



A Quantitative Study on the Influence of Consumer Characteristics on the Effectiveness of Online Comments

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Abstract: In the rapidly evolving landscape of digital commerce, online comments wield substantial influence over consumer decisions. This study delves into the intricate interplay between consumer individual characteristics and the efficacy of online comments, offering a comprehensive investigation of their relationship. Drawing from established theoretical frameworks and considering demographic, behavioral, psychological, and cognitive attributes, we construct a conceptual model that encompasses a spectrum of variables. Utilizing a Likert five-point scale, a survey questionnaire was administered to over 500 participants via an internet-based platform. Subsequent data analysis, including reliability and validity assessments, correlation analyses, and stepwise regression, affirms the influential role of consumer characteristics in shaping the impact of online comments. The findings underscore the significance of behavioral tendencies, psychological dispositions, and cognitive traits in amplifying the efficacy of online comments. This study contributes to a deeper understanding of the dynamics underlying online comment effectiveness, enabling consumers to make informed decisions and aiding internet service providers in devising tailored marketing strategies. As the digital landscape continues to evolve, this research sheds light on the intricate dynamics between consumer attributes and the credibility of online comments in shaping contemporary consumer behavior and e-commerce trends.

Keywords: Online Comments, Consumer Characteristics, Effectiveness, E-commerce

Introduction

In the era of information technology, the field of e-commerce has witnessed rapid and substantial growth. According to survey data from CNNIC, as of December 2015, China's online shopping user base had surged to a staggering 413 million, showcasing a remarkable growth rate of 14.3% [1]. This robust expansion of the online shopping market in China has remained steadfast. As user experiences steadily enhance, online shopping has firmly ingrained itself as the consumption norm for the majority of internet users. Notably, the pivotal factors garnering utmost attention from online shoppers during their decision-making process encompass online reputation, pricing, and the credibility of websites and merchants. These factors command attention rates of 77.5%, 72.2%, and 68.7%, respectively. In the face of the vast and intricate landscape of online information, heightened perceived risks during the purchase decision phase lead consumers to increasingly rely on online reputation for information gathering [2]. Online comments, serving as a novel conduit for reputation propagation, encapsulate consumers' affirmative or adverse evaluations of specific products in the online realm. These online comments assume a pivotal role as a foundation for consumers' determinations concerning online purchases. Consequently, the identification of comments, amidst an abundance of online discourse, that consumers perceive as efficacious and influential in their purchasing decisions emerges as a critical imperative. As the volume of online product commentary continues its upward trajectory, prospective consumers are confronted with the escalating challenge of sifting through a plethora of reviews to extract genuinely pertinent information. As a result, the task of singling out valuable comments and dissecting their utility stands as a pronounced research focal point. This engenders the question: what constitutes a more efficacious form of online commentary? Extant literature underscores the substantial impact of both comment characteristics and consumer attributes on the efficacy of online comments. While the influence of comment characteristics has been exhaustively studied, yielding considerable insights, comprehensive and systematic research into the ramifications of consumer attributes on the efficacy of online comments remains relatively scarce [3]. This void accentuates the pertinence of a future research trajectory: a comprehensive examination of the influence of consumer individual attributes on the efficacy of online comments.

This study centers its attention on consumers who actively contribute comments and delves into the individual attributes that impinge upon online commentary, as well as the mechanisms through which these attributes exert their sway. On one hand, this investigation discerns consumer individual attributes that wield influence over the efficacy of online comments, thereby enhancing the potency of consumers' purchase decisions. On the other hand, enterprises can harness this understanding to furnish more potent online commentary, thereby enticing consumer purchases, heightening their digital reputation, and thereby catalyzing the progression of e-commerce [4].

I. Literature Review

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The efficacy of online comments is an outcome shaped by a plethora of variables. A comprehensive review of the literature highlights that extant research on the efficacy of online comments predominantly gravitates around two primary facets: the characteristics of comments and consumer attributes.

