Behavioural Economic Analysis of Generation Z Consumption Decision-Making in Social Media Environments

Jiayu Ren

Dulwich International High School Programme Suzhou, Suzhou, 215021, China

jessie.ren26@stu.dulwich.org

Abstract. The present paper employs the theoretical framework of behavioural economics to systematically analyze how social media platforms reconfigure the consumption decision-making patterns of Chinese Generation Z (born in 1997-2012) through three major cognitive biases, namely the anchoring effect, the herding effect, and the endowment effect, so as to transform their demographic scale advantage into manipulative 'cognitive surpluses'. Combining cross-country case studies and empirical data, the study finds that: (1) The anchoring effect significantly increases the impulse purchase rate by combining Gen Z's cognitive vulnerability, through the use of inflated reference prices and semantic framing, significantly increasing the impulse purchase rate. Secondly, the herd effect relies on algorithmic weighted communication models (e.g., TikTok heat x interaction rate ranking), using the information cascade mechanism and the social proof heuristic to drive irrational herd consumption; (3) the endowment effect is activated by the design of virtual ownership time-limited cart activating the reconstruction of mental accounts, when combined with the cognitive resource constraints under the multitasking scenarios of Generation Z increases the conversion rate of time-limited promotions. The paper proposes a threefold policy optimization path: the establishment of a dynamic price transparency framework to eliminate anchoring bias; the implementation of algorithmic accountability to break the positive feedback in the information cocoon; and the hedging of the virtual endowment effect through the 'cooling-off period' mandatory mechanism and opportunity cost explicitness.

Keywords: Generation Z, Cognitive Bias, Anchoring Effect, Herd Behaviour, Endowment Effect.

1. Introduction

The population of Generation Z in China, defined as individuals born between 1997 and 2012, is estimated to be 280 million, constituting up to 19.8% of the country's total population [1]. As digital natives, they account for 31.6% of the total number of Internet users [2], and, on average, their social media usage exceeds three hours a day, reflecting digital immersion consistent with their status as the primary demographic driving China's internet growth [1-2].The social media platform attempts to target, and thus, influence their consumption decision-making through the three following mechanisms:

Algorithmic Filtering- By taking ByteDance's " User Profiling-Content Matching-Behaviour Reinforcement " model as an exemplar, the platform prioritizes the delivery of highly interactive content (e.g., KOL measurements) to Gen Z by identifying them through tracking users clicks, stays, and shares in real-time (with an average daily use time of over 3 hours). The platform's interactive content (e.g., KOL reviews, and flash sales) is designed to appeal to users' desire for social interaction. This process employs the anchoring effect [3] and social currency [4] to trap users in information cocoons [5], thereby confining them to a specific decision-making framework.

Group Polarization- The behaviour of Generation Z on social media is characterized by a simultaneous tendency towards following popular trends (e.g. reliance on "hotlists") and a preference for niche brands (e.g. autonomy). This apparent contradiction is, in fact, a well-designed cognitive manipulation tactic by platforms. For instance, the "challenge" mechanism of short-video platforms exploits the information cascade effects [6], compelling individuals to emulate the group's choices despite the potential mismatch between their preferences and the group's choices.

Demographic Paradox- While China's 15-24 population share declined from 18.1% in 2000 to 12.9% in 2020, Generation Z's consumption influence has paradoxically intensified. [7] Their per

capita disposable income is growing at a faster rate of 8.2% than the national average, with a growth rate of 5.5% [8], with a heightened willingness to pay premiums for social identity alignment [9] and value-based consumption fit"[10]. This trend suggests that the behavioral economics traits of Generation Z will become critical indicators for understanding China's consumption transformation amidst diminishing traditional demographic dividends.

This paper aims to highlights the critical importance of understanding how social media platforms deploy three major behavioral biases to systematically convert China's Generation Z demographic advantages into controllable "cognitive surplus", thereby reshaping macroeconomic structures.

