



# THE IMPACT OF SOCIAL MEDIA BRAND FAN PAGE USAGE AND ENGAGEMENT ON CONSUMER PURCHASE INTENTION: THE MEDIATING AND MODERATING ROLE OF BRAND LOYALTY

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## ABSTRACT

This study investigates the impact of brand fan page usage and engagement on social media platforms on consumer purchase intentions, with a focus on the mediating and moderating roles of brand loyalty. In this study, 411 participants who actively use social media and follow brand fan pages participated. The Structural Equation Modeling (SEM) results reveal that both brand fan page usage and engagement significantly enhance brand loyalty, which in turn positively influences purchase intention. Additionally, brand loyalty plays a dual role: it mediates the relationship between fan page interactions and purchase intentions, and it also moderates these relationships, strengthening the positive impact of fan page interactions on purchase intentions. Practically, the findings suggest that marketers should focus on strategies that encourage both usage of and active engagement with brand fan pages to build and sustain brand loyalty, which in turn drives purchase intentions. The critical role of brand loyalty highlights its importance not only in fostering a positive relationship with the brand but also in enhancing the effectiveness of social media marketing efforts.

**Keywords:** Digital Marketing, Brand Fan Page Usage, Brand Fan Page Engagement, Brand Loyalty, Consumer Purchase Intention.

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## SOSYAL MEDYA MARKA FAN SAYFASI KULLANIMI VE ETKİLEŞİMİNİN TÜKETİCİLERİN SATIN ALMA NİYETİ ÜZERİNDEKİ ETKİSİ: MARKA SADAKATİNİN ARACILIK VE DÜZENLEYİCİ ROLÜ

### ÖZ

Bu çalışma, marka sadakatinin aracılık ve düzenleyici rollerine odaklanarak, sosyal medya platformlarında marka fan sayfası kullanımı ve etkileşiminin tüketici satın alma niyetleri üzerindeki etkisini araştırmaktadır. Bu araştırmaya sosyal medyayı aktif olarak kullanan ve marka fan sayfalarını takip eden 411 katılımcı katılmıştır. Yapısal Eşitlik Modellemesi (YEM) sonuçları, hem marka hayran sayfası kullanımının hem de bağlılığın marka sadakatini önemli ölçüde artırdığını ve bunun da satın alma niyetini olumlu yönde etkilediğini ortaya koymaktadır. Ayrıca, marka sadakati ikili bir rol oynamaktadır: hayran sayfası etkileşimleri ve satın alma niyetleri arasındaki ilişkiye aracılık etmekte ve aynı zamanda hayran sayfası etkileşimlerinin satın alma niyetleri üzerindeki olumlu etkisini güçlendirerek bu ilişkileri yönetmektedir. Pratik olarak, bulgular pazarlamacıların marka sadakati oluşturmak ve sürdürmek için marka hayran sayfalarının hem kullanımını hem de aktif katılımını teşvik eden stratejilere odaklanmalarını gerektiğini ve bunun da satın alma niyetlerini yönlendirdiğini göstermektedir. Marka sadakatinin kritik rolü, sadece markayla olumlu bir ilişki geliştirmenin değil, aynı zamanda sosyal medya pazarlama çabalarının etkinliğini artırmanın da önemini vurgulamaktadır.

**Anahtar Kelimeler:** Dijital Pazarlama, Marka Fan Sayfası Kullanımı, Marka Fan Sayfası Etkileşimi, Marka Sadakati, Tüketici Satın Alma Niyeti.

## INTRODUCTION

The advent of social media has fundamentally transformed the landscape of marketing, providing brands with unprecedented opportunities to engage with consumers directly and interactively. Social media platforms such as Facebook, Instagram, and Twitter allow brands to create fan pages where they can share content, communicate with followers, and foster a community of loyal customers. These brand fan pages serve as vital touchpoints for consumer-brand interactions, influencing various aspects of consumer behavior, including brand loyalty and purchase intentions.

