

# Social Media Marketing Efforts in Retaining Sustainable Online Consumers

## Abstract

The purpose of this study is to evaluate the influence that social media marketing activities (SMMa) have on brand loyalty, both directly and indirectly, with the variables of community participation and lovemark being used as mediators. A number of ideas, such as the lovemark theory, the engagement theory, and the brand equity theory, were used in the process of developing a research model. Consequently, the purpose of this study is to evaluate the influence that social media marketing, community participation, and lovemark have on brand loyalty. Data was obtained from 464 female participants who are following luxury fashion labels on key social networking sites such as Facebook, Instagram, Snapchat, and Twitter. According to the findings obtained via the use of PLS, SMMa has a good impact on both lovemark and community participation. In addition, we discover that there are favourable connections between lovemark, community participation, and brand loyalty respectively.

**Keywords;** sustainable marketing; green marketing; social media; natural language processing (NLP); artificial intelligence (AI); latent semantic analysis (LSA); KNIME (Konstanz information miner)

## 1. Introduction

During a time when the globe is struggling with limited resources and environmental damage, marketing methods that are environmentally friendly and sustainable have arisen. A concept known as the triple bottom line (TBL) (Chiche, A ,2022) was responsible for popularising the notion of sustainability in marketing techniques. This concept took into consideration three dimensions: people, planet, and profit. Additional studies also focused on the topic of environmentally responsible practices in marketing interactions (Chakraborty,D,2022). The marketing methods were also strongly impacted by environmental concerns and the behaviour of consumers as a consequence of those concerns (Dietz, C 2016). A comprehensive framework was established by Gordon with the purpose of merging social marketing with environmental marketing and involvement with stakeholders. Green marketing is yet another significant development that has taken place.

Alongside the rise of sustainable marketing, the implementation of green marketing has also grown more common. Giving people more value while also taking care of the earth is possible (de Vries 2016). A lot of different things affect what and how people buy green products (Dash, G 2023). These include their worries and views about the environment, their family and friends, the company itself, green marketing strategies, and more (Dash, G.; Chakraborty, D 2021). When green marketing is combined with a variety of green goods, it may be more effective and even develop a specialised market for these items (Dwivedi, Y.K 2020). As a result, green and sustainable marketing techniques are very necessary in order to accomplish the TBL in marketing.

Marketing tactics have been converted into digital and social media-based (DSMM) activities as a result of the introduction of the new century (Elkington, J 1998). The dispersion of innovation pathways is responsible for the proliferation of new technologies and techniques

(Fillbrunn, A. 2017), and the development of social media marketing is well positioned to see sustained expansion in the future. Customers are significantly impacted by social media platforms in a significant way. Social media networks are used by brands for the purpose of fostering connection building and customer engagement (Gordon, R 2011). Campaigns on social media that include particular messages have the ability to influence the behaviour of consumers in an environment that is packed with emotions (Karmugilan, K 1884). Using social media platforms to implement marketing techniques that are sustainable, green, and environmentally friendly has shown to be quite effective (Kitchenham, B 2007).

On the other hand, the majority of those research have been examples of empirical, bibliometric, or systematic literature approaches (Kautish, P 2017). For the purpose of forecasting the most recent trends, the research procedure makes use of text mining and latent semantic analysis (Kaur, B 2022). (Lee, K 2008) KNIME, which stands for Konstanz Information Miner, is a tool that looks at and predicts all the different trends in sustainable marketing, focusing on how social media will be used (Minton, E 2012). The main goal was broken down into many smaller goals, which are shown below in the form of five study questions about social media and how they work in relation to environmentally responsible or sustainable marketing. (Ottman, J.A 2006) The following study topics were looked into as part of this investigation:

RQ1: Which strings ought to be chosen for this particular research project? in accordance with the title and the goals

RQ2: What are the general advancements that have occurred in the publications that pertain to this field?

RQ3: Which author keywords are the most prominent in the strings that have been chosen?

In light of the aforementioned considerations, the research is further broken down into five distinct areas. The clusters that were calculated as a result of the research are discussed in Section 4 (RQ5). This study used the Small and Medium-Sized Enterprise (SMME) structure to look at how well small and medium-sized businesses (SMMEs) keep customers by creating brand connection, brand choice, brand loyalty, and buy commitment. Through the process of analyzing and reviewing all of the past research, we construct a model to characterize our own study. A representation of the research model may be seen below (Figure 1). (Rex, E 2007)(Rajput,S2022).

