

The Application of Anchoring Effect in Marketing Strategies and Judicial Decisions

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Abstract. The anchoring effect, a pervasive cognitive heuristic in decision science, manifests when agents disproportionately rely on initial informational anchors while exhibiting systematically insufficient subsequent adjustments. This essay aims to discuss the role played by the anchoring effect in the blind boxes economy and judicial decision-making through analysis of the case and data from a previous essay: (1) strategic exploitation of anchoring mechanisms in the blind boxes economy and how to optimize blind box sales strategy to the greatest extent possible; (2) institutional countermeasures against its biasing influence in judicial decision-making. The research found that (1) in the blind boxes economy, firms would use price anchors and scarcity anchors to encourage consumers to purchase blind boxes. The firms could reduce the initial price to attract consumers, and the consumers should be aware of the invisible cost brought by repetitive purchases. (2) In judicial decision-making, 63.6% of judgments were influenced by anchoring. Anchoring was more prevalent in guilty verdicts (87.4%) and in cases without mitigating circumstances. Equity in the legal system could be improved by mandatory mixed judicial panels, expert testimony and transparency mandates, and standardized decision-making frameworks.

Keywords: Anchoring Effect, Behaviour Economics, Blind Boxes Economy, and Judicial Decision Making.

1. Introduction

The anchoring effect, a pervasive cognitive heuristic in decision science, manifests when agents disproportionately rely on initial informational anchors while exhibiting systematically insufficient subsequent adjustments. This study employs a dual-domain analytical framework to systematically examine: (1) strategic exploitation of anchoring mechanisms in blind boxes economy, and (2) institutional countermeasures against its biasing influence in legal adjudication. Through comparative case analyses, the research elucidates how commercial entities strategically deploy numerical anchors to optimize pricing architectures, while simultaneously proposing evidence-based judicial reforms to mitigate cognitive contamination in sentencing decisions.

1.1. Institutional Background

The anchoring effect constitutes a fundamental cognitive bias in behavioral decision theory, characterized by decision-makers' disproportionate dependence on initial numerical cues (anchors) during probabilistic estimation processes. These anchors—whether externally provided through problem framing or endogenously generated through partial information assimilation—establish reference points that constrain subsequent adjustment ranges [1]. Crucially, the adjustment phase exhibits systematic insufficiency, creating final judgments clustered near the initial anchor value. This mechanism produces predictable outcome variations across different starting points, demonstrating how arbitrary numerical primes distort human rationality in measurable patterns.

Understanding anchoring dynamics enables strategic agents (corporations, policymakers, regulatory bodies) to develop targeted interventions. Through rigorous deconstruction of the cognition-anchoring interface, scholars not only refine behavioral models but also equip practitioners with bias-mitigation frameworks that balance ethical imperatives with allocative efficiency. Systematic neglect of this bias perpetuates cognitive market failures, whereas its strategic incorporation enhances decision architecture resilience in complex adaptive systems.

Within novel consumption paradigms like China's blind box economy (2018-2022), anchoring mechanisms critically mediate purchase decisions through curated price-reference ecosystems. Concurrently, judicial systems globally confront a persistent systemic vulnerability: sentencing decisions demonstrate measurable susceptibility to arbitrary numerical anchors in sentencing guidelines, evidencing an urgent need for debiasing institutional reforms.

1.2. Research Questions and Its Importance

The main research questions are: (1) the role of anchoring effect in blind box economy and how merchants can optimize market strategies. (2) The role of Anchoring Effect in judicial judgments, and how the judicial system can be reformed to improve fairness.

In the blind box economy, the Anchoring Effect plays a critical role in shaping consumer's behavior. This behavioral economics phenomenon shows that individuals rely heavily on initial information (the "anchor") when making subsequent decisions. For instance, blind box corporations like POP MART strategically set a "price anchor" (e.g. 59 RMB per box) to create a perception of affordability [2] compared to higher-priced collectibles (e.g. Bear brick toys priced at 299–399 RMB) [3]. This anchor influences consumers to view the blind box as a bargain, even if repeated purchases accumulate costs. Additionally, the "scarcity anchor" (e.g. a 1/144 chance of obtaining a rare "hidden edition") heightens perceived value, making consumers overestimate the likelihood of acquiring desirable items and justifying higher spending [4]. By leveraging these anchors, brands amplify impulsive purchases and drive revenue growth, while consumers subconsciously align their spending habits with these artificially constructed reference points.