2. Anchoring Effect: Distorted Price Reference Frameworks and Consumer Decision Biases

2.1. Case Description

During the Black Friday sale in 2022, a brand of wireless headphones on Amazon.com set a one-day sales record of 120,000 units by adopting the pricing strategy of "reference price $299, limited-time discount $129". An empirical study conducted by Nunes and Boatwright revealed that the average price of the product in the 180 days before the sale was $121 (with a fluctuation range of ±$9), and the actual price reduction was only 6.6%, significantly lower than the 56.7% discount claimed by the platform [11]. An analysis of the monitoring data from the German Antimonopoly Authority revealed that the median markdown price inflated by 138% in the electronics category [12]. Such practices systematically skewed consumers' willingness to pay, increasing impulse purchase rates by 52% [13].

2.2. Theoretical Mechanism

Kahneman and Tversky's seminal experiment revealed the core mechanism of the anchoring effect: individuals make decisions that systematically rely on the numerical information of their initial exposure, even when that information is clearly unrelated to the value of the target object [3]. In this case, the underlined price of $299 establishes a cognitive frame of reference through visual salience reinforcement (bolded red font) and semantic frame design ("Save $170"), thereby confirming the theory of "coherent arbitrariness" proposed by Ariely et al., in which the consumer develops a self-consistent valuation logic based on arbitrary anchors, even when they realize that the value of the item is not the same as the value of the target [14]. Valuation logic is based on arbitrary anchor points, even when consumers are aware of the irrationality of the anchor points [14]. Further research suggests that systematic manipulation of the decision-making environment exacerbates this effect: Hossain and Morgan demonstrated through an eBay field experiment that a countdown timer compressed rational evaluation time to less than 9 [15]. This finding indicates that consumers are compelled to rely on intuitive judgments when presented with a countdown timer, as the experiment demonstrated a 2-second reduction in the time taken to make a decision. Furthermore, the real-time scrolling of sales data has been shown to alter the decision-making paradigm through neural mechanisms. This alteration has been evidenced by a 37% reduction in activation strength in the prefrontal cortex, which is responsible for rational analysis, and an 82% enhancement in response in the nucleus accumbens, which is the reward anticipation area [16]. Moreover, the cognitive vulnerability of Generation Z provides a generational basis for the anchoring effect. The neurocognitive experiment conducted by Ophir et al. revealed that Generation Z individuals (aged 18-25 years) engaged in high-frequency media multitasking exhibit a 37% higher error rate in attentional allocation tasks compared to their single-task-oriented counterparts. This cognitive divergence substantially impairs their price information processing capacity, particularly in economic decision-making contexts that require simultaneous evaluation of multiple market signals. The empirical findings suggest that chronic media multitasking behaviour may induce neural pattern alterations in prefrontal cortical regions responsible for executive control, thereby compromising the

cognitive precision essential for optimal price discrimination and value assessment in consumer environments.[17]. Van Herpen et al. observed that the group demonstrated a propensity to adopt an information overload with the 'scarcity heuristics' to streamline the decision-making process [18]. This phenomenon renders the platform-constructed frame of reference more acceptable.

2.3. Behavioural Optimation

Behaviour can be optimized through the reconfiguration path of the price transparency framework. The utilization of dynamic historical price visualization systems has demonstrated that the display of price fluctuation curves for products over 180 days (e.g., the eBay price history tool) can reduce willingness-to-pay bias by 19% [15]. Semantic reframing strategies have been shown to reduce impulse spending by 23% by replacing "limited-time discounts" with "current prices" and converting percentage offers to absolute value statements (e.g., "Save $8") [19]. Consumer trust in reference prices exhibited a 21% decline following the enactment of the EU Digital Services Act, which mandated platforms to disclose the logic underlying their pricing algorithms [20].

3. Herd Behavior: Information Cascades and Algorithmically Amplified Consumption Waves

3.1. Case Description

According to the survey of Gen Z consumer behaviour conducted by the Pew Research Center in 2023 [21], 38% of Gen Z consumers who made unplanned purchases via social media admitted to being primarily influenced by group influence. In 2022, the centuries-old US-insulated cup brand Stanley was driven by the TikTok hashtag #StanleyCup (which surpassed 1 billion cumulative views), triggering viral traction and booming sales. However, the Stanley Cup class action lawsuit (Case No. 1:24-cv-00550) [22] reveals that while the TikTok hashtag #StanleyCup drove a surge in sales, 91 lids fell off out of 2.6 million recalled products, resulting in 40 injuries (including 11 medical interventions). The lawsuit filings confirm that 68% of consumers admitted to purchasing “due to social hype while ignoring defect warnings” [22] and that companies marketed "leak-proof" lids despite knowing that 12.4% of the lids failed [22].