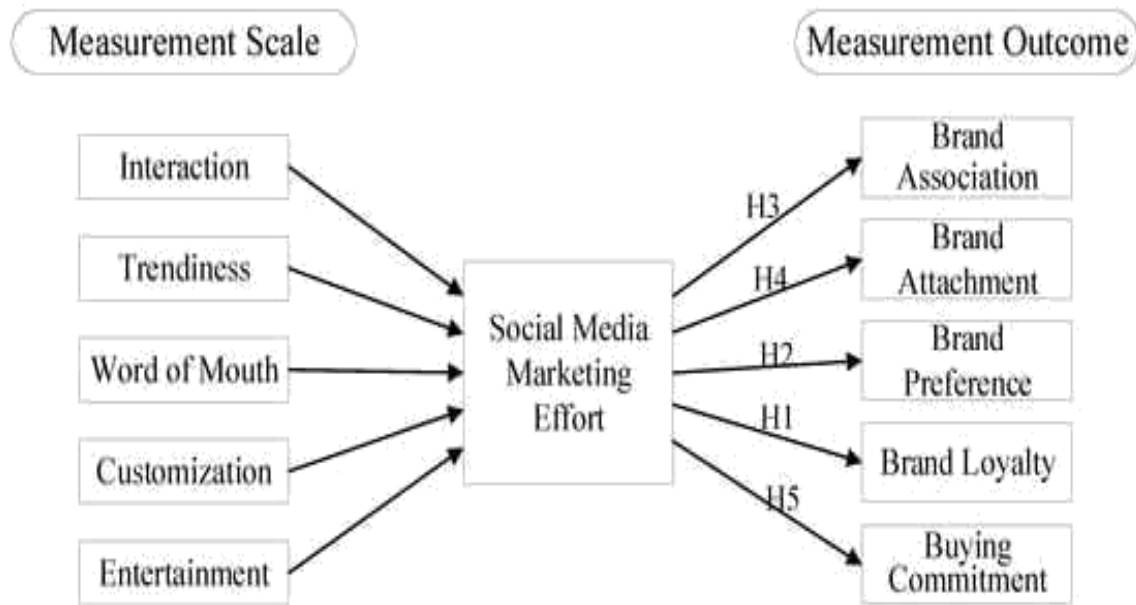


Figure 1. Social media marketing effectiveness research framework.

Because of how biased the medium is, conversations become more social and clear. Table 1 shows a number of important studies that have been done on how well social media marketing changes the behavior of customers.

Table 1. Similar social media marketing research.

Author	Year	Research
Kim and Lee [35]	2019	Influence of Integration on Interactivity in Social Media Luxury Brand Communities
Venmeter et al. [36]	2018	Don't Just "Like" Me, Promote Me: How Attachment and Attitude Influence Brand Related Behaviors on Social Media
Yoshida et al. [37]	2018	Bridging the Gap between Social Media and Behavioral Brand Loyalty
Chen and Lin [38]	2019	Understanding the effect of social media marketing activities: the mediation of social identification, perceived value and satisfaction.
Felix et al. [39]	2017	Elements of Strategic Social Media Marketing: A Holistic Framework
Godey et al. [22]	2016	Social Media Marketing Efforts of Luxury Brands: Influence on Brand Equity and Consumer Behavior
Nisar and Whitehead [40]	2016	Brand Interactions and Social Media, Enhancing User Loyalty through Social Media Sites
Yan et al. [41]	2015	E-WOM from E-Commerce Websites and Social Media: Which Will Consumers Adopt?
Hajji [42]	2015	Social Commerce Constructs and Consumer's Intention to Buy
Eric et al. [4]	2015	Social Media Research: Theories, Constructs, and Conceptual Frameworks
Kim and Ko [15]	2012	Do Social Media Marketing Activities Enhance Customer Equity? An Empirical Study of Luxury Fashion Brand
Kim and Ko [5]	2010	Impact of Luxury Fashion Brand's Social Media Marketing of Customer Relationship and Purchase Intention

## 2. Hypothesis Development

Khan and Mahmood say that brand loyalty is when customers are completely devoted to a company, which creates a strong bond between the two. Brand loyalty has several advantages, including favorable word-of-mouth and increased profitability for businesses. Social media marketing shows that customer involvement is more than just sales. It also includes ideas, impact, and information that customers give without making a purchase.

People who don't do transactional actions buy a lot of things again when they do transactional trades. This is because "engagement marketing" can make customers more loyal, trusted, and happy, which can lead to more sales or better ties between customers and brands. The reason for this is that Brodie's study has shown that customers who do these things are more likely to make big purchases again. When brands take on special, positive, and noticeable meanings in the thoughts of many customers, they become alluring and impossible to replace, which makes customers loyal to the brand.

Small and medium-sized businesses (SMMEs) in the Bangladeshi fashion industry have the ability to make Bangladeshi customers loyal to their brands, according to this theory.

