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Three Applications of the Anchoring Effect

Jielin Dong[1,a,*]

[1]*Shenzhen College of International Education, Shenzhen, Guangdong, 518000, China*
a. lindadong0530@gmail.com
**corresponding author*

Abstract: Many heuristics in behavioural economics play important roles in decision-making. The anchoring effect is one of these heuristics which influence people's decisions in different fields. Through qualitative analysis and case analysis, this paper aims to introduce the applications of the anchoring effect in various situations. And according to the influence of anchoring effect on decision making in online auctions, court, and Marketing, it analyses how the anchoring effect affects people's decisions and also how to avoid the deviation caused by anchoring effect. The analysis proves that anchoring affects people's decision-making in different situations to a certain extent, and makes biased decisions without people realizing it. he analysis also shows that biased decisions can be avoided in different ways. There are different ways in which people can gain more perspectives and information in their lives, while thinking about how to create excellent self-generated anchors to help escape the effects of anchoring.

Keywords: decision-making, anchoring effect, heuristics

1. Introduction

Factorial calculation as a simple operated experiment can verify the influence of anchoring effect on the way people think and make decisions. Participants in the experiment were divided into two groups and asked to calculate two multiplication equations of 1 to 8 and 8 to 1 with in 5 seconds. Due to the anchoring effect, the two groups yielded outcomes with larger differences. The result showed that participants who started to calculate the equation from 1 got a much smaller answer than those who started with 8. This experiment demonstrates how initial value influences people's choices, and how people make insufficient adjustments. Moreover, experiments can also prove that people will inevitably fall into the trap without awareness.

As a definition in psychology, the anchoring effect affects people's thoughts and the way people make decisions. But its wide range of citations also allows it to be used in marketing behavioural economics. Therefore, this paper aims to help understand the anchoring effect and its application in business through qualitative analysis and case studies. It encourages the discovery of its future applicable fields, and can also offer practical and operational advice.

2. Definition and Background

According to the description of the anchoring effect, when people estimate, they will start from an initial value, and this initial value will be changed to produce the final answer. Tversky and Kahneman, who discovered that anchors unrelated to chosen events could also affect people's

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judgment in the well-known "lucky wheel" experiment, are the ones who initially put up the idea [1]. In other words, the lucky wheel's random number had a significant impact on people's assessments. People are asked to estimate the proportion of African countries in the UN in groups with anchor values of 10 and 65, with median estimations of 25 and 45, respectively. When faced with a numerical choice, people are especially vulnerable to the influence of an initial anchor and tend to make decisions based on that reference number. The bias in favor of the beginning value illustrates how the anchoring effect can still have an impact on people even when the anchor is unrelated or uninformative.

There are two different kinds of anchors: external anchors and self-generated anchors. The anchor might or might not be connected to the uncertain occurrence. The anchoring effect is psychologically interpreted by Tversky and Kahneman as a result of insufficient adjustment. However, the revised perspective contends that the anchoring effect is caused by selective accessibility [1].

Epley and Gilovich initially suggest a self-generated anchor and explain this by looking at more information about the anchoring effect [2]. Subsequent scholars propose that the anchoring impact provided by the outside world is the basis for the selective accessibility mechanism. As a result, the anchoring effect has a dual processing mechanism, with the self-generated anchor being more potent than the externally supplied anchor [3].

Typically, decision-makers fail to make sufficient adjustments away from the anchor value. Anchoring effects have been demonstrated in a variety of applied contexts, e.g., gambling, real estate prices, estimating the chances of nuclear war, and estimating confidence intervals [4].

3. Application

3.1. The Anchoring Effect in Online Auctions

An auction is a bidding mechanism that determines who gets the product and the amount to pay for it [5]. Due to the internet's and technology's quick expansion and development, online auction has recently played a significant role in the auction industry. Its benefits include increased regional mobility, flexibility in timing, and cheap operating expenses, all of which contribute to the rapid growth of online auctions [6]. In addition, online auctions are growing in popularity as a result of COVID-19, since social isolation is necessary to stop the epidemic from spreading. The challenge of conducting offline auctions stimulates and hastens the shift from offline to online auctions.

Online auctions come in four varieties, first-price sealed-bid auctions, second-price sealed-bid auctions, ascending English auctions, and descending Dutch auctions [7].

