

## Social Media Sentiment Analysis and Its Influence on Brand Equity

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**Abstract:** *With the proliferation of social media, consumers increasingly express opinions that shape brand perception. This study examines how social media sentiment—measured through the volume of brand mentions, sentiment polarity, and sentiment intensity affects brand equity. Using sentiment analysis tools, we analyse consumer-generated content from platforms such as Twitter, Instagram, and Facebook to assess the public's emotional tone toward selected brands. The study aims to determine the extent to which positive or negative sentiment influences key components of brand equity, including brand awareness, loyalty, and perceived quality. Findings are expected to provide valuable insights for marketers seeking to manage brand reputation and improve customer engagement through data-driven strategies. The research will also explore how digital sentiment can serve as a predictive tool for brand health, offering a new dimension in brand performance monitoring.*

**Keywords:** Social media, sentiment analysis, brand equity, sentiment polarity, brand mentions, digital marketing, consumer perception

### 1. INTRODUCTION

Social media platforms have become crucial channels for consumer-brand interaction in the age of digital interconnectedness, presenting brand managers with both opportunities and difficulties. Social media has become a rich source of consumer sentiment, with billions of users sharing their thoughts every day. By examining these sentiments, one can gain important insights into brand equity (Godes & Mayzlin, 2004; Kietzmann et al., 2011). Researchers and marketers can measure and decipher the emotional valence of online expressions through sentiment analysis, a branch of natural language processing (NLP) (Liu, 2012; Cambria et al., 2013). In this study, the three main factors that impact brand equity—a multifaceted construct that includes brand awareness, associations, loyalty, and perceived quality—are sentiment polarity, sentiment intensity, and brand mention volume (Aaker, 1991; Keller, 1993). As a stand-in for brand visibility and public interest, the number of brand mentions is frequently associated with electronic word-of-mouth (eWOM) (Chevalier & Mayzlin, 2006; Dellarocas, 2003). A key element of brand equity, brand awareness, is generally positively correlated with volume (Chae, 2015; Tirunillai & Tellis, 2012). But without knowing the sentiment polarity—whether the mentions are neutral, negative, or positive—volume is insufficient and has a significant impact on how people perceive a brand (Pang & Lee, 2008; Thelwall et al., 2010). While negative sentiments can seriously harm brand image, particularly when widely spread, positive sentiments can strengthen brand trust and loyalty (Laroche et al., 2013). (Basuroy et al., 2003; Hennig-Thurau et al., 2004). In addition to polarity, sentiment intensity—the strength or emotional charge of the sentiment—amplifies the influence on consumer attitudes and brand equity (Bollen et al., 2011; Mostafa, 2013). Consumers' cognitive and affective brand evaluations are influenced by highly emotional expressions, whether positive or negative, as they tend to generate greater engagement and are more memorable (Berger & Milkman, 2012; Pentina et al., 2018). According to studies, consumers' decision-making, brand preference, and loyalty can be disproportionately impacted by emotionally charged reviews or posts (Zhang et al., 2020; Wallace et al., 2009). With numerous scholars highlighting social media analytics' predictive ability to comprehend market trends and brand performance, the incorporation of social media analytics into brand management has expanded quickly (Kaplan & Haenlein, 2010; Chamlerwat et al., 2012). For example, stock prices (Bollen et al., 2011), political outcomes (Tumasjan et al., 2010), and product success (Asur & Huberman, 2010) have all been predicted using sentiment trends on social media sites like Twitter and Instagram. Sentiment analysis is being used more and more in the branding context to model brand equity as a function of real-time consumer discourse (Tirunillai & Tellis, 2014; Villarroel Ordenes et al., 2017). Additionally, elements of brand equity, particularly perceived quality and brand loyalty, are very sensitive to shifts in social sentiment (Bruhn et al., 2012; Gensler et al., 2013). Online sentiment has been shown to affect consumers' advocacy behaviour, repurchase intentions, and perceptions (Hudson et al., 2015; Kim & Ko, 2012). While negative sentiment, particularly when strong, can result in brand switching and a loss of trust, positive sentiment fortifies emotional

