

Psychological Anchoring Effect and Intervention Research on Consumers' Irrational Decision-making under the Interaction of Cross-cultural Values

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Abstract: With the deep integration of the global consumer market, consumers' decision-making behaviours in cross-cultural contexts are influenced by multiple intertwined psychological mechanisms and cultural factors. Among these, the anchoring effect, as a key cognitive bias, often interacts with value systems under different cultural backgrounds, leading consumers to make irrational decisions. Currently, systematic research on the interaction mechanism between the two and intervention strategies is still insufficient. Based on behavioural decision theory and cross-cultural theory, this paper first defines the core concepts of the anchoring effect, cross-cultural values, and consumers' irrational decision-making, then deeply analyses the process of the anchoring effect, the influencing paths of cross-cultural values, and their interaction mechanism. Through comparative case studies, it examines consumers' irrational behaviours in price judgment, brand choice, and consumption impulses under different cultural backgrounds. Finally, from the dimensions of marketing, consumer education, and policy regulation, targeted intervention strategies are proposed, providing theoretical support and practical references for standardising cross-cultural consumer markets and guiding consumers towards rational decision-making.

1. Introduction

1.1. Research Background

Under the dual promotion of globalization and digitalization, consumers face a massive amount of information daily, including prices, promotions, and social evaluations. Their decision-making process often fails to conform to the “rational” paradigm assumed by neoclassical economics [1]. The anchoring effect in psychology is one of the most persistent cognitive biases. Once individuals are initially exposed to a certain numerical piece of information, even if it is irrelevant to the decision objective, it becomes a reference point for subsequent judgments, systematically influencing price sensitivity, willingness to pay, and brand attitude. Cross-cultural psychology research confirms that differences among cultural spheres in uncertainty avoidance, power distance, individualism–collectivism, and other dimensions can strengthen or weaken the anchoring effect. High-context cultures tend to rely more on social anchors, whereas low-context cultures are more susceptible to numerical anchors. Existing marketing intervention strategies are mostly constructed based on Western individualistic samples, ignoring the moderating effect of cultural contexts on anchoring paths. This has resulted in “one-size-fits-all” nudging strategies performing poorly or even counterproductively in cross-market applications. Systematically exploring the interaction mechanism between the anchoring effect and cultural values, and formulating precise intervention plans that fit different cultural backgrounds, has become an urgent issue for international enterprises, policymakers, and consumer protection organisations.

1.2. Research Significance

From a theoretical perspective, integrating decision-making theory with cross-cultural theory reveals the interactive relationship between the anchoring effect and cross-cultural values, breaking the limitation of previous studies that focused only on single variables [2]. This injects new content into the theoretical system of consumers' irrational decision-making and provides a new entry point

for exploring cross-cultural consumer psychology. From a practical perspective, this research helps enterprises accurately grasp decision-making errors of consumers in different cultural environments, design marketing plans compatible with culture, reduce disputes caused by irrational choices, provide empirical support for consumer education, enhance consumers' ability to identify the anchoring effect, and promote rational cognition in cross-cultural consumption. It also offers decision-making references for policymakers to regulate the use of anchoring information in the market and improve cross-border consumer rights protection mechanisms, thereby promoting the stability and sustainable development of the global consumer market.

2. Related Concepts and Theoretical Foundations

2.1 Related Concepts

The anchoring effect refers to the tendency of individuals to overly rely on the first piece of information ("anchor") encountered when making judgments and decisions, using it as a reference point for adjustments, thereby affecting value evaluation and choice ^[3]. For example, labels such as "original price" or "best seller" marked by sellers often act as cognitive anchors, influencing consumers' decisions. Cross-cultural values refer to stable beliefs and behavioural norms commonly held in diverse cultural contexts, which deeply influence individuals' cognition and decision-making processes. Under different cultural backgrounds, consumers have significant differences in interpreting information, risk tolerance, brand choice, and price sensitivity. Consumers' irrational decision-making refers to individuals not fully following the rational economic man hypothesis during consumption, but instead being influenced by cognitive biases, emotional factors, and social influences—for example, paying higher prices due to the anchoring effect, making non-essential purchases due to herd mentality, or impulsive consumption, potentially resulting in regret or reduced satisfaction.

