category	Key Indicators	Data Details	Implications
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High-priced Anchor Dishes	Average daily sales volume	1.2 servings	Core function is for reference rather than driving actual sales.
	Percentage of total sales volume	1.8%	
Main Dishes (Mid-price Range)	Average sales growth rate	17.3%	Shows strong performance in the mid-tier segment, with Sichuan cuisine as a standout.
	Sales growth of Sichuan cuisine dishes (58-88 yuan)	22%	
Low-priced Dishes (Under 30 yuan)	Sales volume change rate	Decreased by 8.5%	Indicates consumer shift from low-price to mid-price range due to anchor pricing effect.
	Average growth rate	13.6%	
Total Sales	Average transaction value change	Increased from 86 yuan to 98 yuan	Verifies the positive impact of anchor pricing strategy on overall revenue and customer spending.

According to Table 1, the difference-in-differences analysis indicated that, after excluding interfering factors such as season and promotion, the net effect of the anchor point strategy on the sales volume of dishes in the middle price range was 14.2%, which was statistically significant ($P < 0.05$).

4.2 Consumer Decision-Making Path

Eye-tracking data reveals the microscopic process by which anchor points influence decision-making:

Gaze sequence: 78% of consumers first focus on the high-price anchor at the top of the menu, with an average gaze duration of 1.8 seconds, significantly longer than that of other dishes (0.9 seconds).

(2) Comparison frequency: The number of times consumers' gazes switched between anchor dishes and mid-priced dishes reached 3.2, which was 2.1 times that of low-priced dishes.

(3) Decision-making time: The average decision-making time for anchored menus is 4.6 minutes, which is 26% shorter than that for unanchored menus (6.2 minutes), indicating that anchors reduce decision-making uncertainty.

(4) Selection basis: Post-event interviews revealed that 63% of consumers admitted that "after seeing high-priced dishes, they felt that the mid-range prices were more reasonable", directly demonstrating the anchoring effect.

4.3 Analysis of Socio-economic Heterogeneity

The responses of different groups to anchor points show significant differences:

High-income individuals (with a monthly income of over 15,000 yuan) have shown a significant shift towards mid-priced dishes, with the proportion increasing from 52% to 67%, influenced by the anchor point. They are less price-sensitive and focus more on the "degree of matching dish." In contrast, students with monthly living expenses under 2,000 yuan exhibited a reverse resistance, with the proportion of those opting for low-priced dishes rising from 68% to 76%. Some students expressed concerns about overspending, stating, "When I see high-priced dishes, I deliberately avoid them." Middle-aged family groups were moderately influenced by the anchor point, with a 9% increase in the proportion of those selecting the middle price range, and they prioritize "family sharing" and a "balance between cost and effectiveness" in their decisions. This heterogeneity underscores that the anchor point effect is not universally applicable and necessitates a tailored strategy that accounts for the distinct characteristics of each target group [6].

5 Suggestions for the Development of the Catering Industry Based on the Anchor Effect

5.1 Build a Scientific Anchor Pricing System

Catering enterprises should follow the principle of "reasonable anchoring and value matching":

Firstly, anchor point price setting: In addition, it is suggested that the anchor point price is 1.8-2.5 times the main product price. For example, the average price of a main dish is 60 yuan, the anchor point price will be chosen in the range of 108—150 yuan, which is both having anchoring effect and is not too far from the consumer's mental price. Moreover, Authenticity of anchor point products: Ensure the regular stock of anchor point dishes (it is recommended that the inventory meets the daily demand of more than 5 servings), eliminate "false anchor points", and balance scarcity and credibility through "limited quantity but no shortage". In addition, Dynamic adjustment mechanism: Analyze the anchor point effect data every quarter. When the sales volume of the main product fluctuates by more than 10%, promptly change the anchor point dishes (such as from seafood to specialty meat) to maintain the freshness of the strategy.

5.2 Enhance the Transparency of Menu Information

To assist consumers in identifying the logic of price setting, it is crucial to clearly label the hierarchy of dishes on the menu. For instance, Xibei Oat Noodle Village effectively distinguishes between "anchor dishes," "main recommended dishes," and "economical and practical" options. Additionally, disclosing the cost structure by marking the cost proportion of core ingredients for high-priced anchor dishes, such as indicating "The cost proportion of ingredients for this product is 42%," can reduce

information asymmetry and enhance the perception of price rationality. Furthermore, a group adapting design should be implemented by offering "de-anchoring" simple menus tailored to sensitive groups, including students and the elderly. For example, student canteens or fast-food chains like McDonald's could provide menus with lower-priced set meals, focusing on essential dishes and straightforward pricing to accommodate these specific demographics [7-9].

5.3 Promote Industry Norms and Technological Innovation

To establish the Menu Transparency Index (MATI), industry associations lead the initiative by rating restaurants based on five dimensions, including the clarity of price markings, the authenticity of anchor points, and the openness of cost information. This effort is complemented by the empowerment of digital technology, which personalizes anchor points through a membership system, presenting high-end anchor points to high-income members based on their consumption records and pushing cost-performance recommendations to student members. Furthermore, regulatory coordination is essential, as market supervision departments can incorporate "false anchor points" into the scope of handling complaints in the catering industry, regularly releasing brand lists to guide healthy competition and publicize brands that have repeatedly violated regulations, thereby protecting consumers' rights and interests [10, 11].

6 Conclusion

This study, as a result of theory analysis, case validation and experiment testing, demonstrates the price anchoring mechanism in the consumption decision-making of catering products: The high-price anchoring points, because of being the first comparison benchmark for consumers, can more effectively gain acceptability of the mid-price dishes, alter the consumption structure, and boost up the sales of the restaurants. This research also discovered that the anchor effect of group exhibits non-uniformity - high-income groups are more influenced by the positive, and student groups have high resistance ability which gives ground for differentiated pricing. What is more, "false anchor point" will destroy consumer welfare and should be urgently regulated by industry.

This study has two limitations: First, the experimental period is relatively short (only 4 weeks), and the long-term effects of the anchor point strategy (such as the effect attenuation caused by consumer adaptability) have not been observed; Second, the sample coverage is limited. Only mid-range restaurants in Beijing were selected, and high-end dining in first-tier cities and small stores in lower-tier markets were not included. The universality of the conclusion needs to be further verified.

In the future, research can be deepened from three aspects: First, conduct cross-regional comparisons to analyze the differences in anchor point effects among different cities (such as Beijing, Shanghai, Guangzhou, Shenzhen and third - and fourth-tier cities); Second, conduct long-term tracking to explore the adaptation patterns of consumers to anchor point strategies; Thirdly, by integrating neuroscience

methods (such as electroencephalogram monitoring), the physiological mechanism of the anchoring effect can be revealed, providing a basis for more precise pricing strategies.

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