Brand fan page usage refers to the extent to which consumers visit and interact with the media fan page of a brand, while brand fan page engagement involves more active forms of interaction, such as liking, commenting, and sharing content. Both usage and engagement are critical metrics for assessing the effectiveness of social media marketing strategies. Previous studies have shown that social media interactions can significantly enhance brand loyalty, which in turn can influence consumer purchase intentions (Muntinga, Moorman & Smit, 2011; Dessart, Veloutsou & Morgan-Thomas, 2015).

Brand loyalty is a multifaceted construct that encompasses emotional attachment, commitment and a favorable attitude towards the brand. It is both a consequence of positive brand interactions and a driver of future purchasing decisions (Chaudhuri & Holbrook, 2001). Loyal customers are more likely to repurchase from the brand, recommend it to others and exhibit resilience to competitive offers. Thus, understanding the pathways through which social media interactions influence brand loyalty and purchase intentions is crucial for developing effective marketing strategies.

The primary objective of this study is to investigate the impact of brand fan page usage and engagement on consumer purchase intentions, with a specific focus on the mediating and moderating roles of brand loyalty. The study aims to address the following research questions:

How does brand fan page usage influence brand loyalty?

How does brand fan page engagement influence brand loyalty?

How does brand loyalty influence purchase intentions?

Does brand loyalty mediate the relationship between brand fan page usage/engagement and purchase intentions?

Does brand loyalty moderate the relationship between brand fan page usage/engagement and purchase intentions?

This study first reviews the literature on brand loyalty, social media engagement, and purchase intention. Following this, the research hypotheses are presented based on identified gaps. The methodology section explains participant selection, sampling techniques, and data collection. Results are analyzed using Structural Equation Modeling (SEM) to test the proposed hypotheses, and the discussion interprets these findings in light of current literature. Finally, practical implications, limitations, and future research directions are provided.

This study contributes to literature by integrating the roles of brand loyalty as both a mediator and moderator in the context of social media marketing. It provides empirical evidence on how brand fan page interactions can drive consumer purchase behavior through the enhancement of brand loyalty. The findings offer valuable insights for marketers on the importance of fostering engagement and building loyalty through social media channels to effectively influence consumer purchasing decisions.

## I. LITERATURE REVIEW

The rise of social media has dramatically altered the landscape of marketing by providing brands with new avenues to engage with consumers (Appel, Grewal, Hadi & Stephen, 2020). Social media platforms such as Facebook, Twitter and Instagram offer unique opportunities for brands to create fan pages where they can share content, interact with followers and build a community of loyal customers (Saravanakumar & SuganthaLakshmi, 2012). These interactions on brand fan pages are crucial for fostering brand loyalty and driving purchase intentions (Hasim, ShahrinWahid & Shamsudin, 2020). This section reviews the literature on the relationships between brand fan page usage, engagement, brand loyalty and purchase intentions.

## A. INTRODUCTION TO SOCIAL MEDIA BRAND ENGAGEMENT

The advent of social media has provided brands with a unique platform to connect with consumers, enhancing opportunities for interaction and engagement. Brand fan pages on platforms like Facebook and Instagram enable companies to foster direct relationships with consumers, building brand loyalty and influencing purchase behavior. While existing studies have examined the impacts of social media engagement on consumer behavior, there remains a need for further exploration into the mechanisms driving these outcomes. Research has highlighted that brand loyalty can serve both as a mediating and moderating factor in this relationship, adding layers of complexity to how engagement translates into purchasing intentions (Hollebeek, Glynn, & Brodie, 2014).

## B. BRAND FAN PAGE USAGE AND ENGAGEMENT

Brand fan page usage refers to the frequency and extent to which consumers visit and interact with a brand's social media fan page. Muntinga, Moorman and Smit (2011) introduced the concept of COBRAs (Consumers' Online Brand-Related Activities), which categorizes online brand-related activities into consuming, contributing and creating. According to their study, consuming activities, such as reading posts and viewing content, are the most common forms of brand fan page usage. They found that these activities play a significant role in enhancing consumer engagement and fostering a sense of connection with the brand. Similarly, Brodie et al. (2013) identified that engagement within brand communities fosters stronger brand-consumer relationships and results in loyalty and advocacy behaviors.