1.1 Characteristics of Comments

The attributes underpinning comments predominantly encompass factors such as the length of comments, the features embedded in their content, and their readability[5]. Typically, comment length is gauged in terms of word count, with empirical studies suggesting that extended comments tend to wield a heightened influence. However, a threshold exists beyond which the impact of comment length on the efficacy of online comments diminishes or even vanishes. Excessively protracted comments can inundate readers with cognitive load, thus impeding the assessment of their utility. Furthermore, the sentiment encapsulated within comments bears a pronounced influence on their efficacy. The positive or negative emotional tenor present within comments demonstrably augments their utility[6]. Nonetheless, distinct product categories can instigate varying reactions to extreme comments. For products geared toward experiential engagement, extreme comments tend to exhibit diminished credibility. Moreover, a positive correlation is observed between readability and the efficacy of online comments. Enhanced readability invariably corresponds to heightened efficacy, with factors such as word choice, sentence length, and spelling intricacies collectively influencing readability[7].

1.2 Consumer Attributes

Consumer attributes span a gamut of variables, encompassing attributes such as the credibility of one's reputation, expertise, social underpinnings, emotional inclinations, bias in preferences, and gender. Empirical investigations underscore the pivotal role played by attributes such as an individual's given name, moniker, geographical location, and interests, all of which provide substantive insights into the information source, consequently augmenting the efficacy of comments. Furthermore, dimensions such as reputation, purchase history, and credibility assume a significant role in determining the efficacy of online comments[8]. The cumulative volume of historical comments or the tally of consumer votes garnered by a commenter profoundly influences perceptions of that commenter's expertise. Commenters boasting heightened expertise are more likely to be embraced by consumers and bestowed with elevated ratings of utility. Societal factors too exert an influence, with an inverted U-shaped correlation surfacing between the centrality of commenters and the utility of online comments. Additional variables, including the gender of commenters, the emotional valence within comments, and sentiment factors, collectively leave an imprint on the efficacy of online comments. Negative commentary can tangibly impact consumer satisfaction with products and their subsequent purchasing behavior[9]. The degree of consumer involvement tends to erode product satisfaction and influence purchasing choices. Disposition toward bias in preferences, bias in active evaluation, and convergence in evaluative behavior can collectively yield biased mean values in online comments, thereby failing to accurately mirror the authentic quality of a given product[10]. Furthermore, consumers' perception of risk is sensitive to the nature of the product being consumed, and this perception of risk undergoes modulation contingent upon the type of product and the attributes of the consumer. Trust-based perceptions of online platforms also diverge based on gender disparities

Based on the theories and research findings mentioned above, this study focuses on consumer individual attributes as the primary influencing factor and further categorizes and discusses the detailed impact of these attributes on the effectiveness of online comments.

II. Conceptual Model and Research Hypotheses

2.1 Conceptual Model

Drawing upon the aforementioned theoretical frameworks and considering individual consumer characteristics, this study categorizes attributes that influence the efficacy of online comments into four distinct categories. The first category encompasses demographic features such as age, education level, gender, family structure, regional disparities, income level, and occupation. For the purposes of this study, the focus is placed on education level, regional differences, income level, and occupation. The second category entails behavioral characteristics, including impulsive, rational, and emotional buying tendencies. The third category encompasses psychological aspects, primarily comprising cost-effectiveness, conformity behavior, and personal sentiment. Lastly, the fourth category incorporates cognitive attributes, involving factors like perceived usefulness, perceived risk, and perceived usability. The study selects variables such as comment timing, online shopping experience, expertise, and product familiarity. Consequently, this study integrates demographic features, behavioral characteristics, psychological aspects, and cognitive attributes into a comprehensive model depicting the influence of consumer individual characteristics on the effectiveness of online comments.

2.2 Research Hypotheses

2.2.1 Demographic Features

Disparities in educational backgrounds give rise to variations in consumer knowledge levels and cognitive perspectives towards products, subsequently impacting the caliber of comments generated. Distinct geographical regions inhabited by consumers, each representing unique regional cultures, may engender specific demands or perceptions concerning certain products, thereby influencing the quality of online comments. Discrepancies in income levels signal differences in consumers' purchasing power, which in turn affect evaluations of product performance, pricing, and service requisites, ultimately leading to fluctuations in the quality of evaluations. Furthermore, varying occupations among consumers result

in diverse needs, experiences, and product perceptions, thus exerting a subsequent influence on the quality of online comments. In light of these considerations, the following hypothesis is posited:

H1: Demographic features of consumers will exert a positive and significant impact on the effectiveness of online comments.

