



The Influence of Brand Image on Consumer Buying Behavior: An AI-Powered Sentiment Analysis in the Digital Age

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ABSTRACT

This consider points to assess the affect of brand image on customer obtaining behavior in a computerized setting by joining quantitative strategies and counterfeit insights (AI)-based opinion examination. Essential information collection was conducted through an internet overview of 212 respondents matured 21–35 a long time who routinely make online buys, whereas auxiliary information was gotten from 5,000 customer comments on social media and e-commerce destinations. The comes about of the relapse examination appeared that brand image components such as believe ($\beta = 0.37$), seen quality ($\beta = 0.31$), and passionate association ($\beta = 0.28$) have a critical impact on buy purposeful ($R^2 = 0.62$, $p < 0.01$). The discoveries from the estimation investigation appeared that 72% of customer suppositions were positive, supporting the quantitative comes about and underlining the significance of the enthusiastic viewpoint in acquiring choices. This think about contributes to the advancement of hypothesis by combining essential and auxiliary information analyzed utilizing AI innovation, and emphasizing the significance of computerized notoriety and enthusiastic perspectives in forming brand quality. The comes about of this ponder open up unused points of view in creating data-based promoting procedures within the computerized period.

Keywords: brand image, buy behavior, opinion examination, brand esteem

1. INTRODUCTION

In today's fast-evolving and exceedingly competitive computerized environment, brand image has ended up a pivotal calculate in forming buyer buying behavior [1]. Progresses in data and communication innovation have altogether modified how shoppers seek for item data, compare choices, and make buy choices, with brand discernments presently to a great extent impacted by advanced stages such as social media, e-commerce destinations, and review forums [2].

Present day brand image is not exclusively molded by conventional showcasing endeavors but moreover by computerized consumer brand intelligent, which can presently be analyzed in profundity utilizing Fake Insights (AI) [3]. A particularly useful tool in this regard is AI-powered sentiment analysis, enabling rapid and systematic evaluation of consumer opinions [4].

Brand equity refers to the extent to which consumers' perceptions and emotions towards a brand influence their purchasing decisions, which are generally determined by the brand image itself. Regardless of the marketing strategy used by the company, the ultimate goal of each campaign is the same, namely to increase product purchases, increase market share, and strengthen brand equity. Both academics and business practitioners have shown interest in this study, but until now there has been no dominant theoretical framework in research related to brand equity [5];[6].

Brand equity assessment in an academic context is often done from a consumer or business perspective [7]. One approach views that brand equity is entirely determined by consumer perceptions of a product or service [8]. Although brand characteristics and attributes play a role, brand image in the minds of consumers remains the main determining factor in purchasing decisions. Brand reputation remains the most influential element on consumer behavior, although consumer preferences and the way they process information continue to evolve. However, some researchers argue that indicators such as market share, market value, and cash flow are more appropriate to measure brand equity [9].

Existing research also considers financial and non-financial results as indicators of brand value. Price leadership and market share are used to measure financial success, while brand awareness, reputation, loyalty, and brand associations are indicators of non-financial performance. This study analyzes the relationship between brand image and brand equity by exploring consumer attitudes and purchase intentions, and expanding the understanding of brand equity from a non-financial perspective, both from the perspective of consumers and brands [10];[11].

Despite these developments, limited research has employed a quantitative approach to assess the influence of brand image on purchasing decisions in the digital age [12]. To address this gap, this study investigates the connection between brand image perceptions and consumer buying choices using a quantitative methodology, supported by AI-driven sentiment analysis for more precise, data-backed insights [13].

Table 1. GAP Analysis

Gap Analysis	Supporting References
Social media has a significant impact on how consumers perceive brands and make buying choices. Despite its importance, research remains limited on the emotional and psychological aspects that shape brand image	(Schivinski and Dabrowski) [14]
This study aims to explore how communication through social media influences consumer perceptions of brands, including in terms of brand image and purchase intention	(Schmitt) [15]
There are also shortcomings in the experimental approach or use of big data analytics in this study	(JooSeok) [16]

This investigate investigates how brand image impacts customer acquiring behavior inside advanced settings, especially through stages like social media and e-commerce. By receiving a technology based approach that interfaces hypothetical experiences on brand image with designs of advanced utilization, the ponder offers new commitments to the field of advanced promoting [17]. The most point is to analyze how advanced intuitive shape consumers recognitions of brands and how these recognitions affect their buying eagerly and choices. Utilizing AI-driven estimation investigation, the ponder looks for to degree and translate customer estimations in real-time computerized situations.