Brand fan page engagement involves more active forms of interaction, such as liking, commenting, and sharing content. Dessart, Veloutsou and Morgan-Thomas (2015) highlighted that engagement in online brand communities extends beyond passive consumption to include active participation and co-creation of content. Their research demonstrated that higher levels of engagement are associated with greater emotional and behavioral loyalty. Engagement behaviors are crucial for building a strong brand community, enhancing consumer satisfaction, and fostering long-term relationships with the brand.

## C. BRAND LOYALTY

Brand loyalty is a key outcome of effective social media marketing and a critical predictor of consumer purchase behavior. Chaudhuri and Holbrook (2001) defined brand loyalty as a combination of attitudinal loyalty and behavioral loyalty, which is manifested in repeat purchases. They found that brand loyalty significantly influences both attitudinal and behavioral outcomes, such as willingness to pay a premium price and resistance to competitive offers. Brand loyalty serves as a mediator in the relationship between social media interactions and purchase intentions, as loyal customers are more likely to translate their positive attitudes and experiences into purchasing behavior. This has been reinforced by more recent studies, which suggest that loyalty resulting from social media engagement translates into long-term behavioral loyalty and influences purchase intentions (Kumar & Pansari, 2016). This research contributes to the literature by examining how loyalty functions not only as an outcome but as a key factor that mediates and moderates the relationship between engagement and purchasing behaviors.

Recent insights highlight that consumers increasingly expect loyalty programs to offer personalized rewards and streamlined experiences. According to Bond Brand Loyalty's 2023 report, loyalty programs should focus on flexibility, simplicity, and ease of use, which significantly contribute to brand loyalty by enhancing user satisfaction and retention rates. Additionally, paid loyalty programs are on the rise, with consumers willing to pay for exclusive rewards and benefits, yet brands need to differentiate these from standard perks to drive added engagement and spending. Personalization and unique rewards have become critical in differentiating loyalty programs and fostering stronger consumer-brand relationships.

Deloitte's 2023 survey also emphasizes that brand loyalty is heavily influenced by transparent data practices and personalization efforts.

Consumers expect brands to use their data responsibly and deliver relevant, customized content in exchange, showing a trend toward loyalty built on trust and tailored engagement rather than mere transactional benefits. This aligns with broader loyalty trends that suggest brands should emphasize emotional engagement to cultivate lasting loyalty.

### D. PURCHASE INTENTION

Purchase intention refers to a consumer’s likelihood of buying a product or service. Fishbein and Ajzen’s (1975) Theory of Reasoned Action posits that purchase intention is a function of attitudes towards the behavior and subjective norms. In the context of social media marketing, Laroche, Habibi and Richard (2013) found that brand loyalty mediates the effect of social media engagement on purchase intentions. Their study revealed that consumers who are highly engaged with a brand on social media are more likely to develop strong brand loyalty, which in turn increases their intention to purchase from the brand.

In terms of purchase intention, Loyalty360’s 2023 report highlights that effective customer engagement—especially through personalized and data-driven interactions—boosts consumers’ intent to purchase. Consumers are more likely to buy from brands that actively engage them through relevant and timely digital interactions. Furthermore, brand loyalty positively impacts purchase intentions, as loyal customers tend to view their preferred brands more favorably, thus increasing their willingness to make repeat purchases.

For marketers, these insights imply that a focused strategy on customized, trust-building loyalty initiatives and real-time, personalized communications can significantly enhance both brand loyalty and purchase intentions. Leveraging these recent findings can help reinforce the theoretical underpinnings of your study with contemporary examples and trends that highlight the power of personalization and consumer trust in fostering loyalty and purchase intentions.

### E. MEDIATING ROLE OF BRAND LOYALTY

The mediating role of brand loyalty in the relationship between social media interactions and purchase intentions has been reviewed in the literature. Gummerus et al. (2012) demonstrated that customer engagement in a brand’s social media community enhances brand loyalty, which subsequently drives purchase behavior. Similarly, Brodie et al. (2013) found that consumer engagement in online brand communities leads to higher levels of brand loyalty, which mediates the relationship between engagement and purchase intentions. These studies suggest that brand loyalty is a critical mechanism through which social media interactions influence consumer purchase behavior.