As was already said, brand choice is when a customer likes the services that a certain company offers more than the services that other companies in the same consideration set offer. And this is because customers tend to like the services that are made by that company. Self-image congruity was found to be a very good driver of buyer happiness and a very good indicator of which brand a customer would choose.

Small and medium-sized businesses (SMMEs) in the Bangladeshi fashion industry have the power to change and improve Bangladeshi customers' brand choices.

There is a difference between brand preferences and brand associations, according to, in terms of the degree of abstraction, which refers to the amount of information that is summarized or absorbed by the association. In accordance with this criteria, we defined brand connections according to three primary categories, which are qualities, advantages, and attitudes. A brand's attributes are the things that people use to describe it. For example, how buyers feel about a brand and the events that lead to them buying or using it are examples of attributes. In other words, benefits are how people think a brand can help them. The customers' overall opinion of a brand is referred to as their brand attitudes.

When a person feels strongly about a brand, they are said to have brand connection. This shows how committed they are to keeping their relationship with that brand. There is research that shows that self-image congruity has a good effect on the thing itself (but only for real and ideal self-image congruity). This has an impact on people's happiness and their plans to buy. On the basis of this important metric, we constructed Hypothesis 4, sometimes known as H4.

The fourth hypothesis (H4) The small and medium-sized enterprises (SMMEs) that make up the Bangladeshi fashion sector have the ability to effectively develop an emotional commitment to brands among Bangladeshi consumers of Bangladeshi fashion.

Our goal is to get an understanding of the purchasing behavior of Bangladeshi customers as it is impacted by social media by analyzing the interaction between small and medium-sized enterprises (SMMEs) and brand attachment.

In addition, the purpose of consumer engagement is to emphasize contacts with consumers and the involvement of such customers. The exchange of information is the most important component of consumer involvement. As an additional benefit, they are able to provide assistance in comprehending the process by which loyalty may be preserved in order to

improve the purchasing commitment of clients toward a certain brand or service. Through the use of this climacteric metric, we were able to generate Hypothesis 5 (H5).

The fifth idea (H5) says that micro, small, and medium-sized businesses (SMMEs) in the Bangladeshi fashion industry can easily persuade Bangladeshi customers to buy from them again and again.

Small and medium-sized enterprises (SMMEs), which is to determine whether or not it is effective in producing income by persuading customers to have a favorable intention to purchase.

### **3. Methodology**

This research aimed to investigate if small and medium-sized enterprises (SMMEs) of local Bangladeshi fashion companies had the ability to influence customer online purchasing decisions. In order to develop the study model that would be utilized to assess the perception of customers, we made use of the five SMME measuring instruments that Kim and Ko [5] identified as independent variables. Approximately 564 correct replies were received from the 700 forms that we distributed after constructing a structured questionnaire and distributing them. These responses were then utilized for quantification. The answers were put into the statistical program SPSS 21 so that association, ordinalchi-square, and multiple regression analyses could be done.

#### **3.1. Data Sampling**

We looked at three types of personal information: gender, age, and the length of time people had been shopping online. Following are the five dependent measures that were created because of these factors: brand connection, attachment, choice, loyalty, and buy commitment. Small and medium-sized businesses (SMMEs) were judged on how well they did in each of these five different markets by how committed customers were to making purchases. The entire local design industry in Bangladesh was looked at, and the interviewees were grouped by age to get a better idea of their backgrounds. A breakdown of the respondents' demographic characteristics is shown in Table 2. The people who answered said that they kept up with fashion company ads on Facebook and Instagram (89%) and that they often looked for websites that were linked to Bangladeshi fashion brands (91%). A total of over 83 fashion brands were followed by the respondents, with 23 of the labels being native Bangladeshi names.

Table 2. Respondent demographics.

Name	Percentage	N	Mean	SD
<b>Gender</b>	100	564	1.49	0.5008
Male	504	278		
Female	49.6	0.00		
<b>Average time on internet</b>	100	564	1.6051	0.612
1-3 h	45.7	258		
3-6 h	45.2	255		
More than 6 h	6.9	41		
<b>Age of the respondents</b>	100	564	1.603	0.783
18-23 years	54.8	309		
24-28 years	21.1	164		
29-33 years	11.9	67		

### 3.2. Descriptive Data

Kim and Ko's study looked at fun, trendiness, contact, stomization, and e-WOM with five different types of results. Things were judged on a scale that had two parts for fun, trendiness, and connection. For tailoring and e-WOM, the scale had three parts, and all three were important for making a choice. The numbers used to find out how well the brands did were purchase commitment, brand loyalty, brand link, brand bond, and brand choice. With SDs of 10.61 and 2.23, they were also 12.80 and 2.09. Only customization and e-WOM did better than the other three ways of scoring.