The previous papers collectively reveal how blind box economies exploit cognitive biases: especially anchoring: to manipulate perceived value and spending. By framing prices, scarcity, and social trends as reference points, brands condition consumers to accept higher costs and risks, fueling the industry's rapid expansion. Enterprises need to continuously innovate products, improve quality and packaging design [2], enhance brand vitality through high-quality products and honest management, and control the premium in the second-hand market and avoid excessive speculation. What's more, their Social responsibility is to prevent teenage addiction and guide rational consumption [4].

Judicial decision-making, a cornerstone of legal systems worldwide, is profoundly influenced by cognitive biases, with the anchoring effect emerging as a pivotal yet under addressed challenge. Anchoring: the tendency to rely heavily on initial information when making judgments: has been rigorously documented across diverse legal contexts, threatening the fairness and objectivity of judicial outcomes. A Meta-analysis and other data analysis synthesizing 29 studies (N = 8,549 participants) reveals that numeric anchors significantly bias legal decisions, yielding moderate to large effect sizes (Cohen's $d = 0.58\text{--}0.91$) in both civil (e.g. damage awards) and criminal (e.g. sentencing) cases [5]. Strikingly, even legally relevant anchors, such as statutory damage caps or prosecutor demands, often amplify biases rather than curbing them, underscoring the insidious nature of this heuristic [6].

Previous findings collectively underscore a systemic vulnerability: anchoring incentives cognitive shortcuts, eroding the meticulous evaluation of evidence and legal principles. Its consequences: simplified reasoning, inequitable verdicts, and weakened public trust: demand urgent interventions. This essay synthesizes cross-jurisdictional insights, including judicial training, strategic litigation practices, and structural safeguards (e.g. expert testimony mandates) [6], aiming to restore integrity to judicial decision-making and uphold the rule of law.

1.3. Construction of the Essay

This study synthesizes previous research to establish a conceptual framework for the anchoring effect in behavioral economics, then investigates its empirical applications in two distinct domains: marketing strategies and judicial decision-making [1].

In examining marketing applications, the analysis focuses on the "Blind Box Economy" phenomenon. A case study of China's blind box market is presented, supplemented by statistical analysis of sales data from 2018-2022 to quantify the anchoring effect's operational mechanisms. Subsequently, evidence-based recommendations are proposed for optimizing pricing strategies through deliberate anchor calibration.

Regarding judicial applications, the paper conducts an empirical analysis of 555 criminal sentencing cases in Spain [6], employing meta-analytical techniques [5] to quantify anchoring biases in sentencing outcomes. The discussion extends to institutional reforms, proposing structured sentencing guidelines and cognitive debiasing protocols to enhance judicial equity.

Finally, the study synthesizes key findings regarding: (1) commercial exploitation of anchoring effects in blind box business models, and (2) systemic mitigation strategies for legal institutions. This dual perspective bridges behavioral economics theory with practical implications for both corporate strategy and judicial reform.

2. Blind Boxes Economy

The anchoring effect is a cognitive bias where individuals rely heavily on the first piece of information encountered (the "anchor") when making decisions, even if that information is irrelevant or arbitrary [1]. For example, if a product is initially priced at \$100 (the anchor), subsequent discounts (30% discount) or comparisons (The price has been reduced from \$100 to \$75) will be judged relative to this value, skewing perceptions of fairness or value. This heuristic highlights how initial exposure to numbers, values, or ideas unconsciously limits rational adjustment in decision-making [1]. Anchoring is widely exploited in marketing and pricing strategies to influence choices.