### F. MODERATING ROLE OF BRAND LOYALTY

While many studies focus on loyalty as a mediating factor, research on its moderating effect is less common but equally significant. Brand loyalty can enhance the effect of engagement on purchase intention by intensifying consumers’ responses to brand interactions. Hollebeck (2011) found that loyal consumers are more responsive to brand engagement, resulting in stronger behavioral outcomes. Kumar and Pansari (2016) demonstrated that loyal customers exhibit a stronger link between engagement behaviors (e.g., liking and sharing posts) and purchase decisions. Similarly, Dessart et al. (2016) proposed that loyalty strengthens the relationship between online engagement and purchasing behavior, indicating that highly loyal customers derive greater value from their engagement, thus increasing the likelihood of a purchase.

### G. HYPOTHESES AND MODEL DEVELOPMENT

Based on the literature review, the following hypotheses and model are proposed:

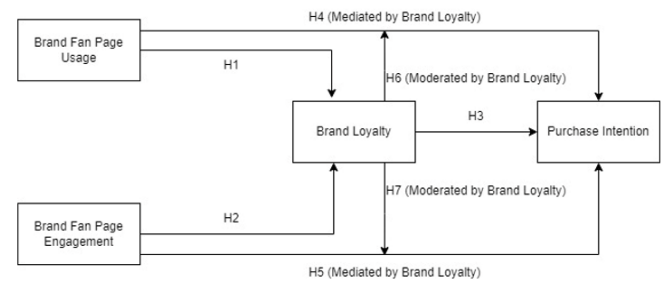
- H1: Brand fan page usage positively influences brand loyalty.
- H2: Brand fan page engagement positively influences brand loyalty.
- H3: Brand loyalty positively influences purchase intention.
- H4: Brand loyalty mediates the relationship between brand fan page usage and purchase intention.
- H5: Brand loyalty mediates the relationship between brand fan page

engagement and purchase intention.

H6: Brand loyalty moderates the relationship between brand fan page usage and purchase intention.

H7: Brand loyalty moderates the relationship between brand fan page engagement and purchase intention.

FIGURE 1 | Model Development



## II. SAMPLING AND DATA COLLECTION METHODOLOGY

### A. PARTICIPANT RECRUITMENT AND SELECTION

The sample for this study consisted of 411 participants who were active users of social media and followed at least one brand fan page. The participants were recruited using a combination of online survey distribution and social media outreach. This approach ensured a diverse and representative sample of social media users who engage with brand fan pages.

To be eligible for participation in the study, respondents had to meet the following criteria:

**Age:** Participants had to be at least 18 years old to ensure they were legally adults and capable of providing informed consent.

**Social Media Usage:** Participants needed to be active users of at least one social media platform, such as Facebook, Instagram, or Twitter.

**Brand Fan Page Engagement:** Participants must follow at least one brand fan page, as the study focuses on interactions with brand fan pages.

**Geographic Location:** While the study did not restrict participation based on geographic location, efforts were made to recruit a sample that represents various regions to enhance the generalizability of the findings.

### B. SAMPLING TECHNIQUE

A convenience sampling technique was employed to select participants from various social media platforms. This method helped ensure that the sample was representative of the broader population of social media users. The use of convenience sampling also helped to minimize selection bias and enhance the external validity of the study’s findings (Fowler, 2014).

### C. SURVEY ADMINISTRATION

The survey was administered online using a web-based survey tool. Participants were invited to complete the survey through direct messages, social media posts, and email invitations. The online format allowed for efficient data collection and ensured that participants could complete the survey at their convenience (Evans & Mathur, 2005).

### D. DATA QUALITY AND CONTROL

To ensure the quality and accuracy of the data, several measures were implemented:

**Pre-testing:** The survey instrument was pre-tested with a small group of participants to identify and rectify any issues related to question clarity, formatting, and technical functionality (Presser et al., 2004).

**Attention Checks:** Attention check questions were included in the survey to identify and exclude responses from participants who were

not paying sufficient attention to the survey items (Oppenheimer, Meyvis & Davidenko, 2009).