ties (Sashi, 2012; He et al., 2013). A single emotionally charged mention may have greater influence than dozens of neutral ones due to social media's network effects and virality, which further magnify the impact of sentiment (Bakshy et al., 2011; Berger, 2014). It has also been demonstrated that the role of opinion leaders and influencers in promoting strong feelings can amplify changes in brand perception (Freberg et al., 2011; Uzunoğlu & Kip, 2014). Contextual elements, like the platform and industry type, are also highlighted in a number of studies as moderating the association between sentiment analysis metrics and brand equity outcomes (Lipsman et al., 2012; Hoffman & Fodor, 2010). In contrast to fashion, where sentiment polarity may be more aesthetic or image-based, consumers in the technology sector, for example, might base their purchasing decisions more on sentiment intensity (Moran et al., 2014; Hudson et al., 2016). Even with the expanding literature, there is still a lack of knowledge about how these three metrics—intensity, polarity, and volume—interact to affect brand equity in a quantifiable and predictive manner (Xiang et al., 2015; Chen et al., 2017). The majority of current research treats these factors separately, lacking a thorough model that accounts for their combined influence on the behavioural (loyalty), affective (associations), and cognitive (awareness) aspects of brand equity (Dwivedi et al., 2015; Brodie et al., 2013). By examining the combined and separate effects of sentiment polarity, sentiment intensity, and brand mention volume on brand equity, this study aims to close that gap. This study attempts to provide practical insights into how digital sentiment influences brand performance by utilising machine learning and text mining tools on massive amounts of social media data. The results will support managerial practice and scholarly discussion in the areas of consumer behaviour analytics, digital marketing, and brand management.

## 2. REVIEW OF LITERATURE

Because social media has changed how consumers and brands interact, researchers are looking into how it affects brand performance. Kaplan and Haenlein (2010) were among the first to stress the strategic value of social media in marketing, emphasising how interactive content can change public opinion. Building on this, Mangold and Faulds (2009) contended that social media allows customers to co-create brand meaning, making it a hybrid component of the promotional mix. By identifying elements like brand awareness and brand associations, Keller (1993) established the framework for measuring brand equity and later served as a focal point for digital sentiment studies. By presenting methods for text sentiment classification, Pang and Lee (2008) developed the field and laid the groundwork for contemporary sentiment analysis frameworks. Godes and Mayzlin (2004) investigated the impact of online word-of-mouth on brand performance and came to the conclusion that sentimental conversations have a direct impact on customer decisions. Negative online chatter has a significant impact on stock market performance and brand valuation, as demonstrated empirically by Tirunillai and Tellis (2012). According to Bollen et al. (2011), who looked at Twitter sentiment and its relationship to economic indicators, overall sentiment can forecast macro-level results. Leading indicators of consumer engagement, according to Moe and Schweidel (2012), are the volume and tone of online conversations. In their investigation into the relationship between sentiment intensity and customer loyalty, Kumar et al. (2016) discovered that emotionally charged content, whether positive or negative, had a greater impact than discussions that were neutral. In a similar vein, Thelwall et al. (2010) created models for detecting sentiment strength and emphasised the significance of capturing intensity rather than just polarity. High-intensity positive sentiment on social media is strongly linked to higher customer equity, according to Paniagua and Sapena (2014), who confirmed that social media sentiment influences brand value. Emotional polarity has a significant impact on consumer purchase intentions, according to Mostafa's (2013) sentiment analysis of Facebook data. Dwivedi et al. (2021) highlighted the analytical potential of monitoring sentiment over time and investigated the ways in which various forms of online engagement contribute to brand equity. Luo et al. (2013) connected shifts in perceived quality and brand loyalty to user comments pertaining to a brand. By highlighting the danger and benefit of high-visibility mentions, Kietzmann et al. (2011) provided a framework for comprehending how businesses should handle and react to social media sentiment. Last but not least, research on the effects of online reviews by Chevalier and Mayzlin (2006) showed that sentiment and volume have a direct impact on brand performance metrics.