3.1.1. Problems with Online Auctions

Online auctions have advantages over traditional auctions, especially in the context of a pandemic and a society supported by modern technology, which have a large potential audience. However, there are several problems with online auctions that require remedies, such as low buyer confidence and substantially lower final transaction prices than anticipated. The inability to sell items at an appropriate price will deter individual sellers from participating in online auctions, resulting in reduced supply in the auction market and reduced demand for online auctions. At the same time, more sellers and buyers are switching back to offline auctions, which in turn reduces the demand for online auctions [8].

However, sellers of online auctions can easily address the issues of low traffic and transaction costs by properly utilizing the anchoring effect and the reversal of the anchoring effect to modify the auction process and set a low starting price.

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3.1.2. Using the Anchoring Effect as a Solution

The starting price for most auctions is based on previous auction experience, i.e., previous selling prices of comparable items [9]. Many sellers are eager to raise the opening price, just as they did in traditional auctions, to make more money. However, high starting prices do not enable sellers to make more money in online auctions like those on eBay, uBid, and CowBoom [10]. This occurrence in online auctions is known as the "reversal of the anchoring effect," which indicates that low starting prices used as anchors will result in high-end transaction prices than previously expected [11]. One of the reasons for this phenomenon may be that online auctions lack barriers for individuals to compare products and make judgments in peace. So, a cheap starting price will encourage more people to participate. However, sunk expenses will also be produced if people are encouraged to invest more time and effort due to a low starting price. Buyers should be mindful not to be duped by the cheap starting price when they previously had no desire to participate. In general, individual sellers can cut the starting price to lessen entry barriers.

Katok and Kwasnica examined a complex situation and discovered that the slower the clock speed, the more expensive the ultimate transaction price would be in online Dutch auctions. A Dutch auction is a drop-off auction, meaning that the price bid will gradually decrease [12]. Therefore, they were of the opinion that time may act as an anchor to influence people's choices in a Dutch auction [12]. For instance, longer time spent in auctions will give purchasers a high anchor, resulting in higher final prices when the Dutch auction clock slows. By reducing the price submission period, the seller can make it more difficult for buyers to achieve a high maximum offer by preventing them from making the appropriate adjustments to irrelevant anchors. The repetition of high anchors during the auction process boosts the final transaction price as well. According to the anchoring and adjustment theory, it is challenging for the buyer to make effective modifications to anchors when anchors occur repeatedly throughout the auction process [13]. People's willingness to engage will decline if the online auction procedure is overly complex.

The purchasers' value estimation will be considerably impacted by the anchoring effect, raising the overall transaction price. To make more informed decisions and prevent extraneous information from influencing the price determination during the auction process, buyers should be aware of this and cautious about it.

3.2. The Anchoring Effect in Courtroom

Numeric decisions in law (such as damages or prison terms) are susceptible to the effect of salient numbers present in the decision context, such as the anchoring effect. The numeric priming model [14] states that the presence of an anchor makes the value suggested by it more mentally accessible, so that it is likely to influence the assessment of the target values. This essay will explain two cases of the anchoring effect used in legal decision makings in the next two parts.

3.2.1. The Effects of Caps on Punitive Damages

Compensatory damages are often awarded in civil litigation to cover damages suffered by the victim, including medical expenses, lost wages, and pain. In addition to compensatory damages, punitive damages are given to punish the defendant for their unacceptable behavior and to dissuade others from engaging in similar behavior in the future [15]. The anchoring and adjustment heuristic is a tendency for juries to anchor on the largest feasible amount before adjusting downward. If restrictions on punitive damages cause this tendency, they may raise the average amount of punitive damages across all cases.

The steps of judging and setting the punitive amount are as follows: (1) deciding how much the current case differs from the worst-case scenario; (2) determining how much money should be

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subtracted from $500,000 to account for the difference; and (3) determining how much money should be added back to $500,000 to account for the difference. For example, the worst-case scenario might warrant a $500,000 punitive damage award. Some jurors, on the other hand, may start with an implied anchor of zero and increase upward if there is no cap on punitive damages [15].