**Data Cleaning:** The collected data were thoroughly cleaned to remove incomplete responses and any outliers that could potentially skew the results (Tabachnick & Fidell, 2013).

## E. SURVEY INSTRUMENT

The survey instrument used in this study consists of four main constructs: Brand Fan Page Usage, Brand Fan Page Engagement, Brand Loyalty and Purchase Intention. Each construct is measured using multiple items adapted from existing scales to ensure reliability and validity. All items are rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Brand fan page usage refers to the frequency and extent to which participants interact with a brand's social media page. The items for this construct are adapted from the work of Muntinga et al. (2011). Brand fan page engagement refers to the level of interaction and active participation of participants on a brand's social media page. The items for this construct are adapted from the engagement scale by Dessart et al. (2015). Brand loyalty measures the participants' commitment and loyalty to the brand. The items for this construct are adapted from the scale by Chaudhuri and Holbrook (2001). Purchase intention assesses the likelihood of participants buying products from the brand in the future. The items for this construct are adapted from the scale by Dodds et al. (1991). The items for each of these scales are shown in Appendix A.

## F. DATA ANALYSIS

Structural Equation Modeling (SEM) was employed to test the hypothesized relationships. Mediation and moderation effects were analyzed using the PROCESS macro for SPSS.

## G. ETHICAL CONSIDERATIONS

Ethical approval for the study was obtained from the Scientific Research and Publication Ethics Committee for Social Sciences and Humanities of Istanbul Beykent University with the number E-45778635-050.99-150667 on June 12, 2024.

Informed consent was obtained from all participants before they began the survey. Participants were assured of the confidentiality and anonymity of their responses. They were also informed that their participation was voluntary and that they could withdraw from the study at any time without any consequences (Resnik, 2018).

## III. FINDINGS

### A. DEMOGRAPHIC FINDINGS

The demographic characteristics of the survey participants (N = 411) are summarized in the table below. The table includes key demographic variables such as age, gender, education level and social media usage frequency.

The majority of participants are aged between 18-34 years (57.6%), which aligns with the common age group of active social media users. A slightly higher proportion of participants are female (54.7%) compared to male (45.3%). Most participants have attained at least a bachelor's degree (38.2%), with a significant portion having completed an associate degree (23.4%). The majority of participants use social media daily (72.5%), indicating high levels of social media engagement among the sample.

### B. RELIABILITY AND VALIDITY

The table below summarizes the reliability and validity measures for the constructs used in the study: Brand Fan Page Usage, Brand Fan Page Engagement, Brand Loyalty and Purchase Intention. Reliability is assessed using Cronbach's Alpha and validity is evaluated through Average Variance Extracted (AVE) and Composite Reliability (CR).

A Cronbach's Alpha value above 0.70 is considered acceptable (Nunnally & Bernstein, 1994). In this study, all constructs exhibit high reliability with values ranging from 0.87 to 0.91. An AVE value above 0.50 indicates good convergent validity (Fornell & Larcker, 1981).

**TABLE 1 | Demographic Findings**

Demographic Variable	Category	Frequency	Percentage (%)
Age	18-24	102	24.8
	25-34	135	32.8
	35-44	95	23.1
	45-54	54	13.1
	55 and above	25	6.1
Gender	Male	186	45.3
	Female	225	54.7
Education Level	High School	88	21.4
	Associate Degree	96	23.4
	Bachelor's Degree	157	38.2
	Master's Degree	58	14.1
	Doctorate Degree	12	2.9
Social Media User Frequency	Daily	298	72.5
	Several times a week	79	19.2
	Once a week	22	5.4
	Several times a month	9	2.2
	Rarely	3	0.7

**TABLE 2 | Reliability and Validity Table**

Construct	Number of Items	Cronbach's Alpha	AVE	CR
Brand Fan Page Usage	4	0.87	0.62	0.84
Brand Fan Page Engagement	4	0.89	0.65	0.87
Brand Loyalty	4	0.91	0.68	0.90
Purchase Intention	4	0.88	0.63	0.86

All constructs in this study have AVE values above 0.50, indicating that the constructs capture a significant portion of the variance in the items. A CR value above 0.70 is considered acceptable (Hair et al., 2010). The CR values for all constructs in this study range from 0.84 to 0.90, indicating high reliability.