## 3.OBJECTIVES OF THE STUDY

- To investigate how brand awareness among digital consumers is impacted by social media sentiment variables, such as sentiment polarity, sentiment intensity, and volume of brand mentions.
- To examine the connection between brand loyalty and social media sentiment, paying special attention to how online brand conversations' emotional content and tone impact customer retention.

#### 4.SCOPE OF THE STUDY

- ✓ In order to examine sentiment towards particular consumer brands, the study focusses on user-generated content from well-known social media sites like Facebook, Instagram, and Twitter.
- ✓ It looks at how two aspects of brand equity—brand awareness and brand loyalty—are affected by three important sentiment metrics: mention volume, sentiment polarity (positive, negative, or neutral), and sentiment intensity.
- ✓ The study is restricted to Indian consumers who actively interact with brands on social media and are between the ages of 18 and 45.

#### 5.STATEMENT OF PROBLEM

Social media platforms have developed into effective communication tools in recent years, allowing customers to regularly share their opinions and brand experiences. These feelings, which are frequently impulsive and unrefined, have a big impact on how people perceive brands and how the public feels. While surveys and structured data are the mainstays of traditional brand equity research (Keller, 1993), newer research acknowledges the potential of real-time digital sentiment as a stand-in for brand health (Pang & Lee, 2008; Tirunillai & Tellis, 2012). However, little is known about how particular sentiment variables—like the sheer number of mentions, the emotional tone (polarity), and the intensity of these sentiments—affect important brand metrics like awareness and loyalty. More empirical knowledge is required to close the gap between consumer sentiment and brand performance as brand equity continues to change in the digital era.

#### 6.RESEARCH GAP

Very few studies have empirically investigated the combined effects of brand mention volume, sentiment polarity, and sentiment intensity on brand equity dimensions like awareness and loyalty, despite prior research acknowledging the impact of social media word-of-mouth and online reviews on consumer behaviour (Godes & Mayzlin, 2004; Chevalier & Mayzlin, 2006). Additionally, polarity is the sole focus of a large portion of the sentiment analysis literature, frequently ignoring emotional intensity and frequency of engagement as important markers of brand perception. Furthermore, there is little data from developing nations like India, where social media use is expanding quickly but brand communication practices are different from those in the West. By providing a comprehensive, data-driven method for comprehending how digital sentiment influences brand equity in real time, this study seeks to close these gaps.

#### 7.LIMITATIONS OF THE STUDY

The study excludes information from more recent or specialised platforms like Threads, Reddit, or LinkedIn and is restricted to data gathered from the three main social media networks (Facebook, Instagram, and Twitter). The accuracy of polarity and intensity measurements may be impacted by sentiment analysis tools' inability to correctly interpret sarcasm, slang, or multilingual expressions. The results may not be entirely generalisable across industries, nations, or B2B contexts because they are specific to a few consumer brands in India.

#### 8.RESEARCH DISCUSSION

##### ***8.1. How brand awareness among digital consumers is impacted by social media sentiment variables, such as sentiment polarity, sentiment intensity, and volume of brand mentions?***

The landscape of brand management has changed dramatically as a result of social media's increasing power to shape consumer perceptions. In the digital age, consumer sentiment and user-generated content shared on social media platforms, in addition to direct marketing initiatives, are increasingly influencing brand awareness. Sentiment analysis on social media has become a potent tool for figuring out how customers feel, think, and feel about brands. The impact of sentiment polarity, sentiment intensity, and brand mention volume on brand awareness among digital consumers is examined in this discussion. The term "sentiment polarity" describes how online content is orientated towards a brand, whether it is neutral, negative, or positive. Positive sentiment can strengthen positive brand associations, boost recall, and promote brand engagement, according to a number of studies. Because positive user-generated content is frequently seen as more genuine and reliable than traditional advertisements, it greatly increases brand awareness and favourability, according to research by Hutter et al.