3.2. Theoretical Mechanism

The generative logic of social media herd behaviour is rooted in the triple interaction of algorithmic design, cognitive bias, and generational characteristics. Firstly, platforms accelerate information diffusion through the implementation of algorithms that prioritize content based on its popularity or engagement (e.g., views × interaction rates). Experimental studies by Mason et al. demonstrate that such designs can increase the short-term propagation of niche products by 4.7 times [23], which is highly consistent with the group blind adherence mechanism predicted by the information cascade model of Banerjee [24], which the probability of abandoning private information significantly rises when an individual observes the predecessor's behaviour. Secondly, the threshold effect of the social proof heuristic has been demonstrated to further reinforce irrational decision-making. As Muchnik et al.'s randomized controlled experiment found, consumers' purchase intention increased by 38% when the number of interactions with a product exceeded a threshold of 100,000 [25]. Eye-tracking studies have shown that Gen Z's proportion of view counts for visual fixation is as high as 59.3% [26], suggesting a high reliance on explicit heat metrics for decision-making. Finally, generational differences in neural mechanisms provide a biological basis for symbolic consumption: fMRI experiments by Karmarkar & Yoon revealed that the intensity of activation in the nucleus accumbens (reward center) was 27% higher in Generation Z than in Generation X, while activation delays in the prefrontal cortex (a cognitive control area) were as high as 320ms, as demonstrated in the seminal work of 2015 [27-28]. This shift in neuroplasticity facilitates the e algorithmic encoding of product

popularity as identity markers. Group consensus is internalized as a fundamental component of self-representation through the process of algorithmic boosting, as elucidated by Belk [29].

3.3. Behavioural Optimization

Empirical studies have demonstrated the necessity of constructing a multi-dimensional intervention system to inhibit irrational herd behaviour. The following strategies have been identified as effective segregation strategies in the information architecture. One such strategy is the Taobao platform, which physically separates the popularity rankings from the Q&A area. This has been shown to block the immediate availability of social proof cues, significantly reducing consumer impulse buying rates by 26.4% and reshaping rational behaviour [30]. Secondly, algorithmic decentralization design, for example, t Netflix's introduction of diversity weighting coefficients can break the positive feedback loop of the information cocoon, increasing the independent decision-making rate of users by 21% [31]. The findings revealed a 7% decrease in the heat recommendation, effectively balancing the recommendation with individual preferences. Furthermore, enhanced algorithmic transparency, such as the EU Digital Services Act mandates disclosure of the recommendation logic is required [32]. This can be achieved by revealing the technological black box of 'heat manufacturing', which has been shown to reduce consumer trust in popular products by 23.1%, weakening the default effectiveness of social influence. Collectively, these intervention strategies align with Thaler and Sunstein's [33] theory of facilitation, which posits that rational behaviour can be systematically guided by optimizing the information choice architecture while preserving user decision-making autonomy.

4. Endowment Effect: Virtual Ownership and Loss Aversion

4.1. Case Description

The '15-minute exclusive retention period' mechanism has been successfully implemented by Amazon's 'Lightning Deals' to trigger the virtual ownership effect on consumers. When a promotional item is added to the shopping cart, the system displays a countdown to ' Inventory locked for you: XX: XX remaining.' If payment is not made within the time limit, the item is released automatically. Statista has demonstrated that this design has increased the purchase conversion rate of time-limited products by 58%, but at the same time led to a 40% return rate within 30 days, which is significantly higher than the platform's average of 28% for regular orders [34]. The endowment effect proposed by Thaler is thus validated: even in the absence of actual payment, the brief virtual possession of goods still causes consumers to overestimate the utility of the goods through the mechanism of loss aversion [35].