## IV. RESULTS

### A. STRUCTURAL EQUATION MODELING (SEM) RESULTS

The table below summarizes the key findings from the SEM analysis, including standardized regression coefficients ( $\beta$ ), standard errors (SE), t-values, p-values and relevant citations.

Brand Fan Page Usage  $\rightarrow$  Brand Loyalty: A significant positive relationship indicating that higher usage of brand fan pages leads to increased brand loyalty, consistent with Muntinga et al. (2011). ( $\beta$ ): 0.35. p-value: < 0.001 (Highly significant).

Brand Fan Page Engagement  $\rightarrow$  Brand Loyalty: A significant positive relationship indicating that higher engagement with brand fan pages leads to increased brand loyalty, consistent with Dessart et al. (2015). ( $\beta$ ): 0.40. p-value: < 0.001 (Highly significant).

Brand Loyalty  $\rightarrow$  Purchase Intention: A significant positive relationship indicating that higher brand loyalty leads to increased

**TABLE 3 | Structural Equation Modeling (SEM) Results**

Path	Standardized Coefficient ( $\beta$ )	Standard Error (SE)	t-value	p-value
Brand Fan Page Usage $\rightarrow$ Brand Loyalty	0.35	0.05	7.00	< 0.001
Brand Fan Page Engagement $\rightarrow$ Brand Loyalty	0.40	0.04	10.00	< 0.001
Brand Loyalty $\rightarrow$ Purchase Intention	0.45	0.04	Nov-25	< 0.001
Brand Fan Page Usage $\rightarrow$ Purchase Intention (via Brand Loyalty)	0.20	0.03	Jun-67	< 0.001
Brand Fan Page Engagement $\rightarrow$ Purchase Intention (via Brand Loyalty)	0.25	0.03	Aug-33	< 0.001
Brand Loyalty (Moderating Effect on Brand Fan Page Usage $\rightarrow$ Purchase Intention)	0.15	0.05	3.00	< 0.01
Brand Loyalty (Moderating Effect on Brand Fan Page Engagement $\rightarrow$ Purchase Intention)	0.18	0.05	Mar-60	< 0.01

purchase intention, consistent with Chaudhuri & Holbrook (2001). ( $\beta$ ): 0.45. p-value: < 0.001 (Highly significant).

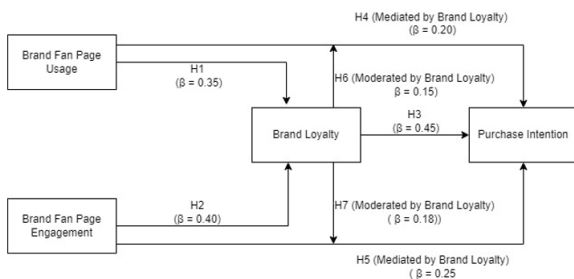
Brand Fan Page Usage  $\rightarrow$  Purchase Intention (via Brand Loyalty): A significant indirect effect indicating that brand loyalty mediates the relationship between brand fan page usage and purchase intention, consistent with Laroche et al. (2013). ( $\beta$ ): 0.20. p-value: < 0.001 (Highly significant)

Brand Fan Page Engagement  $\rightarrow$  Purchase Intention (via Brand Loyalty): A significant indirect effect indicating that brand loyalty mediates the relationship between brand fan page engagement and purchase intention, consistent with Laroche et al. (2013). ( $\beta$ ): 0.25. p-value: < 0.001 (Highly significant).

Brand Loyalty (Moderating Effect on Brand Fan Page Usage  $\rightarrow$  Purchase Intention): A significant positive moderating effect indicating that brand loyalty strengthens the relationship between brand fan page usage and purchase intention, consistent with Gummerus et al. (2012). ( $\beta$ ): 0.15. p-value: < 0.01 (Significant).