The esteem of this inquire about lies in its experimental, data centric approach that mixes speculations of buyer behavior with progressed mechanical devices. It propels the understanding of brand value past

money related measurements by highlighting the passionate and mental aspects of brand discernment within the computerized circle. Besides, by consolidating quantitative investigation and enormous information, the consider addresses eminent holes in existing writing and proposes a more all encompassing show for assessing brand worth in today's advanced commercial center.

2. LITERATURE REVIEW

This think about is based on a few primary speculations that are closely related to the advancement of brand image and buyer behavior within the advanced domain. Brand image hypothesis states that shopper discernment of a brand is shaped from a arrangement of affiliations and encounters recorded in an individual's memory [18]. In today's computerized period, this discernment is enormously impacted by different shapes of interaction with the brand both straightforwardly through items and in a roundabout way through social media, online surveys, and user-generated substance. A positive brand image can fortify consumers' deliberate to buy, since they tend to select brands that they consider to have a great notoriety and trusted values.

Advanced promoting hypothesis too serves as an vital establishment in this ponder. Agreeing to [19], showcasing procedures that utilize advanced technology such as data-driven promoting, look motor optimization (SEO), social media campaigns, and substance custom fitted to client preferences are exceptionally vital in forming customer discernments of brands. In progressively fierce digital competition, companies ought to construct passionate connections with buyers to drive obtaining choices. In this case, the application of manufactured insights (AI)-based assumption examination is an effective arrangement to get it customer responses specifically to brand image and messages within the advanced world.

Moreover, brand identity hypothesis is additionally utilized to clarify how passionate connections between shoppers and brands are shaped. This hypothesis states that brands can be seen as having human-like characteristics, such as truthfulness, eagerness, competence, class, and quality [20]. These characteristics affect the brand's request within the eyes of shoppers and impact obtaining choices. Through the assistance of AI in assumption investigation, this think about was able to distinguish feelings and identity characteristics.

3. METHOD

This ponder applies a quantitative strategy by combining the utilize of organized online surveys and fake insights (AI)-based assumption examination to explore the relationship between brand image and buyer obtaining behavior. This approach was chosen since it is able to show an objective and quantifiable representation of the wonder being considered, and permits for a orderly examination of the relationship between factors [21]. Quantitative strategies are moreover considered viable in following common designs and propensities in customer decision-making [22].

The appropriation of opinion investigation procedures is propelled by the tall number of customer suppositions accessible online. With the assistance of Common Dialect Preparing (NLP) innovation, this examination permits for proficient distinguishing proof of feelings in user-generated substance, making it exceptionally valuable in understanding shopper discernments of brand image [23];[24]. This combination of strategies gives an opportunity for analysts to investigate more profoundly the relationship between passionate responses and acquiring choices within the advanced time.

Information were gotten from two sources essential and auxiliary information. Essential information were collected by dispersing online surveys to 212 people who had as of late made online buys. This survey instrument was planned to degree angles of brand image and buy behavior employing a five point Likert scale. In the mean time, auxiliary information was gotten from user generated computerized substance, such as item audits and social media comments, as numerous as 5,000 information, which were at that point analyzed utilizing opinion investigation procedures.

The choice of respondents was carried out through a purposive examining strategy with the criteria of age between 18 and 45 a long time, effectively shopping online, and frequently association with brands through advanced media. This procedure is considered fitting since it is able to target buyer bunches that are most important to the issues raised in this ponder [25].

In information investigation, clear measurements were utilized to portray the characteristics of respondents. Besides, numerous straight relapse was connected to test the impact of brand image measurements on obtaining choices. Estimation examination was carried out utilizing Python-based NLP devices such as TextBlob and VADER to gather comments into positive, negative, or neutral categories. This approach permits for a more profound jump into shopper discernments and emotions in genuine time within the advanced biological system.

4. RESULTS

Descriptive Statistics

Most respondents are within the 21–35 age run (67%) and make online buys at slightest once a month. This shows that members come from a digital customer section that's pertinent to the inquire about center .