In blind box marketing, this effect plays a crucial role by setting a low reference price (e.g. 59 RMB per box), making consumers perceive the purchase as affordable and justifiable. Even though the probability of obtaining rare "hidden" items is extremely low (e.g. 1/144), the initial anchor (base price) distorts buyers' judgment, leading them to underestimate the real cost of repeated purchases [3]. Additionally, the inflated resale value of rare items in secondary markets reinforces this bias, as consumers overestimate potential gains, further driving irrational spending. Thus, the anchoring effect amplifies impulsive buying behavior in blind box consumption.

The anchoring effect is a cognitive bias in which individuals heavily rely on the initial information they encounter ("anchors") when making decisions, even if the information is irrelevant or incorrect. For example, if a product is initially priced at \$100 (anchor), subsequent discounts (30% discount) or comparisons (price has dropped from \$100 to \$75) will be judged based on this value, distorting people's perceptions or decisions. This heuristic approach emphasizes how the initial exposure to information unconsciously limits rationality in decision-making. Anchoring is widely used in marketing and pricing strategies to influence choices.

In the blind box economy, businesses set lower reference prices (such as 59 RMB per blind box) to make consumers believe that blind box consumption is affordable and reasonable. Although the probability of obtaining rare "hidden" blind boxes is extremely low (e.g. 1/144), the initial anchor (base price) distorts buyers' judgments, leading them to underestimate the actual cost of repeat purchases [3]. In addition, the inflated resale value of rare items in the second-hand market exacerbates the anchoring effect bias, and consumers often overestimate their potential value, further driving consumers' irrational spending. Therefore, the anchoring effect amplifies impulse buying behavior in blind box consumption.

Blind box economy refers to a business model that focuses on selling randomly sealed boxes containing toys, collectibles, or other themed products, whose contents are unknown before purchase. This model originated in Japan and was promoted by brands such as POP MART in China, utilizing various psychological motivations of consumers such as curiosity, gambling psychology, and social recognition. The main features of blind box economy include:

a. Random reward: Each box has a chance to obtain a regular item or a rare "hidden" version (e.g. 1/144 probability).

b. Intellectual Property Marketing: The collaboration between blind box brands and popular intellectual property enhances consumers' emotional resonance and the collectability of blind boxes.

c. Scarcity and hype: Stimulating consumers through "hidden blind boxes" and stimulating demand with hidden items resold at 10 times the retail price in the second-hand market.

d. Social participation: On social platforms such as Xiaohongshu, users share their experiences of purchasing and opening blind boxes, creating viral trends and herd behavior [7].

The anchoring effect plays a crucial role in driving irrational consumption in the blind box economy. This is reflected in three key aspects:

Low entry price as anchor: Blind boxes are usually priced within an acceptable range for people's daily entertainment consumption, such as 59 yuan per box, creating an affordable "anchor" and diluting the cumulative cost of repeat purchases. Consumers consider purchasing blind boxes to be a small and reasonable expense, although obtaining rare hidden items usually requires dozens of purchases.

Premium in the second-hand market: The inflated resale value of hidden items (such as blind boxes priced at 59 yuan that can be sold for 500 yuan in the second-hand market) acts as a secondary anchor, distorting consumers' perception of potential value and even making them think they are "investing".

b. Scarce anchoring

Probability anchoring: The brand clearly promotes a low probability of obtaining hidden items (e.g. 1/144), making consumers see "buying hidden items" as a challenge. This anchors consumers' expectations on rarity, making each purchase feel closer to 'victory'.

Limited edition: Seasonal products sold for a limited time will create a sense of urgency for consumers, who are worried about missing out.