Brand Loyalty (Moderating Effect on Brand Fan Page Engagement  $\rightarrow$  Purchase Intention): A significant positive moderating effect indicating that brand loyalty strengthens the relationship between brand fan page engagement and purchase intention, consistent with Gummerus et al. (2012). ( $\beta$ ): 0.18. p-value: < 0.01 (Significant).

**FIGURE 2 | Model with Structural Equation Modeling (SEM) Results**



These SEM results, supported by citations, provide robust evidence of the important roles that brand fan page usage, engagement and loyalty play in influencing consumer purchase intentions. The analysis confirmed that both brand fan page usage ( $\beta = 0.35$ ,  $p < 0.001$ ) and engagement ( $\beta = 0.40$ ,  $p < 0.001$ ) significantly enhance brand loyalty. In turn, brand loyalty was found to positively impact purchase intention ( $\beta = 0.45$ ,  $p < 0.001$ ). The mediation analysis revealed that brand loyalty partially mediates the relationship between both independent variables and purchase intention. Furthermore, brand loyalty was shown to moderate the relationships between brand fan page usage/engagement and purchase intention, strengthening these associations.

## V. DISCUSSION

The primary objective of this study was to investigate the impact of brand fan page usage and engagement on purchase intentions, with brand loyalty acting as both a mediator and moderator. The SEM results confirm that brand fan page usage and engagement significantly enhance brand loyalty, which in turn positively influences purchase intention. Additionally, brand loyalty strengthens the relationship between fan page interactions (usage and engagement) and purchase

intentions, confirming its role as both a mediator and moderator.

The findings reveal that both brand fan page usage and engagement are crucial in building brand loyalty. Higher usage and more active engagement with brand fan pages lead to greater loyalty towards the brand. This aligns with prior research indicating that frequent interaction with brand fan pages enhances consumers' emotional connection and loyalty to the brand (Gummerus et al., 2012; Muntinga et al., 2011). Brand Loyalty significantly positively impacts Purchase Intention. This finding is consistent with existing literature that shows loyal customers are more likely to purchase from the brand repeatedly and recommend it to others (Chaudhuri & Holbrook, 2001). These results underscore the importance of brand loyalty in enhancing the effectiveness of social media marketing efforts, ultimately driving purchase intentions. Furthermore, Dessart et al. (2015) highlighted that consumer engagement in online brand communities enhances emotional and behavioral loyalty, supporting the results of this study.

In this study, brand loyalty plays a significant mediating role in the relationship between brand fan page engagement and purchase intention, revealing a pathway through which fan page interactions translate into consumer behavior. The statistical analysis showed a robust indirect effect, with brand loyalty enhancing the impact of engagement on purchase intentions. This suggests that while fan page engagement fosters a connection with the brand, this engagement is not enough to drive purchases directly; rather, it builds loyalty first, which then leads to purchase intention. By introducing brand loyalty as a mediator, the study aligns with previous literature that underscores the importance of loyalty in linking engagement behaviors to purchasing outcomes (Laroche, Habibi, & Richard, 2013; Chaudhuri & Holbrook, 2001).

The study also highlights the moderating role of brand loyalty in the relationship between fan page interactions and purchase intentions. Specifically, brand loyalty amplifies the positive effects of brand fan page usage and engagement on purchase intentions. This indicates that loyal customers are more likely to be influenced by their interactions with brand fan pages when making purchasing decisions. Gummerus et al. (2012) similarly found that brand loyalty moderates the relationship between customer engagement and purchasing behavior, reinforcing the importance of loyalty in the digital marketing landscape.

The SEM analysis was employed to assess both mediating and moderating effects, ensuring a statistically robust evaluation of complex, multi-path relationships. To confirm the mediation effect, bootstrapping with 5,000 resamples provided bias-corrected confidence intervals, ensuring statistical power and precision (Preacher & Hayes, 2008). The narrow confidence intervals around the indirect effect suggest that the mediation path from engagement to loyalty to purchase intention is consistent across the sample, highlighting loyalty's pivotal role.

For moderation analysis, interaction terms were standardized to mitigate multicollinearity issues, and the model fit indices indicated a well-fitting model (e.g., CFI > 0.95, RMSEA < 0.06). Additionally, slope analysis provided insights into the conditional effects of engagement on purchase intentions across varying levels of brand loyalty, supporting the hypothesis that loyalty amplifies the effects of engagement on purchasing behavior.