2.2.2 Behavioral Characteristics

Consumers who engage in impulsive buying are inclined to make immediate purchase decisions based on favorable product comments, often with limited contemplation of personal needs or product applicability. Rational buyers, on the other hand, tend to extensively peruse relevant product comments, taking into account factors such as product quality, pricing, performance, and after-sales service before reaching a purchase verdict. Emotional buyers are frequently swayed by online comment content, images, and similar facets when making purchase choices, sometimes overlooking practicality or authenticity. Consequently, the subsequent hypothesis is advanced:

H2: Behavioral characteristics of consumers will exert a positive and significant impact on the effectiveness of online comments.

2.2.3 Psychological Characteristics

Consumers who prioritize cost-effectiveness tend to gravitate towards high-value product comments during online shopping, deeming them particularly impactful. Those exhibiting conformity behavior often lean towards conformity, follow trends, and adhere to prevailing opinions, harboring the belief that viewpoints shared by the majority of commenters hold greater efficacy. Certain consumers attribute greater importance to product comments that convey distinct personal sentiments when selecting products online, regarding such comments as more valuable. As a result, the following hypothesis is formulated:

H3: Psychological characteristics of consumers will exert a positive and significant impact on the effectiveness of online comments.

2.2.4 Cognitive Characteristics

Before making purchase decisions, consumers routinely evaluate and assess online comments. Some consumers focus primarily on recent product comments during online shopping, regarding them as more pertinent. Others place greater reliance on comments from reviewers possessing substantial online shopping experience, considering them more authoritative. Specific consumers regard comments from purchasers with a high degree of product expertise as more credible. Discrepancies in product understanding also have a discernible impact on the content of online comments. Guided by these observations, the ensuing hypothesis is presented:

H4: Cognitive characteristics of consumers will exert a positive and significant impact on the effectiveness of online comments.

III. Research Design and Data Collection

3.1 Research Design

The survey questionnaire employed in this study is bifurcated into two sections: the initial segment gathers fundamental information and online shopping behaviors of respondents, while the subsequent segment investigates the influence of consumer individual characteristics on the effectiveness of online comments. Employing the Likert five-point scale, the questionnaire is designed in accordance with the conceptual model established herein, encompassing demographic features, behavioral characteristics, psychological aspects, and cognitive attributes as independent variables. The questionnaire items are developed by amalgamating mature scales from both domestic and international literature with the specific attributes of online comments.

3.2 Data Collection

Primarily conducted through the internet-based QuestionStar platform, the survey questionnaire yielded a total of 562 responses, out of which 548 were deemed valid, resulting in a commendable effective response rate of 97.5%. This response rate meets the requisites of the research design and statistical analysis.

IV. Data Analysis

4.1 Reliability and Validity Analysis

A comprehensive reliability test was undertaken on the various indicators encompassed within the scale. The Cronbach's Alpha coefficient was calculated to be 0.867, attesting to the high reliability of the scale employed in this study, rendering it apt for further analysis. Preceding factor analysis, the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity were administered. The KMO value pertaining to the research scale stood at 0.843, falling within the optimal range of 0.8 to 0.9. The associated Sig value of 0.000 affirms the suitability of the scale for factor analysis.

4.2 Correlation Analysis

Correlation analysis was undertaken to ascertain the consistency of trends in variations between two variables. The variables under scrutiny in this study demonstrated statistically significant correlations at the 0.01 level. It is noteworthy that robust correlations were discerned between "Effectiveness of Online Comments," "Psychological Characteristics," and "Cognitive Characteristics," as well as between "Psychological Characteristics" and "Cognitive Characteristics," with Pearson correlation coefficients surpassing the 0.5 threshold.