2.1. How to Maximize the Optimization of Blind Box Sales Strategy

For merchants, they can accurately position themselves in the market and cooperate with intellectual property rights, further strengthening the anchoring effect and promoting the rapid development of the blind box economy.

a. Enterprises need to capture consumer emotions and cultural trends, continuously innovate products, strengthen intellectual property operations, and enhance emotional resonance.

b. By operating with integrity, improving product quality and packaging design, and enhancing brand vitality.

c. Control the premium in the second-hand market and avoid excessive speculation.

d. Design tiered pricing: For example, many products have basic, limited edition, and collector's items. These three styles can increase the sales of other products through special price design. For example, the price of luxury collectibles can be set extremely high, while the price of basic models can be set extremely low, which can increase the sales of mid-price products;

For consumers, they could reduce the effect brought by anchoring effect through:

Improve cognitive level and identify anchor points set by merchants;

Calculation of mathematical expectations: Calculate the average number of blind boxes to be opened when selecting hidden items:

Delayed consumption may help enhance the satisfaction brought by purchasing blind boxes.

3. Judicial Judgement

The anchoring effect in judicial contexts refers to a cognitive bias wherein initial numerical or contextual information (e.g. a plaintiff's monetary claim, a prosecutor's sentencing recommendation, or a prior judicial ruling) disproportionately influences subsequent legal judgments, even when such information is arbitrary, irrelevant, or unsubstantiated. This bias arises as judges, jurors, or legal professionals insufficiently adjust their final decisions away from the initial "anchor," often due to

heuristic processing under time constraints, information scarcity, or institutional pressures. Empirical studies demonstrate its pervasive impact across civil and criminal cases, with anchored judgments exhibiting reduced engagement with contextual evidence, causal reasoning, and legal rigor [7]. While expertise marginally attenuates the bias, systemic factors: such as homogeneous judicial panels or opaque valuation processes: can exacerbate reliance on anchors, risking inequitable outcomes and eroding public trust in judicial fairness [6].

3.1. Basic Description and The Case:

Criminal Sentencing (Spain): Analysis of 555 criminal judgments found that 63.6% of verdicts directly mirrored prosecutors' demands or prior rulings, prioritizing procedural expediency over evidentiary analysis. Anchored rulings exhibited 51% fewer legal citations and causal explanations, reflecting truncated reasoning [8]. Anchoring effects exert a profound and systematic influence on judicial decision-making, as evidenced by cross-jurisdictional experimental and observational data. This cognitive bias, wherein initial numerical or contextual information disproportionately shapes judgments, manifests across civil and criminal cases, undermining evidentiary rigor and equitable outcomes.

Despite having all the necessary factual information at hand, the judge's decision-making process is subtly influenced by a journalist's question about whether the sentence will be higher or lower than three years. This question serves as an anchor, potentially skewing the judge's final decision [9]. Demonstrates that even experienced judges can be affected by such anchors. In their study, judges who were exposed to a high anchor (three years) tended to give longer sentences compared to those who considered a low anchor (one year), resulting in a significant difference of eight months in prison for the same crime [7]. Rooted in psychological heuristics, this phenomenon occurs when judges, jurors, or legal professionals fixate on an initial value or claim (e.g. a plaintiff's monetary demand, a prosecutor's sentencing recommendation, or a prior judicial ruling) and insufficiently adjust their final decision away from this "anchor", even when the anchor is arbitrary or irrelevant [10].

3.2. Meta-analysis and Other Data Analysis to Describe the Role of Anchoring Effect in Judicial Judgement

Meta-analytic findings [5] reveal moderate to large effect sizes ($d = 0.58\text{--}0.91$) for anchoring in legal contexts. For instance, plaintiffs' monetary claims in civil cases and prosecutors' sentencing recommendations in criminal trials consistently skew judicial awards, even when anchors are arbitrary or legally irrelevant. Notably, expertise offers limited protection: while experienced judge's exhibit marginally reduced susceptibility, they remain vulnerable under time constraints or information scarcity. Mechanisms of Influence

Cognitive Shortcuts: Judges under workload pressure default to heuristic processing, fixating on salient anchors (e.g. high damages or sentencing demands) rather than engaging with complex evidence.

Institutional Design Flaws: Homogeneous panels (e.g. all novice judges) and opaque valuation processes amplify anchoring risks. For example, in Taiwan, pre-2012 land disputes lacked transparent market data, enabling plaintiffs' inflated claims to dominate decisions.

