

A Study on Inflation of Product Rating on E-Commerce Platform for Laptops

DR. D. MALARVIZHI MSC., M.PHIL., PH.D.¹, B. DAYANAND²

^{1,2}*B.com with information technology, Dr. N. G. P Arts and science college*

Abstract- The credibility of product ratings on e-commerce platforms is increasingly threatened by the phenomenon of rating inflation, where average scores are artificially elevated due to biased feedback and manipulative practices. This study examines the factors contributing to inflated ratings for laptops on major platforms and analyzes the resulting gap between consumer perception and actual product satisfaction. The research investigates the impact of this distortion on consumer trust, purchase behavior, and market fairness among sellers. Findings indicate that while consumers heavily depend on ratings for high-investment products like laptops, a significant portion has experienced a mismatch between online scores and actual performance. The study concludes that rating inflation erodes the integrity of digital marketplaces and emphasizes the need for robust verification mechanisms, algorithmic transparency, and enhanced consumer awareness to restore trust.

I. INTRODUCTION

The digitization of commerce has fundamentally altered consumer behavior, with e-commerce platforms emerging as the primary marketplace for a vast array of products. Within this digital ecosystem, product ratings and reviews serve as a critical heuristic, functioning as a proxy for quality assurance in the absence of physical product inspection. For high-investment, specification-intensive products such as laptops, this reliance on aggregated peer feedback is particularly acute. A prospective buyer cannot tangibly assess processing power, display fidelity, or build quality through a screen, and thus, the numerical star rating and accompanying textual reviews become the dominant source of pre-purchase information. However, the integrity of this system is under threat. The very mechanisms designed to build trust and guide decisions are being systematically undermined by rating inflation, a condition where the distribution of feedback is skewed towards the

extreme positive end, failing to reflect the genuine, nuanced spectrum of consumer experiences.

Rating inflation is not a random anomaly; it is a complex outcome of interwoven psychological biases, deliberate economic manipulation by sellers, and the opaque algorithmic governance of the platforms themselves. A consumer who has just invested a significant sum in a laptop may experience post-purchase rationalization, subconsciously downplaying minor flaws to validate their decision, thereby contributing a more positive review than objective performance might warrant. Simultaneously, sellers operating in a hyper-competitive environment face immense pressure to maintain a near-perfect rating, as even a marginal decrease from 4.5 to 4.3 stars can lead to a catastrophic drop in search visibility and conversion rates. This pressure incentivizes a spectrum of manipulative strategies, from benignly nudging satisfied customers for reviews to engaging in systematic fraud by commissioning fake reviews. The platform algorithms, designed to prioritize the 'most helpful' or 'highest-rated' products, inadvertently amplify this cycle, creating a winner-takes-all dynamic where inflated ratings are both the key to success and a barrier to entry for honest competitors.

Placing this issue within the context of India's burgeoning e-commerce landscape, the study focuses on the laptop purchasing behavior of consumers in Coimbatore, a city with a pronounced IT and manufacturing presence. The consumer here is both tech-savvy and price-sensitive, navigating between detailed technical specifications and the social proof offered by star ratings. When inflation erodes the reliability of that social proof, the consequences are multifaceted. Consumers risk making suboptimal purchases based on misleading consensus, leading to post-purchase dissonance and eroding trust in the

entire platform. Genuine sellers, particularly small and medium-sized enterprises that compete on product merit rather than manipulative tactics, find themselves at a severe disadvantage. The theoretical departure point for this investigation is the recognition that the informational value of a rating is not absolute but is constantly being negotiated between the psychology of the reviewer, the commercial intent of the seller, and the architectural design of the platform.

II. THEORETICAL FRAMEWORK AND DECONSTRUCTION OF THE RATING INFLATION PHENOMENON

To systematically understand the phenomenon, this study proposes a conceptual framework—the Inflation-Consumer Response Model—which delineates the pathway from a macroeconomic trigger to the final rating behavior. The cycle commences with a Price Adjustment Stage, driven by inflationary pressures in the broader economy that increase component, logistics, and operational costs for laptop manufacturers and sellers. These escalated costs are transferred to the consumer through higher price tags, which then initiates the Consumer Evaluation Stage. Here, the buyer does not view the laptop in isolation but compares its new, elevated price against their internal reference price and the perceived value proposition offered by the specifications—such as the latest generation processor, dedicated graphics memory, or solid-state drive capacity.

This evaluation inevitably leads to an Expectation Gap Stage. A product's specifications create a baseline promise of performance. When a consumer pays a premium price, especially during inflationary periods, their expectation of tangible value delivery intensifies. If the real-world experience, such as battery longevity or thermal management under heavy workloads, falls short of this heightened benchmark, a chasm between expectation and reality forms. This chasm is the crucible where satisfaction or dissatisfaction is forged. The consumer then enters the Rating Behaviour Stage, where they translate this affective and cognitive assessment into a numerical star rating and a textual review. A crucial distortion occurs here: a consumer who perceives the product as

"good but not great value for money" might still assign 4 or 5 stars if the single most prominent feature, say the display quality, is exceptional. This is the Halo Effect in action, where a dominant positive attribute overrides a more balanced, critical evaluation.