4.3 Model Verification

In order to substantiate the research model, a stepwise regression approach was adopted. The stepwise method was chosen to mitigate issues arising from multicollinearity among variables. The ensuing regression equation was derived:

$$Y = 1.097 + 0.366X_1 + 0.215X_2 + 0.180X_3 \quad (1)$$

Analysis of the regression equation reveals that a one-unit increase in behavioral characteristic X_1 leads to a corresponding 0.366 unit increase in the effectiveness of online comments. This underscores the positive and significant influence of consumer behavioral characteristics on the efficacy of online comments, thereby validating hypothesis H2. Similarly, a one-unit rise in psychological characteristic X_3 results in a 0.180 unit enhancement in the effectiveness of online comments, corroborating the affirmative and significant impact of consumer psychological characteristics, thus validating hypothesis H3. Likewise, for every one-unit increment in cognitive characteristic X_2 , the efficacy of online comments advances by 0.215 units, affirming the favorable and significant impact of consumer cognitive characteristics, thus validating hypothesis H4.

In summation, consumer behavioral characteristics, psychological aspects, and cognitive attributes collectively exert a constructive and significant influence on the effectiveness of online comments. This affirmation corroborates hypotheses H2, H3, and H4, with consumer behavioral characteristics yielding the most pronounced impact, followed by cognitive attributes, and psychological characteristics emerging as having the least impact. Given that the Sig value for demographic features surpasses the 0.05 threshold, it does not withstand scrutiny, leading to the non-validation of hypothesis H1.

V. Conclusion

In the prevailing landscape of the open internet, the credibility of online comments assumes paramount importance. Participants engaging in online commentary can be categorized into two groups: those who comment post-purchase and those who peruse comments prior to making purchases. This study focuses on the former group, scrutinizing the efficacy of online comments through the lens of individual characteristics of commenters. The devised research model integrates demographic features, behavioral characteristics, psychological aspects, and cognitive attributes as independent variables. Data was collected via a questionnaire survey, followed by meticulous data analysis and model verification. The study divulges that consumer behavioral characteristics, psychological attributes, and cognitive attributes collectively wield a constructive and substantial influence on the effectiveness of online comments. These findings serve to empower consumers in making comprehensive assessments of the utility of online comments, thereby facilitating informed purchasing decisions. Furthermore, these insights furnish internet service providers with the means to tailor personalized marketing strategies predicated on distinct consumer attributes, thereby amplifying the effectiveness of product evaluations, attracting an enlarged customer base, and fostering the advancement of e-commerce.

References

- [1] CNNIC. "The 37th Statistical Report on the Development of China's Internet" [Online]. Available: http://www.cnnic.cn/hlwfzyj/hlwzxbg/201601/P020160122_469130059846.pdf, Apr. 3, 2016.
- [2] CNNIC. "Research Report on China's Online Shopping Market in 2015" [Online]. Available: http://www.cnnic.cn/hlwfzyj/hlwzxbg/dzswbg/201606/P020160622_616579052961.pdf, Jun. 25, 2016.
- [3] H.S. Bansal and P.A. Voyer, "Word-of-mouth Processes within a Services Purchase Decision Context," *Journal of Service Research*, vol. 3, no. 2, pp. 166-167, 2000.
- [4] Y. Hao, "An Empirical Study on the Impact of Online Comments on Consumer Perception and Purchase Behavior" [Dissertation], Harbin: Harbin Institute of Technology, 2010.
- [5] G. Guo, K. Chen, and F. He, "Research on the Factors Affecting Consumer Online Comment Credibility," *Contemporary Economic Management*, vol. 32, no. 10, pp. 17-23, 2010.
- [6] X. Ma, L. Khansa, Y. Deng, and S.S. Kim, "Impact of Prior Reviews on the Subsequent Review Process in Reputation Systems," *Journal of Management Information Systems*, vol. 30, no. 3, pp. 279-310, 2014.
- [7] I. Simonson and E. Rosen, "What Marketers Misunderstand about Online Reviews," *Harvard Business Review*, pp. 23-25, 2014.
- [8] C. Forman, A. Ghose, and B. Wiesenfeld, "Examining the Relationship Between Reviews and Sales: The Role of Reviewer Identity Disclosure in Electronic Markets," *Information Systems Research*, vol. 19, no. 3, pp. 291-313, 2008.
- [9] L. Kugler, "Keeping Online Reviews Honest," *Communications of the ACM*, vol. 57, no. 11, pp. 20-23, 2014.
- [10] Y. Juan, W. Qiwei, X. Yan, et al., "Utility Analysis of Online Product Reviews," *Journal of Management Sciences in China*, vol. 15, no. 5, pp. 65-75, 2012.