2.2 Theoretical Foundations

Behavioural decision theory challenges the traditional economic assumption of "absolute rationality," arguing that decision-making is constrained by bounded rationality, heuristic cognition, and prospect effects ^[4]. This explains the formation of the anchoring effect and its impact on purchasing behaviour. Cross-cultural theory analyses the effects of cultural differences on decision-making, with core frameworks including Hofstede's cultural dimension theory, Schwartz's value theory, and Hall's high-low context culture theory, revealing differences in the cognition and reaction to anchoring information across cultures, and providing theoretical support for understanding the anchoring effect in cross-cultural contexts.

3. Analysis of the Mechanism of Anchoring Effect and Cross-cultural Values on Consumer Decision-making

3.1. The Process of Anchoring Effect

Environmental cues first capture the selective attention, thereby enabling the anchoring effect to occur ^[5]. In purchasing scenarios where there is interference from online cues, the initially focused price, rating, or inventory quantity will automatically be transformed into an "anchor" and be regarded by working memory as a reference benchmark. From a neural perspective, the dorsolateral prefrontal cortex rapidly encodes the anchor value, and the amygdala assigns it corresponding emotional significance. Subsequent information must be filtered through the "anchor-adjustment" path. Due to the limitations of cognitive resources, consumers often make incomplete adjustments to the anchor value, causing the judgment results to tilt towards the anchor point.

In a cross-cultural context, individuals' responses to social reference points such as "average group price" and "relatives and friends" will be strengthened or weakened. Individuals in collectivist cultures are more susceptible to the influence of social anchors, and their adjustment behaviors are relatively conservative. In individualist cultures, people are more easily influenced by

authoritative reference points such as "official original price" and "brand price", and time pressure and digital processing methods also affect the depth of adjustment. Consumers in high-context cultural backgrounds tend to rely on intuitive judgment, with a relatively shallow adjustment amplitude. Consumers in low-context cultural backgrounds are more accustomed to rational analysis, but the continuous influence of the anchoring effect leads to certain stability of non-rational biases in cross-cultural comparisons.

3.2. The Impact Path of Cross-cultural Values

During the decision-making process, cross-cultural values mainly exert influence through two channels: self-conceptualization and uncertainty avoidance. From the perspective of self-conceptualization, the product characteristics of an independent self-awareness system are regarded as a means of self-expression, and they show a significant acceptance towards the "unique benchmark point". While the interdependent self-awareness system presupposes a reference system of "group behavioral norms", it is more inclined to consider the choices of the general public ^[6]. In cultures with a strong tendency towards uncertainty avoidance, consumers tend to avoid risks and rely on external authoritative information such as brand reputation and official pricing as the main reference points, and limit subsequent changes. In contrast, in cultures with a weaker tendency towards uncertainty avoidance, people are more willing to accept flexible reference methods such as flexible promotions and time-limited discounts, and are willing to make multiple adjustments.

The interaction between cognitive closure needs and regulatory orientation is reflected in the second paragraph of the path. When information is insufficient, high-closure demanders tend to rely on the initial reference point to make quick judgments and have psychological resistance to new evidence that contradicts this reference point. The orientation focuses on "acquisition", and is easily triggered to purchase impulses by the reference point of "original price - discount". While preventive orientation focuses on "avoiding losses", it is more likely to trigger anxiety-based consumption due to the reference point of "tight inventory". Cultural differences lead to the formation of a "values → cognitive style → reference point strength" chain effect between these two paths ^[7]. The common reference point mechanism has shaped an irrational decision-making picture with different cultural characteristics.

3.3. The interactive effect between cultural values and anchoring effect

Cultural values and anchoring effect are not simply additive linearly. Instead, they interact through three links: "emotional intensity - adjustment depth - anchor point selection". Which anchor point can gain legitimacy in a specific culture depends on the significant power distance in the society. Official pricing becomes a strengthened "super anchor" due to its alignment with the hierarchical structure in such societies. In a short-term-oriented culture, time-limited discounts become the preferred adopted explicit anchor due to their alignment with the "immediate satisfaction" value. When the anchor point gains recognition from cultural values, its emotional weight significantly increases, weakening the individual's willingness to make corrections.