Strategic Litigation: Unopposed anchors (e.g. unchallenged prosecutorial demands) gain undue weight, while counter-anchors (e.g. expert rebuttals) disrupt heuristic reliance.

Table 1. Comparison of General Cognitive Activity (Summary)

Variable	Without Anchoring (Mean)	With Anchoring (Mean)	Significance (p-value)
Related propositions	48.02	36.1	0.000
Words	755.95	595.03	0.013

Table 1 compares general cognitive activity between judgments influenced by anchoring and those without anchoring. It reveals that judgments without anchoring contain significantly more evidence-

related propositions (mean=48.02 vs. 36.1, $p < 0.001$) and longer textual descriptions (mean=755.95 vs. 595.03 words, $p = 0.013$), indicating deeper engagement with case details.

Table 2. Comparison of Specific Cognitive Activity (Summary).

Variable	Without Anchoring (Mean)	With Anchoring (Mean)	Significance (p-value)
Legal detail	7.87	3.85	0.000
Neutral propositions	33.54	21.01	0.001
Physical causal relationships	0.91	0.61	0.015

Data source: Fariña, F., Arce, R., & Novo, M [5]

As shown in the table 2, anchoring reduces critical legal reasoning: judgments with anchoring exhibit fewer legal references (mean=3.85 vs. 7.87, $p < 0.001$), fewer neutral propositions (mean=21.01 vs. 33.54, $p = 0.001$), and less analysis of physical causality (mean=0.61 vs. 0.91, $p = 0.015$). Together, these findings highlight how anchoring simplifies judicial reasoning, prioritizing efficiency over thorough evidence evaluation.

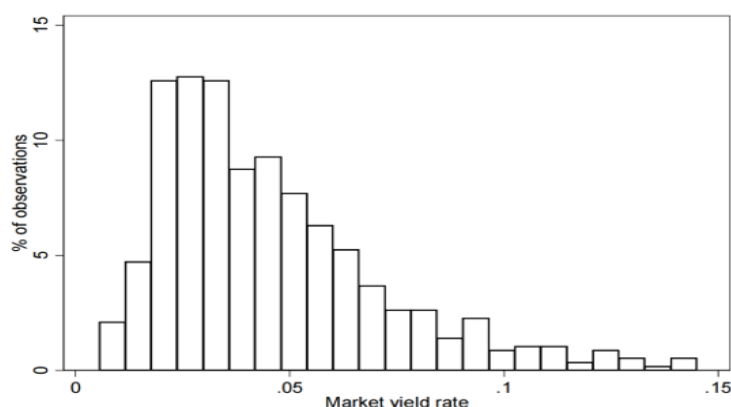
Consequences for Judicial Integrity: Anchoring incentives oversimplified verdicts, disproportionately favoring plaintiffs or prosecutors. In Spain, 87.4% of anchored judgments resulted in guilty verdicts, often disregarding mitigating evidence. Similarly, Taiwanese novice judges' rulings correlated with plaintiffs' claims, risking inequitable resource allocation in land disputes.

3.3. How to Improve the Equity in Judicial System

The pervasive influence of anchoring effects in judicial decision-making demands systemic reforms to safeguard fairness and objectivity. Drawing on empirical evidence from diverse jurisdictions, three critical institutional changes emerge as priorities:

3.3.1. Mandatory Mixed Judicial Panels

The Taiwanese land dispute study [7] reveals that novice judges are particularly susceptible to plaintiffs' monetary anchors, while panels incorporating experienced judges significantly reduce bias. Institutionalizing mixed panels: requiring at least one seasoned judge (e.g. with caseloads above the median) in every adjudication: can leverage expertise to counterbalance heuristic-driven decisions. For instance, in Taiwan, such panels lowered anchoring effects by 4.2%, demonstrating how mentorship and collaborative deliberation disrupt cognitive shortcuts.



Note: 5 of the 577 observations, with market yield rate > 0.15, are omitted from this figure; N=572.

Figure 1. The distribution of market yield rates.