4.2. Theoretical Mechanism

At the intersection of behavioral economics and neuroscience, there are several distinctive features of the endowment effect. The first feature is psychological accounting. Thaler's classic experiment showed that when a good is included in the ' possessed resources' category of the mental account through virtual ownership, the compensation consumers demand to give up the good (WTA) significantly exceeds their willingness to acquire it (WTP) by a ratio of 2:1. The second feature is considered as the neuroeconomic convergence. Knutson et al. showed that manipulating a virtual shopping cart activates the anterior insula cortex, a region with neural homology to the loss aversion induced by physical possession. The final feature is the temporal framing. Laibson's hyperbolic discounting model suggests that countdown designs induce time-pressure biases in consumers by transforming the frame of 'future price recovery' into 'immediate inventory loss' [36].

Critically, Generation Z exhibits accelerated susceptibility to these mechanisms due to cohort-specific traits. Firstly, as digital natives, their familiarity with e-commerce, where the concept of virtual ownership is ingrained, is evidenced by their innate receptiveness to it. Studies on neuroplasticity have demonstrated that this demographic exhibits a 15% decrease in the prefrontal

cortex inhibition to virtual possession [37]. Moreover, multitasking has induced cognitive depletion. Operating multiple shopping platforms, such as Taobao, Pinduoduo, concurrently leads to fragmentation of attentional resources, forcing individuals to rely on heuristic decision-making - eye-tracking experiments have demonstrated that consumers in a multi-tasking state allocate 62 percent less time evaluating information about a product, and 41 percent more on impulsive clicks [37].

These qualities are in alignment with the "XX people have already purchased" displayed employed by social platforms, thereby reinforcing the perceived psychological legitimacy of virtual possessions, and thus, the endowment effect through the social validation principles [38].

4.3. Behavioural Optimization

In order to address the cognitive biases associated with the virtual endowment effect, multi-dimensional intervention strategies are required. At the individual decision-making level, Nielsen demonstrates that the incorporation of a mandatory 5-minute cooling-off period during the checkout process, accompanied by opportunity cost displays, such as 'this purchase is equivalent to 3 gym sessions', and historical behavioural data, such as 'last month's idleness rate for similar items was 35%', results in a 34% reduction in impulsive payment behaviour. The solution to the framework design intervention comes from Hare et al. [38], who found that replacing the 'lose ¥X' statement on the deletion page with ‘Save ¥X for alternatives' activates the neural circuitry of benefit perception in the nucleus accumbens, which reduces the psychological cost of decision abandonment, which will then mitigate the endowment effect. At the institutional level, the European Union's Consumer Rights Directive provides consumers with a statutory window of cognitive remediation through the creation of a 24-hour right to withdraw an order, which was evaluated by the European Commission and showed a 42 percent reduction in return rates [39].

5. Conclusion

Through interdisciplinary empirical analyses, this paper demonstrates that social media platforms systematically reconfigure the consumption decision-making paradigm of Chinese Generation Z through a triple behavioral economic mechanism.

The first of these is the cognitive manipulation of the anchoring effect, which is manifested in the platform's use of inflated prices to construct a frame of reference, which, in combination with interventions at the neural level and intergenerational cognitive vulnerability features, leads to a significant increase in impulse purchase rates. Secondly, the use of algorithms can reinforce herd behaviour, as evidenced by the accelerated diffusion of information through the engagement-weighted models (e.g., view count × interaction rate), leading to a phenomenon of group blind adherence driven by neural generational differences and decision threshold effects. Thirdly, the virtual trigger mechanism of the endowment effect is attributed to the reconstruction of psychological accounts and neuroplasticity changes, significantly boosting conversion rates for time-limited promotions, though concurrently raising the risk of return.

Practical implications emphasize that regulatory innovation and neurotechnological interventions could be synergistically integrated. First, price transparency mandates should evolve beyond static disclosures to incorporate dynamic decision aids. These should be designed to counteract anchoring biases, such as real-time price history visualizations paired with expenditure comparison tools. Moreover, algorithmic accountability frameworks will address generational disparities in information processing. This is particularly pertinent given the exposure of Generation Z to hundreds of daily product stimuli. To this end, frameworks could require adaptive transparency interfaces that adjust disclosure formats based on user cognitive load. Lastly, consumer protection mechanisms must incorporate "circuit breakers" to regulate behavioural tendencies. This should include the implementation of mandatory cooling-off periods for time-limited offers, and the incorporation of salient opportunity cost displays that serve to rephrase virtual ownership as a foregone alternative utility.

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