When the adjustment stage begins, culture uses self-confirmation and decent principles to narrow the correction range. When consumers notice that the adjustment path is consistent with their beliefs, they will prematurely end the exploration to maintain cognitive consistency. If the adjustment direction conflicts with cultural norms, a sense of dignity loss will be triggered, driving individuals to return to the original reference point. The synergy causes irrational decisions to exhibit "cultural templateization" characteristics. The same price discount is regarded as "not gaining but losing" in a collective culture that highly values face, while in an individual culture with low face preference, it is understood as "worthwhile". Thus, reference point deviations are continuously replicated under the continuous influence of cultural concepts, forming a constant and predictable consumption behavior pattern in the context of global marketing.

4. The Performance of Consumers' Irrational Decision-making under the Interaction and Case Analysis

4.1. Common Performances of Irrational Decision-making

4.1.1. Price Judgment Bias

Under the combined influence of cross-cultural values and the anchoring effect, consumers' price evaluations often deviate from rational standards. Taking the "original price-discount" model as an example, Western consumers tend to treat the official price as an authoritative reference to judge whether the discount is credible, while Eastern consumers are more easily influenced by implicit references such as "friends' transaction prices" or "average price in the social circle," making social judgments on price reasonableness. When e-commerce platforms present promotion information such as "original price 999, now 299 RMB," consumers in individualistic cultural contexts pay more attention to whether the discount is significant, while consumers in collectivist cultural contexts focus more on the social signal of "whether others have purchased." Cultural differences assign different importance to the same price information, producing systematic price judgment biases, and eventually manifesting as "seemingly favourable but non-essential" irrational behaviours [8].

4.1.2. Abnormal Brand Choice Preference

In the process of brand choice, the anchoring effect is usually formed by "first-impression brands" or "high-exposure brands" as initial reference points, and cultural values influence consumers' acceptance of brand anchors. In cultural contexts with high power distance, consumers are more likely to choose "authoritative" or "officially certified" brands, even if the cost-performance ratio is not outstanding. Conversely, in cultures emphasising individual expression, consumers are attracted to "niche" or "unique" brands, ignoring practical value. A certain international skincare brand built a strong anchoring effect in the Chinese market through "celebrity endorsement," and consumers often ignore ingredient and skin-type suitability, while in the Nordic market, the same brand became a preferred choice due to its "environmental protection concept," and consumers ignored high price factors. The interaction of cultural factors and the anchoring effect causes brand preference to deviate from functional rationality, giving rise to "symbolic payment" irrational decision-making.

4.1.3. Impulse Consumption Behaviour

The anchoring effect uses time cues such as "limited time" and "limited quantity" to stimulate consumers' sense of urgency, and cultural values influence consumers' acceptance of impulsive behaviour. In short-term oriented cultures, such as the United States, consumers are more likely to be influenced by time anchors like "only 2 left" or "3 hours left" to make quick purchases. In long-term oriented cultures such as Japan, consumers also feel time pressure, but the cultural concept of "planned consumption" encourages restraint. When anchoring information aligns with cultural values, a dual anchoring strategy of "limited time + social recognition" can break self-control even in long-term oriented consumers. In live-stream shopping scenarios, prompts such as "only 5 sets left, everyone in my circle is buying" set a time anchor and trigger collectivist values, significantly inducing irrational impulse purchases.

4.2. Typical Case Analysis

4.2.1. Comparison of Consumer Decision Cases under Different Cultural Backgrounds

Taking the "Black Friday" promotion as an example, when American consumers see "original price \$199, now \$49" headphones, they usually take the "official marked price" as the reference to quickly assess the discount, with purchase decisions mainly based on "saving money." Chinese consumers during "Double Eleven" with similar offers tend to refer to "the number of friends buying" or "streamer references" to judge "whether it is worth following the trend." Both phenomena reflect the influence of cultural background on the source and importance of reference points in the anchoring effect. American consumers emphasise "maximising individual benefits,"

while Chinese consumers value “social recognition and group coordination.” The comparison shows that irrational decision-making does not occur randomly but is the result of the combined action of cultural patterns and anchoring mechanisms, reflecting “cultural fit differences.”

4.2.2. Specific Role of Anchoring Effect and Cross-cultural Values in Cases

In 2022, in the promotion of a certain multinational brand’s lipstick, the brand launched “limited edition gift boxes” in both Chinese and French markets and adopted a pricing strategy of “original price ¥399, now ¥199.” In the Chinese market, using influencers on Xiaohongshu to spread information such as “sold out online” and “female friends competing to buy” stimulated collective concepts and face culture, making consumers form the reference point of “others have purchased” and generate the mindset of “if I don’t buy, I will not keep up with the trend.” In the French market, the focus was on “artist collaboration” and “exclusive colours” to cater to individual expression needs. Consumers were attracted by the reference points of “scarcity + uniqueness,” ignoring actual usage frequency. Although the anchoring price was consistent, cultural values differed, and consumers’ understanding paths to the reference points varied, all leading to irrational excessive purchases, revealing the deep connection mechanism between the anchoring effect and cultural values^[9].