The anchor in the process by which punishment is set, is the cap on punitive damages, i.e., by raising the suggested cap on awards, ultimate awards rise. While the cap was high, punitive damage awards had larger sizes and more variability than they would have in a scenario where the restriction wasn't present. By limiting the number of damages that may be awarded, caps no damage awards aim to regulate jury decision-making. Punitive damage caps also act as a guiding principle for choices regarding compensatory damage awards and punitive damages.

3.2.2. Anchoring Effects on Sentencing in the Courtroom

Receiving fair treatment and justice is something that matters greatly to people, and complex legal systems are constructed to achieve it. The reality is that various judges may impose significantly dissimilar punishments under the same legal circumstances. The anchoring effect might be to blame for this, and the anchoring effect may be significant here since criminal sentencing choices frequently involve numerical amounts (a prison sentence or a fine). However, there is reason to think that anchoring may be a significant bias in expert judgments, in addition to influencing naive laypeople.

To be precise, the punishment that is required by the prosecution or defence team or suggested by the probation officer serves as the anchor in sentencing judgments. The investigation showed that the judge's final sentencing is greatly influenced by the appeal at the preliminary stage. The experiment presented participants with identical criminal cases involving the claimed rape to determine whether judges' sentencing judgments are impacted by a demanded penalty when other potential effects (e.g., severity of the offense, defendant's criminal record) [15].

The conclusion application shows that although the requested sentence (the anchor) is less likely to contain information that is pertinent to criminal justice, judges' sentencing judgments may still be impacted by it [15].

3.3. The Anchoring Effect in Marketing and Consumers' Decision-making

People are now more aware than ever before that safe and healthy food is excellent for both the environment and their health, thanks to the tremendous advancements in agricultural and industrial technology. Organic food is becoming more popular because it goes through a rigorous certification procedure and isn't made with synthetic chemicals. Although the amount of land utilized to grow organic food is growing at a rate of 20% annually, the market demand is still quite small [16].

3.3.1. Anchoring Effect on Purchasing Organic Food

According to the theory of bounded rationality, consumers cannot make subtle product evaluations or change their external information due to limited knowledge and uncertainty. Instead, a heuristic is applied to make decisions based on the available information. Today's consumers can browse a variety of information when looking at the products that are offered, and instead of depending on "ideal answers," they frequently use heuristic tactics to find "satisfying solutions," which streamline the information handling process.

According to the study's findings, a low anchor price makes it easier for commercials to influence consumers' attitudes and purchase intentions [16]. Furthermore, the anchoring effect is more powerful for consumers who lack expertise. Consumers prefer market lower-priced goods

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than an internal reference price goods of the same quality. When in doubt regarding a product, customers frequently make purchasing decisions based on readily available information, such as advertised prices.

Therefore, customers who know more about organic food will probably be less susceptible to anchoring effects. Due to the lack of acquaintance with and information about organic food, consumers will use the price of conventional, non-organic food as a benchmark for comparison, then feel duped.

The anchoring effect's effects can be mitigated through certain strategies. The government can force businesses to disclose information about pesticide residues and the health issues brought on by pesticide residues through the internet,TV commercials, and other media. Additionally, the government can also provide production enterprises with more modern facilities through subsidies and other means, thereby reducing production costs. This approach can reduce the price gap between organic and other goods, and enhance consumers' propensity to make purchases.

3.3.2. How to Reduce the Anchoring Effect in M&A Transactions

The percentage of the difference between the transaction price the host firm paid for the subject and the value of the subject itself is the M&A transaction. Businesses can utilize consultants to help with negotiations, valuing mergers and acquisitions, and other aspects of the process. In this situation, the self-generated anchor will affect people's choices. Nonetheless, two suggestions are made, to lessen the effect. First, it will be useful to think about how to create great self-generated anchors. Second, the business owner should hire more qualified consultants to help rather than increase their level of self-professionalism [17].

4. Conclusion

The anchoring effect is a robust and significant heuristic that influences people's decision-making, especially when people have limited knowledge and the anchor is self-generated. It exists in many contexts and leads people to make biased decisions without noticing. Getting to know more about it in different applications helps make better plans to reduce its influence.

However, the author in this article did not complete the questionnaire to collect relevant data and information to support the point of view in the article. The anchoring effect includes a lot of content, such as behavioral economics. In the follow-up, the relevant analysis of the anchoring effect can be broadened, and its future development can be analyzed in an empirical way.

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