Photo credit: Chang, Y. C., Chen, K. P., & Lin, C. C [7].

Figure 1 illustrates the distribution of market yield rates for land parcels, calculated as the ratio of estimated lease rents to market values. The majority of market yield rates cluster in the lower range (0-5%), with a few extreme values exceeding 15% (omitted for clarity). This distribution highlights a significant gap between market-based yield rates and the judicial yield rates determined by courts,

which are often influenced by plaintiffs' claims. The chart underscores how judicial decisions, driven by anchoring effects, deviate from objective market benchmarks, leading to potential under-compensation in land dispute cases.

3.3.2. Expert Testimony and Transparency Mandates

Anchoring thrives in information-poor environments. The meta-analysis [5] highlights that even legally relevant anchors (e.g. statutory caps) can distort judgments if uncritically accepted. Reforms should mandate independent expert testimony in cases involving complex valuations (e.g. damages, land disputes) and require courts to disclose historical data (e.g. market rates, sentencing ranges). Taiwan's post-2012 mandate for public land transaction data, which reduced judicial deviations by 1.4%, exemplifies how transparency curbs arbitrary reliance on plaintiff-defined anchors.

3.3.3. Standardized Decision-Making Frameworks

Spain's findings [6]: where 63.6% of anchored judgments lacked causal analysis and contextual rigor: underscore the need for structured reasoning protocols. Reforms should enforce standardized templates requiring judges to:

- Explicitly address the validity of initial anchors (e.g. prosecutorial demands, plaintiff claims) and any counter-anchors (e.g. defendant rebuttals, expert reports).

- Detail causal linkages between evidence and verdicts, mirroring the rigorous reasoning seen in non-anchored Spanish judgments.

- Cite comparable cases or statutory guidelines to contextualize decisions, reducing reliance on isolated numerical anchors.

Anchoring poses to judicial impartiality, as it encourages oversimplified decision-making, undermines evidence-supported rigor, and risks systemic inequities. Addressing this bias requires multifaceted interventions, including cognitive training for judges, strategic litigation practices, and institutional reforms such as mixed judicial panels and mandatory expert testimony.[5] This study integrates insights from different jurisdictions and various previous research, aims to explore the impact of anchoring effects on judicial decisions, the impact of anchoring effects on judge's decisions, the impact of anchoring effects on defendants' litigation and how defendants can use anchoring effects to improve litigation success rates, and how to improve the existing legal system to uphold fairness and objectivity principles in the global legal system.

4. Conclusion

In conclusion, the anchoring effect is a pervasive cognitive heuristic in decision science, manifests when agents disproportionately rely on initial informational anchors while exhibiting systematically insufficient subsequent adjustments.

(1) Anchoring effect is one of the cornerstones of blind box economic marketing strategy. Merchants will set low price anchors and exaggerate scarcity, while consumers often rely on initial reference points to make decisions. This not only drives consumers to make impulsive purchases, but also keeps them loyal to long-term participation in the blind box economy, transforming blind boxes from mere souvenirs into addictive, colorful consumer experiences. Understanding the anchoring effect is crucial for businesses that need to optimize their marketing strategies and for consumers seeking to reduce overconsumption.

(2) In judicial decision-making, the anchoring effect poses systemic risks to fairness. Judges, despite professional training, often subconsciously fixate on numerical anchors such as prosecutors' sentencing recommendations or media-driven narratives. For example, a prosecutor's demand for a 15-year sentence may anchor a judge's deliberations, resulting in disproportionately harsh rulings even when evidence warrants leniency. To counteract this, structural reforms like standardized evaluation protocols (e.g., evidence-weighted sentencing matrices), mandatory expert testimony on cognitive biases, and defendant support mechanisms (e.g., bias-awareness training for jurors) are critical. Such measures disentangle verdicts from arbitrary anchors, grounding them in objective

evidence. By institutionalizing these safeguards, the legal system can diminish cognitive distortions, enhance equitable outcomes, and rebuild public trust in judicial integrity.

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