5. Intervention Strategies for Consumers’ Irrational Decision-making

5.1. Marketing-based Intervention

Reasonable setting of anchoring information is an important means to prevent irrational decision-making. Enterprises should combine product characteristics and target audience, avoid setting excessively high “reference prices” that create false discounts, and use graded anchoring strategies to provide consumers with objective comparison benchmarks. In cross-cultural marketing, anchoring methods should be adjusted according to cultural differences in price sensitivity, for example, disclosing cost information to enhance trust, or providing quality verification to support rational choices. In addition, enterprises should formulate corresponding marketing strategies based on different cultural values, such as emphasising group recognition and social value in collectivist cultures, and highlighting personalised experiences and self-value in individualistic cultures, to achieve culturally compatible intervention effects.

5.2. Consumer Education-based Intervention

Improving consumers’ awareness of the anchoring effect is an important way to reduce irrational decision-making^[10]. This can be achieved through educational courses, participatory case teaching, community promotion, and popular science dissemination, enabling consumers to understand the mechanism of the anchoring effect and master identification and coping strategies, such as setting shopping expectations, comparing prices, and focusing on core needs. At the same time, cross-cultural consumption rational awareness should be cultivated through online courses, cultural forums, and cross-cultural consumption manuals, helping consumers understand the influence of cultural differences on consumption behaviour, avoid irrational choices caused by cultural misunderstandings, and promote cross-cultural consumption communication and rational judgement ability.

5.3. Policy and Regulation-based Intervention

Governments should regulate the use of anchoring information, formulate clear standards, prohibit false pricing, require marking of information sources and validity periods, strengthen supervision of e-commerce platforms, and establish complaint reporting mechanisms to form regular supervision. Industry guidelines should be established to promote enterprise self-discipline and improve market transparency. In the field of cross-cultural consumption, a sound rights protection mechanism should be established, clarifying the responsibilities of cross-border platforms, providing clear product information and after-sales services, establishing cross-cultural consumption dispute resolution mechanisms, and strengthening international cooperation to prevent

cognitive biases and rights infringements caused by cultural differences, thereby protecting consumers' legitimate rights in cross-cultural contexts.

6. Conclusion

This study focuses on the intervention mechanism of consumers' irrational choices under the combined influence of the anchoring effect in psychology and cross-cultural values. By integrating relevant theoretical frameworks and practical cases, the following key conclusions are summarised.

When consumers make decisions, the anchoring effect goes through three steps of initial information positioning, judgment adjustment bias, and decision consolidation to produce influence, while cross-cultural values construct different influencing paths from three levels: cognitive guidance, behavioural norms, and demand ranking. These two factors are not separate, but a mechanism of "anchoring information matching cultural cognition – values intensifying anchoring bias – synergistically enhancing irrational tendencies," jointly amplifying consumers' errors in price evaluation, abnormal brand selection, and impulse shopping behaviours. In different cultural environments, the strength and specific manifestations of the synergistic effect vary significantly. In collectivist cultural contexts, the synergy between social-level anchoring and group values is more pronounced.

To intervene in irrational decision-making under the interaction background, it is key to build synergistic intervention strategies from marketing, education, and policy dimensions. Scientific use of the anchoring effect can weaken cognitive bias at the marketing level, systematic consumer education can enhance individuals' understanding and discrimination of the interaction mechanism, and policies and regulations can define clear boundaries for market behaviour. The three measures together build a multi-level intervention framework, providing practical references for enterprises to optimise strategies in cross-cultural marketing, for consumers to improve decision-making, and for regulatory agencies to improve market governance.

Although the interaction mechanism and intervention paths of the anchoring effect and cross-cultural values have been clearly identified, differences in interaction among different cultural subgroups and the evaluation of long-term intervention effects still need to be explored. Future research can be promoted with empirical data to provide precise theoretical basis and practical strategies for optimising decisions in cross-cultural consumption contexts.

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