The final stage, Platform Reputation Impact, completes the feedback loop. The aggregated, inflated rating becomes a permanent fixture on the product page, misleading future consumers who make purchasing decisions based on what now constitutes a false market signal. The factors contributing to this final inflated score are deeply embedded in platform dynamics. Algorithmic Visibility Bias is a primary culprit; search and recommendation engines are designed to surface top-rated products, creating a powerful economic incentive for sellers to hoard 5-star reviews at any cost. This commoditization of trust is further complicated by the concept of Verified Reviews. While intended as a seal of authenticity, the system can be circumvented through orchestrated campaigns where fake reviewers make low-cost purchases to obtain the 'Verified' badge, lending an unwarranted aura of credibility to fraudulent feedback. The very policies designed to ensure transparency become tools for sophisticated manipulation, creating a systemic crisis of informational authenticity where the signal-to-noise ratio of genuine customer feedback is dangerously low.

III. THE PSYCHOLOGY OF TRUST AND THE BROKEN SOCIAL PROOF HEURISTIC

The reliance on product ratings is a manifestation of the psychological principle of social proof, which posits that individuals in situations of uncertainty look to the actions and opinions of others to determine correct behavior. In the high-stakes, high-uncertainty environment of online laptop purchasing, a 4.4-star rating aggregated from hundreds of buyers serves as powerful social validation, signaling safety and quality. However, rating inflation systematically corrupts this heuristic, transforming social proof from a reliable informational shortcut into a deceptive mirage. Consumer trust, a fragile and multidimensional construct, is the first casualty. Trust in the e-commerce context can be decomposed into

three levels: trust in the individual product, trust in the seller, and the overarching trust in the platform as a neutral intermediary. Inflated ratings initially target trust in the product, but a repeated experience of mismatch between the stellar online promise and mediocre real-world performance causes a cascading failure, ultimately eroding the foundational trust in the platform itself.

The study's insights into consumer perception reveal a deep-seated cognitive dissonance. A vast majority of consumers operate on a spectrum of cautious reliance, believing that ratings are 'mostly genuine' but harboring a significant residue of doubt. This 'trust-but-verify' attitude is cognitively taxing, forcing consumers to become amateur detectives. They look for linguistic cues in reviews to decipher authenticity, cross-reference ratings across different platforms, and place disproportionate weight on negative reviews in a search for the 'real' story. The discovery that a significant number of respondents have experienced a direct mismatch between the rating and actual performance is not merely a statistical finding; it is a catalyst for a profound shift in purchasing behavior. It transforms the consumer from a passive recipient of social proof into a skeptical analyst, undermining the very efficiency and convenience that are the value propositions of e-commerce. This erosion manifests in a renewed, though reluctant, preference for offline retail, where physical inspection can serve as a counter-measure to the perceived dishonesty of the digital rating ecosystem.

IV. MARKET DISTORTION AND THE EROSION OF MERITOCRATIC COMPETITION

Beyond misleading individual consumers, systematic rating inflation acts as a structural market distortion that penalizes authenticity and rewards manipulation. In a theoretically efficient market, superior products should rise to the top based on merit, as reflected by genuinely high customer satisfaction and consistently positive feedback. Rating inflation shatters this meritocracy. It creates an asymmetric playing field where a seller who invests heavily in product R&D and genuine quality control may be outperformed—in terms of visibility and sales conversion—by a competitor selling an inferior product but deploying

an army of incentivized reviewers or algorithmic bots to fabricate a flawless 4.7-star rating.

This dynamic has devastating long-term consequences for market competition, particularly for micro, small, and medium-sized enterprises (MSMEs) and new market entrants. A startup with an innovative laptop design but a limited marketing budget cannot ethically or financially compete with established players or unscrupulous sellers who purchase thousands of fake reviews to dominate the search results page. This creates a 'rating barrier to entry' that stifles innovation and reduces consumer choice. Furthermore, the study's finding that consumers perceive rating inflation to be especially acute in the electronics category, a sector characterized by high technical complexity and rapid innovation, is critical. It suggests that the very products that would benefit most from accurate, detailed user feedback are the ones most compromised by systemic rating distortion. This phenomenon pressures sellers into a 'race to the bottom' in ethical conduct; even honest businesses may feel compelled to engage in mild forms of rating gaming—such as aggressively soliciting reviews only from demonstrably happy customers—just to neutralize the artificial competitive disadvantage, thereby perpetuating the cycle of inflation.