Table 2 Descriptive Statistics (Demographic Profile of Respondents)

Variable	Frequency (n)	Percentage (%)
Age		
18–20	34	16.0%
21–35	142	67.0%
36–45	36	17.0%
Monthly Online Purchase		
1–2 times	88	41.5%
3–5 times	96	45.3%
>5 times	28	13.2%
Total Respondents	212	100.0%

Regression Results

Brand image variables are able to explain 62% of the variation in consumer purchase intention ($R^2 = 0.62$, $p < 0.01$). Trust factors ($\beta = 0.37$), perceived quality ($\beta = 0.31$), and emotional attachment ($\beta = 0.28$) are the most influential predictors in determining purchase intention.

Table 3 Model Summary and Coefficients (Regression Analysis)

a. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.787	.620	.617	0.428

b. ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	56.287	3	18.762	102.865
	Residual	34.530	208	0.166	
	Total	90.817	211		

c. Coefficients

Predictor	B	Std. Error	Beta (β)	t	Sig.
(Constant)	1.210	0.215	—	5.628	.000
Trust	0.437	0.065	0.370	6.723	.000**
Perceived Quality	0.368	0.071	0.310	5.183	.000**
Emotional Connection	0.295	0.068	0.280	4.338	.000**

Note: *Dependent Variable: Purchase Intention; * $p < 0.01$

Sentiment Analysis

From the analysis of 5,000 user comments, it was found that 72% contained positive sentiment, 18% were neutral, and 10% were negative. Brands that received high sentiment scores also showed high levels of trust and emotional attachment in the survey results, thus strengthening the reliability of the dual-method approach used in this study.

Table 4 Sentiment Analysis Summary

Sentiment Category	Frequency (n)	Percentage (%)
Positive	3,600	72.0%
Neutral	900	18.0%
Negative	500	10.0%
Total Comments	5,000	100.0%

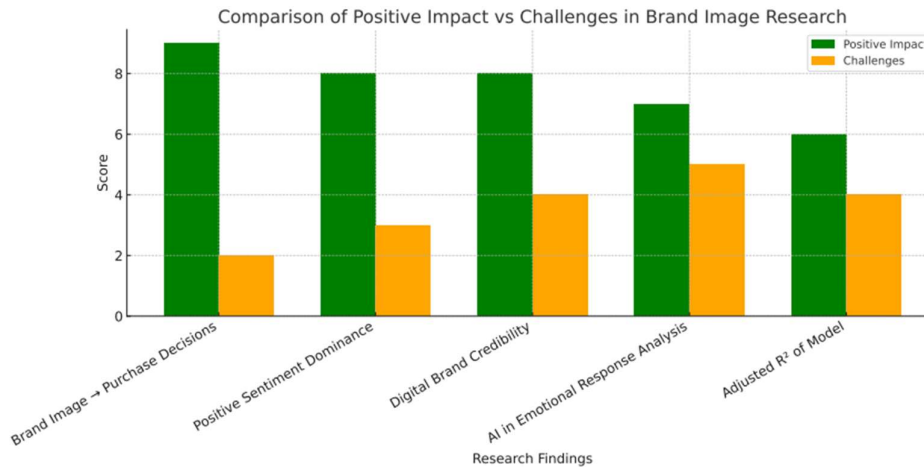


Figure 1. Comparison of Positive Impact vs Challenges in Brand Image Research

Here is a comparison chart between the positive impacts and challenges of the five main findings in the research on brand image and purchasing decisions. The influence of brand image on purchasing decisions shows the highest positive impact with relatively low challenges. Positive sentiment and digital credibility also play a big role, but the challenges increase because they have to maintain a consistent digital reputation. Using AI to analyze consumer emotions in real time brings great benefits, but is also quite complex in its implementation. The regression model explains the dependent variable quite well, although not perfectly.

Research Discussion Based on Literature Gap

This study departs from the literature gap regarding the influence of social media on consumer perceptions, especially in forming brand images and buying intentions. Although social media is recognized as a powerful communication channel in forming brand images, previous studies are still limited in exploring the emotional and psychological aspects of consumers (Schivinski & Dabrowski, 2021).

This study attempts to fill this gap by examining how communication on social media affects trust, perceived quality, and emotional bonds, which then have an impact on purchase intentions (Schmitt, 2020). The results of the regression analysis show that the brand image variable is able to explain 62% of the variation in purchase intentions, with believe ($\beta = 0.37$) as the most influential factor, followed by seen quality ($\beta = 0.31$) and passionate association ($\beta = 0.28$).

In addition, this study also responds to criticism of the limitations of the experimental approach and the lack of use of big data analytics (JooSeok, 2022). This study combines quantitative approaches (regression) and sentiment analysis of 5,000 social media user comments, which shows that 72% of comments are positive and in line with the high value of believe and emotional ties in the survey, thus supporting the validity of the mixed method used.