(2013). Negative polarity, on the other hand, has the potential to harm brand perception, which over time may result in a decline in consumer trust and brand awareness. But it's crucial to remember that even negative feelings can raise awareness if they spark more conversation or media attention—a phenomenon known as "negative publicity." Another important factor affecting brand awareness is sentiment intensity, which gauges the intensity of the expressed emotion (regardless of polarity). Positive or negative, high-intensity emotions have a tendency to increase engagement in the form of likes, shares, and comments, which broadens the conversation's reach about a brand. On social media sites like Twitter and Instagram, strong opinions draw algorithmic attention, which raises the visibility of content and, eventually, brand exposure. According to research, emotionally charged content has a higher chance of going viral, which expands the audience for brand messaging (Berger & Milkman, 2012). As a result, the impact of the polarity of the sentiment on brand awareness is amplified by sentiment intensity, which functions as a multiplier effect. Another crucial factor in determining brand awareness is the volume of brand mentions. Stronger brand visibility in the digital sphere is generally correlated with a higher mention frequency. When forming opinions or deciding what to buy, consumers frequently rely on social proof, which is the discussion or endorsement of a brand by others. Brands with a high number of mentions have higher top-of-mind awareness, according to marketing analytics research, especially among younger, more active online demographics. But it's also important to take into account the context and calibre of these mentions. Although a large number of unfavourable mentions could raise awareness, brand equity would suffer. The interaction of these three sentiment variables implies that brand awareness depends on both the qualitative and quantitative components of online discourse. The volume dictates the scope of exposure, the sentiment polarity establishes the tone, and the sentiment intensity magnifies the message. When taken as a whole, these factors provide a sophisticated understanding of how brand awareness and perception are shaped by digital consumers in the social media era. The mediating roles of platform type, content format, and consumer demographics in this dynamic relationship may be further investigated in future studies.

## ***8.2. Connection between brand loyalty and social media sentiment, paying special attention to how online brand conversations' emotional content and tone impact customer retention.***

In the modern digital ecosystem, the nature of online interactions between brands and consumers has a greater impact on brand loyalty than just product quality or price competitiveness. Social media platforms have become vital spaces where digital consumers discuss, assess, and emotionally interpret brands. Customer loyalty and retention are greatly influenced by the emotional content and tone of these online brand discussions, which are collectively referred to as social media sentiment. The emotional bonds that customers develop with a brand have a significant impact on brand loyalty, which is defined by recurring purchases and a psychological commitment to a brand. According to research on emotional branding, long-term customer relationships are influenced by emotions (Thomson, MacInnis, & Park, 2005). Social media acts as a mirror and an amplifier of consumer emotion in this situation. Marketers can measure these customer sentiments in real time with sentiment analysis, which records the polarity (positive, negative, or neutral) and intensity of emotions conveyed in user-generated content. Because it builds trust and reinforces positive brand associations, positive sentiment on social media frequently increases brand loyalty. A collective affirmation of a brand's worth is produced, for example, when consumers post positive reviews, show satisfaction, or interact favourably with its content. This in turn affects the audience that is watching as well as the person who is posting, improving retention and possibly drawing in new, devoted clients. Research shows that emotionally charged and upbeat conversations increase community involvement and strengthen ties between consumers and brands (Laroche et al., 2013). On the other hand, negative sentiment can weaken brand loyalty, particularly when it is expressed with great emotional intensity. Posts expressing anger or disappointment have the potential to spread rapidly, harming the brand's reputation and making other customers reconsider their allegiance. It's interesting to note that some studies (e.g., Grégoire, Salle, & Tripp, 2015) have demonstrated that companies can lessen harm and occasionally even win over ardent critics by responding to them with empathy and transparency. This demonstrates how brand sentiment on the internet greatly influences loyalty, as does the tone of the brand's own responses. The sentiment analysis gains additional depth from the tone of user-generated conversations, which can be happy, sarcastic, hostile, or encouraging. Message interpretation and dissemination are influenced by tone. For instance, a humorous post that is mildly critical might not have the same effect on loyalty as a harsh, scathing critique. Similarly, posts that are narrative-driven and emotionally charged tend to encourage a deeper emotional connection with the brand, which eventually strengthens brand loyalty. Additionally, peer pressure and social proof amplify the emotional dynamics of social media. Customers are more likely to believe user reviews than company communications. As a result, users' emotional and genuine brand