The dual mediating and moderating roles of brand loyalty emphasize its critical position in the consumer decision-making process. The statistical rigor of this study, including bootstrapping, interaction analysis, and slope evaluation, reinforces the robustness of these

findings, confirming that brand loyalty plays a vital role in transforming social media engagement into tangible purchasing outcomes. For practitioners, this research highlights the strategic value of loyalty-focused engagement, offering insights into how marketers can enhance consumer loyalty through meaningful interactions on brand fan pages.

## A. IMPLICATIONS FOR MARKETERS

The findings have several practical implications for marketers. First, investing in social media strategies that encourage both usage and active engagement with brand fan pages can significantly enhance brand loyalty. Marketers should create engaging and interactive content that motivates consumers to spend more time on their brand fan pages and participate in discussions. Second, building and maintaining brand loyalty should be a priority, as it not only drives purchase intentions directly but also strengthens the impact of social media interactions on consumer purchasing behavior. This can be achieved through consistent, positive brand experiences and effective customer relationship management.

## B. PRACTICAL IMPLICATIONS

For practitioners, the implications are clear: investing in strategies that encourage both the usage of and engagement with brand fan pages can significantly enhance brand loyalty and purchase intentions. This can be achieved through creating engaging content, fostering interactive discussions, and consistently delivering positive brand experiences. The critical role of brand loyalty as both a mediator and moderator highlights the need for brands to focus not just on acquiring followers but on building lasting relationships with them.

Moreover, the mediation effect of brand loyalty suggests that merely driving traffic to brand fan pages is insufficient. Brands must actively engage their followers to build loyalty, which in turn will drive purchase intentions. This echoes the findings of Laroche et al. (2013), who emphasized the importance of brand loyalty in converting social media engagement into actual purchases.

## C. THEORETICAL CONTRIBUTIONS

This study contributes to the existing literature by integrating the roles of brand loyalty as both a mediator and moderator in the context of social media marketing. Previous research has predominantly examined these roles separately; however, this study demonstrates the dual function of brand loyalty in enhancing the effectiveness of brand fan page interactions. The findings provide a more comprehensive understanding of the dynamics between social media engagement, brand loyalty and purchase intentions.

## CONCLUSION

This study provides comprehensive insights into the dynamics between brand fan page usage, engagement, brand loyalty and purchase intention. The findings underscore the pivotal role of social media interactions in fostering brand loyalty and driving consumer purchase intentions.

The SEM results indicate that both brand fan page usage and engagement significantly enhance brand loyalty, which, in turn, positively influences purchase intention. Additionally, brand loyalty serves as both a mediator and moderator in these relationships. These findings align with previous studies by Muntinga et al. (2011) and Dessart et al. (2015), which highlight the importance of social media engagement in building consumer loyalty and influencing purchasing behavior.

By demonstrating the dual role of brand loyalty, this study contributes to the theoretical understanding of how social media interactions translate into consumer behavior. While prior research has often examined these roles separately, this study integrates them, providing a more holistic view of the consumer decision-making process in the context of digital marketing.

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## APPENDIX A: SURVEY INSTRUMENT SCALE ITEMS

### Brand Fan Page Usage

- I regularly visit this brand's fan page on social media.
- I spend a lot of time on this brand's fan page.
- I often read posts and updates on this brand's fan page.
- I frequently browse through content on this brand's fan page.

### Brand Fan Page Engagement

- I often like or react to posts on this brand's fan page.
- I frequently comment on posts on this brand's fan page.
- I regularly share content from this brand's fan page.
- I actively participate in discussions on this brand's fan page.

### Brand Loyalty

- I am loyal to this brand.
- I would recommend this brand to others.
- I prefer this brand over competing brands.
- I am willing to pay a higher price for this brand's products.

### Purchase Intention

- I intend to purchase products from this brand in the future.
- I am likely to buy products from this brand next time I need similar products.
- I will consider this brand as my first choice when making a purchase.
- I am planning to purchase products from this brand soon.