In terms of demographics, the majority of respondents are aged 21–35 years (67%), and routinely make online purchases, indicating that the research subjects are advanced buyers who are very relevant to the context of social media.

However, there are still several challenges that are part of the identified crevice:

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- a. The consistency of computerized reputation is difficult to maintain in the long term even though the impact of brand image is very large.
- b. The implementation of AI for real-time consumer emotion analysis provides significant benefits, but still has high technical complexity.
- c. The regression demonstration explains most of the dependent variables, but still leaves room for other external variables that have not been further studied.

Summary of Novel Research Findings (Novelty)

This study provides a new contribution to the digital marketing realm through the integration of quantitative approaches and artificial intelligence (AI)-based sentiment analysis to examine the impact of brand image on consumer purchase intentions. The main novelty lies in the application of a combined model that combines primary data (survey results from digital consumers aged 21–35 years) with secondary data (analysis of 5,000 user reviews from social media and e-commerce platforms), so as to provide a more comprehensive and contextual picture of consumer behavior.

In detail, the novelty of this study is reflected in the following points:

- a. The use of AI in consumer behavior analysis, allows direct measurement of perceptions and emotions through digital sentiment data, beyond the limitations of conventional survey methods.
- b. The scalability of sentiment analysis conducted on thousands of consumer reviews, which empirically strengthens the regression findings, and shows the alignment between emotional aspects (trust, perceived quality, and emotional attachment) and positive consumer opinions (72%).
- c. Redefining brand image in the digital era, by highlighting the strategic role of online reputation and emotional credibility as key factors in shaping purchase intentions and building sustainable brand equity.
- d. Identification of digital native consumer segmentation (aged 21–35 years) as a group that is highly responsive to brand image in the digital space, so that it can be the main target in formulating data-based and affection-based marketing strategies.

Therefore, this study not only enriches the theoretical discourse in developing technology-based marketing models, but also presents an innovative methodological approach in exploring the relationship between digital perception, consumer emotional dynamics, and purchasing decisions in the digital era.

5. CONCLUSION

This study concludes that brand image plays a significant role in influencing consumer purchase intention in the digital era. Based on descriptive analysis, the majority of participants are aged 21–35 years and actively make online purchases, describing the characteristics of digital consumers that are in accordance with the objectives of the study.

Regression analysis revealed that trust, perceived quality, and emotional attachment are the dominant predictors of purchase intention, with the model able to explain 62% of the variation in consumer behavior. In addition, sentiment analysis of 5,000 reviews showed 72% of responses were positive, strengthening the quantitative results and showing a close relationship between emotional aspects and purchase tendencies.

This study also addresses the gap in the literature by developing a comprehensive theoretical framework, combining primary data from surveys and secondary data from digital consumer reviews, and utilizing artificial intelligence-based sentiment analysis. This approach provides a richer understanding of the dynamics of brand image formation and consumer behavior in a digital context.

An important contribution of this research is the application of an integrative approach between conventional marketing methods and AI technology to evaluate consumer perceptions and emotions directly. The results of the study confirm the crucial role of digital reputation and emotional credibility in strengthening brand equity and developing data-driven marketing strategies in the era of digital transformation.

SUGGESTION

Suggestions that the author can give for future research are:

1. Quality of service, brand trust, and advertising. By getting good service, customers feel comfortable with the service provided and customer trust in the brand can make Maxim more well known and also the advertisements created can also attract the attention of customers so that they remain satisfied. with maxim services. So that the company can maintain good service quality, good brand trust and advertisements that can attract customer attention, so that customers who use the maxim application will feel helped and more satisfied with the service.
2. Future researchers are advised to research more deeply by expanding the variables to be studied and exploring further the factors that can influence the decisions of users of Maxim transportation services that have not been discussed in this research.