Addressing this multifaceted crisis requires a tripartite approach involving platforms, regulators, and consumers. The study's findings underscore a strong consumer demand for external regulation, indicating that self-governance by platforms has failed to inspire full confidence. Algorithmic accountability is paramount. E-commerce platforms must move beyond simplistic weighted averages and deploy advanced, transparent AI models capable of detecting anomalous patterns indicative of review bombing, brigading, and bot-generated content. Detection logic should integrate temporal analysis, linguistic complexity scoring, and reviewer network analysis to flag coordinated inauthentic behavior. Simultaneously, a consumer-centric remedy involves decoupling the visual primacy of the average star rating from the search and recommendation architecture. Elevating the visibility of detailed, multimedia reviews, and highlighting 'most critical' alongside 'most helpful' reviews, can provide a more

balanced informational diet to buyers. Ultimately, restoring integrity will depend on shifting the culture from one of passive consumption of a single inflated number to an active, critical engagement with a rich, pluralistic fabric of feedback, thereby reinstating the genuine voice of the consumer as the ultimate arbiter of quality.

VI. CONCLUSION

The investigation into the inflation of product ratings on e-commerce platforms, with a specific focus on the laptop market, reveals a digital marketplace grappling with a crisis of authenticity. The study conclusively establishes that product ratings, while serving as a critical decision-making heuristic for consumers, are systematically being disconnected from the ground reality of product performance and customer satisfaction. This disconnect arises from a toxic confluence of psychological biases, aggressive seller manipulation through fake and incentivized reviews, and platform algorithms that inadvertently reward inflated scores with higher visibility. The result is a distorted market signal that misleads consumers, penalizes ethical sellers, and progressively erodes the foundational trust upon which digital commerce is built.

A pivotal finding of this research is the persistent gap between the promised value, as signified by high star ratings, and the actual post-purchase experience of consumers. While a majority of consumers operate under the assumption that online ratings are genuine, a substantial and significant segment has directly encountered a mismatch, with their laptops failing to live up to their digitally inflated reputations. This experience breeds a form of consumer skepticism that is deeply counterproductive for the e-commerce ecosystem. It forces consumers into a defensive posture, compelling them to cross-reference multiple sources, scrutinize textual reviews for subtle cues of deception, and even retreat towards traditional offline retail channels to physically verify product quality. The trust that platforms have painstakingly built as convenient, reliable intermediaries is thus fractured not by a single event, but by the slow, corrosive drip of inflated expectations meeting mediocre reality.

Furthermore, the study illuminates the profound market distortion caused by rating inflation, which effectively dismantles the meritocratic ideal of the online marketplace. When a product's visibility and commercial success hinge not on its engineering excellence or genuine customer satisfaction but on the scale of its review manipulation, the competitive landscape is fundamentally corrupted. This creates an almost insurmountable rating barrier for new entrants and honest small-scale sellers who cannot compete with the fabricated reputations of established or unscrupulous players. The perception among consumers that electronic products, particularly specification-heavy items like laptops, suffer from disproportionate rating inflation exacerbates this problem, injecting unwarranted risk into high-investment purchasing decisions. The study concludes that the current ecosystem, left to its own self-regulatory devices, has failed to safeguard the integrity of the feedback loop.

In conclusion, restoring the credibility of e-commerce product ratings is not merely a technical challenge of tweaking an algorithm; it is an exercise in rebuilding a broken social contract between platforms, sellers, and consumers. The path forward necessitates a multi-pronged strategy of radical algorithmic transparency, where platforms openly explain how ratings are calculated and weighted. This must be coupled with the deployment of sophisticated, AI-driven forensic tools to dismantle review-fraud networks in real-time. Crucially, the study confirms a strong consumer mandate for external regulatory oversight, signaling a clear need for governmental and consumer protection agencies to define and enforce strict penalties against fake review ecosystems. Finally, the solution lies in consumer empowerment—shifting the focus from a single, easily-gamed numerical aggregate to a rich ecosystem of verified, diverse, and multimedia feedback. Only through such a comprehensive reinvention can the product rating be salvaged as a tool of genuine guidance, realigning the perception of value with the reality of performance, and ensuring that the digital marketplace is a space for authentic choice, not manufactured consensus.

REFERENCES

- [1] Ajzen, Icek, "The Theory of Planned Behavior," *Organizational Behavior and Human Decision Processes*, vol. 50, no. 2, pp. 179–211, 1991.
- [2] Cialdini, Robert B., *Influence: Science and Practice*, 4th ed. Boston: Allyn & Bacon, 2001.
- [3] Davis, Fred D., "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology," *MIS Quarterly*, vol. 13, no. 3, pp. 319–340, 1989.
- [4] Federal Trade Commission (FTC), "FTC to Ramp Up Enforcement Against Illegal Practices in Online Reviews and Endorsements," *FTC Business Guidance*, June 2023. [Online]. Available: <https://www.ftc.gov>.
- [5] Hingad, Gravit, et al., "Impact of Social Commerce on Consumer Buying Behaviour in India," *Journal of Positive School Psychology*, vol. 6, no. 3, pp. 5001–5010, 2022.
- [6] Kaur, Kulwinder and Singh, Tejinderpal, "Impact of Online Consumer Reviews on Amazon Books Sales: Empirical Evidence from India," *Journal of Retailing and Consumer Services*, vol. 59, p. 102387, 2021.
- [7] Kumar, V. and Reinartz, Werner, *Consumer Behavior and Digital Marketing*. USA: Springer, 2016.