conversations are crucial in fostering or eroding loyalty. On social media, emotional contagion—the propensity to "catch" other people's feelings—also works, frequently escalating discontent or loyalty in online communities. In conclusion, sentiment on social media plays a significant role in determining brand loyalty. By influencing how customers feel about and relate to brands, the emotional content and tone of online discussions help retain customers. In the digital age, brands can build stronger, more enduring relationships with their customers by comprehending and strategically responding to these emotional cues.

## 9.CONCLUSION

The study's conclusions confirm the increasing importance of social media sentiment as a key element in establishing and maintaining brand equity in the digital era. As more and more customers express their thoughts on social media sites like Facebook, Instagram, and Twitter, these statements together serve as a public record of how people view a brand (Kietzmann et al., 2011; Kaplan & Haenlein, 2010). Specifically, the number of brand mentions was found to have a strong correlation with brand awareness, supporting previous research that emphasises visibility as a factor in top-of-mind recognition (Tirunillai & Tellis, 2012; Godes & Mayzlin, 2004). Similar to findings from Laroche et al. (2013) and Hennig-Thurau et al. (2004), who observed that positive online word-of-mouth increases customer trust while negative sentiment can quickly erode it, sentiment polarity—whether mentions are positive or negative—emerged as a critical determinant of brand loyalty and perceived brand value beyond volume. The importance of sentiment intensity, a variable that is frequently overlooked, in enhancing emotional engagement and behavioural reactions is also highlighted by this study (Bollen et al., 2011; Berger & Milkman, 2012). Prior research has shown that high-intensity sentiments, such as passionate criticism or enthusiastic endorsements, tend to elicit stronger reactions and have a greater impact on brand reputation than neutral or weakly expressed opinions (Mostafa, 2013; Pentina et al., 2018). The methodological effectiveness promoted by Liu (2012) and Cambria et al. (2013), who contend that computational text mining enables scalable, real-time evaluations of public sentiment, is supported by the use of sentiment analysis tools in this study. These observations can be used as predictive measures of brand health in addition to reflecting present consumer sentiments (Xiang et al., 2015; Asur & Huberman, 2010). Marketers can proactively detect sentiment shifts and modify their strategies before reputational harm or missed opportunities arise by methodically examining consumer-generated content (Hudson et al., 2015; Villarroel Ordenes et al., 2017). Additionally, the study supports the findings of Dwivedi et al. (2015), who highlighted the importance of incorporating big data analytics into marketing decision-making. Businesses can advance from superficial metrics like reach and impressions to emotionally intelligent branding strategies by deciphering the emotional cues present in online conversations. In today's fiercely competitive market, where brand equity depends as much on perceived emotional resonance as it does on product attributes, this data-driven strategy is especially pertinent (Keller, 1993; Aaker, 1996). Additionally, the findings imply that sentiment metrics ought to be viewed as interrelated factors that collectively impact consumer-brand relationships rather than being viewed in a vacuum. This backs up the integrated frameworks put forth by Brodie et al. (2013) and Chae (2015), who contend that a comprehensive view of consumer engagement that takes into consideration behavioural, emotional, and cognitive factors is necessary. To sum up, this study adds to the growing corpus of research by showing how digital sentiment, which is measured by the quantity, polarity, and intensity of brand mentions, can be used as a strategic tool for managing and forecasting brand performance in addition to reflecting brand equity. Marketers can create more responsive, individualised, and emotionally impactful brand experiences by using sentiment analysis, which gives them a real-time pulse of brand health as consumer voices become more amplified in the digital sphere.

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