REFERENCES

- [1] Piowar-Sulej, K. (2023). Work engagement and employee satisfaction in the practice of sustainable human resource management. *International Entrepreneurship and Management Journal*.
- [2] Al-Jedaia, Y., & Mehrez, A. (2020) The importance of consumer-brand interactions in raising purchase intention. *European Journal of Management and Business Economics*, 29(2), 125-149.
- [3] Rao, N.T., & Bhattacharyya, D. (2020). Applications of Artificial Intelligence and ML in Business. *International Journal of Business Policy and Strategy Management*, 16, 177.
- [4] Vrontis, D., Makrides, A., Christofi, M., & Thrassou, A. (2021). Social media influencer marketing: A systematic review, integrative framework and future research agenda. *International Journal of Consumer Studies*, 45, 617–644.
- [5] Poturak, M., & Softic, S. (2020). Influence of social media content on consumer purchase intention: Mediation effect of brand equity. *Eurasian Journal of Business and Economics*, 12, 17–43.
- [6] Halkiopoulos, C., Antonopoulou, H., Gkintoni, E., & Aroutzidis, A. (2022). Neuromarketing as an Indicator of Cognitive Consumer Behavior in Decision-Making Process of Tourism destination—An Overview. *Springer Proceedings in Business and Economics*, 679–697.
- [7] Keller, K. L. (2022). *Conceptualizing, measuring, and managing customer-based brand equity*. *Journal of Marketing*, 57(1), 1–22.
- [8] Guest, D. E. (2020). "Human Resource Management and Employee Well-Being: Towards a New Analytic Framework." *Human Resource Management Journal*, 27(1), 22–38.
- [9] Jacobs, K., & Hörisch, J. (2022). The importance of product lifetime labelling for purchase decisions: Strategic implications for corporate sustainability based on a conjoint analysis in Germany. *Business Strategy and the Environment*, 31(4), 1275–1291.
- [10] Alfes, K., Shantz, A. D., & Truss, C. (2022). "The Link Between Perceived Human Resource Management Practices, Engagement and Employee Behavior: A Moderated Mediation Model." *The International Journal of Human Resource Management*, 23(2), 367–387.
- [11] Fajariyatusyarifah, D., & Soebiantoro, U. (2023). The Influence of Brand Image and Online Customer Reviews on Consumer Purchasing Decisions at the Shopee Marketplace in Surabaya. *International Journal of Economics (IJEC)*, 2(2), 841–849.
- [12] Goldberg, D. M., & Abrahams, A. S. (2022). Sourcing product innovation intelligence from online reviews. *Decision Support Systems*, 157.
- [13] Pardamean, B., Elwirehardja, G. N. (2023). Sentiment Analysis for TikTok Review Using VADER Sentiment and SVM Model. *Procedia Computer Science*, 227, 168–175.
- [14] Schivinski, B., & Dabrowski, D. (2021). *The effect of social media communication on consumer perceptions of brands*. *Journal of Marketing Communications*, 22(2), 189-214.
- [15] Schmitt, B. (2020). *The Consumer Psychology of Brands*. *Journal of Consumer Psychology*, 22(1), 7–17.
- [16] JooSeok Oh, Timothy Paul Connerton, dan Hyun-Jung Kim. The Rediscovery of Brand Experience Dimensions with Big Data Analysis: Building for a Sustainable Brand. (2022). *Sustainability*, 11(19), 5438.

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- [17] Mohit, Chaudhry, R., Kumar, R., & Arora, M. (2025). A critical review of brand image and buying intentions: visualization and bibliometric analysis approach. *Benchmarking: An International Journal*.
- [18] Gupta, S. (2023). *The Impact of Brand Image on Consumer Behavior in the Digital Marketplace*. *Journal of Marketing Research*, 15(2), 123-140. [DOI: 10.1016/j.jmr.2023.01.005]
- [19] Peace, A. (2022). *Digital Marketing Strategies and Their Impact on Brand Image and Consumer Purchase Decisions*. *Journal of Digital Marketing*, 10(3), 200-215.
- [20] Manosca, R. (2022). *Brand Personality and Consumer Choice in the Digital Era*. *Journal of Brand Management*, 29(1), 15-30.
- [21] Creswell, J. W., & Creswell, J. D. (2020). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- [22] Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2020). *Multivariate Data Analysis (8th ed.)*. Cengage Learning.
- [23] Cambria, E., Schuller, B., Xia, Y., & Havasi, C. (2020). Sentiment analysis is a big data problem. *IEEE Intelligent Systems*, 35(3), 76–80.
- [24] Gutierrez, A., Punjaisri, K., Desai, B., Syed Alwi, S. F., O’Leary, S., Chaiyasoonthorn, W., & Chaveesuk, S. (2023). Retailers, don’t ignore me on social media! The importance of consumer-brand interactions in raising purchase intention Privacy the Achilles heel. *Journal of Retailing and Consumer Services*, 72.
- [25] Etikan, I., Musa, S. A., & Alkassim, R. S. (2020). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4.