### 3.3. Validity Measure

We carried out a reliability test, and the findings are shown in Table 3. For the SMME measurements, we were able to get a Cronbach's alpha value of 0.7 or above, which demonstrates their constant dependability in accordance with the established standard. When it comes to data collecting, reliability is concerned with the consistency of the metrics that are utilized. All three of the amounts of contact (0.657), trendiness (0.639), and brand choice (-0.667) were below the norm. They were also very close to the norm value of 0.7. What's more, the negative Cronbach's alpha (-0.616) was found to be the lowest when it came to brand connection.

Table 3. Assessment of scale validity (Cronbach's alpha).

Measurement Outcome	Brand Association	Brand Attachment	Brand Loyalty	Brand Preference	Buying Commitment
Values	-0.616	0.994	0.910	-0.667	0.988
Measurement Scale	Entertainment	Interaction	Customization	Word-of-Mouth	Trendiness
Values	0.949	0.657	0.969	-0.997	0.639

## 4. Results Analysis

### 4.1 Instrument/Chi-Square Test

A poll was created using the Likert scale model. The purpose of the poll was to try the five chosen measurement tools and look at every part of the small business. These are brand attachment, brand choice, brand link, brand loyalty, and buying commitment. Table 4 shows all the numbers.

Table 4. Questionnaire measure.

Measurement Scale Used for Statistical Analysis
<p><b>Social Media Marketing Effort (Entertainment) [5]</b>            1. The contents used in the website of local (Bangladeshi) fashion brands are appealing. (ENT 1)            2. I always like to visit local Bangladeshi fashion brand sites as they are more interesting than the international ones. (ENT 2)</p> <p><b>Social Media Marketing Effort (Interaction) [5]</b>            1. Opinions and comments on the product are easily visible. (INT 1)            2. I can share my views on the product comfortably. (INT 2)</p> <p><b>Social Media Marketing Effort (Trendiness) [5]</b>            1. The fashion features provided by the sites of local brands are the latest in nature. (TRN 1)            2. I found all the necessary updates on the product. (TRN 2)</p> <p><b>Social Media Marketing Effort (Customization) [5]</b>            1. The local brand website provides individual customer support. (CUS1)            2. I get personalized support according to my choice of product. (CUS2)            3. I used to get text messages on new offers or new product arrivals. (CUS3)</p> <p><b>Social Media Marketing Effort (Word-of-Mouth) [5]</b>            1. I already have or I would like to have the website or blog of the local fashion brand in my mobile or personal device. (WOM1)            2. I would prefer to upload the contents of the local fashion brands in my blog or micro blog. (WOM2)            3. I share or I would like to share the information of the local fashion brand website in my personal social media like Facebook, Twitter, etc. (WO3)</p> <p><b>Brand Association</b>            1. I believe that the local fashion brand is equally or more suitable as it is superior in quality. (BA1)            2. I think local fashion brands are the symbol of luxury and comfort. (BA2)</p> <p><b>Brand Attachment</b>            1. I like the local fashion brands as those brands are bought by my family and friends. (BAT1)            2. I specifically love some/most of the local brands, so I buy them. (BAT2)</p> <p><b>Brand Preference</b>            1. I specifically love some/most of the local brands, so I buy them. (BP1)            2. I would like to choose the local Bangladeshi brands over the international fashion brands even if they have the same features. (BP2)            3. I think it is wise to buy local fashion brands even if they are the same in quality. (BP3)</p> <p><b>Brand Loyalty</b>            1. I would love to recommend Bangladeshi local brands to my family and friends. (BL1)            2. The local Bangladeshi fashion brands are my first choice over the international brands. (BL2)</p> <p><b>Buying Commitment</b>            1. I am ready to pay a higher price for local brands (Bangladeshi) than for international brands. (BC1)            2. I think the price of local brands (Bangladeshi) should increase to a certain level to make me switch to international brands. (BC2) [5]            3. I can pay —% more for local brands than international brands. (BC3)</p>

For this, we used Person's chi-square and confirmatory factor analysis to see how strong and separate the rating scales were from each other. In order to find out how strong the scale measure, which is called the R2 number, really is, this test was done. It's clear from the data that the name association value of -0.616, which is one of the validity measures, was too low. Table 5 shows the outcomes of the chi-square test and the root-mean-square error estimate (RMSEA).

Table 5. RMSEA—root-mean-square error approximation; df—degrees of freedom; SMME Independence Chi-square test.

<b>Brand Association</b>	<b>Value</b>	<b>df</b>	<b>Expected Count % Less Than 5</b>	<b>RMSEA</b>	<b>Asymptotic Significance (2-Sided)</b>
Entertainment	14.613	12	0.00	0.081	0.263
Interaction	12.001	12	0.00	0.042	0.446
Trendiness	13.235	9	0.00	0.051	0.152
Customization	13.235	9	12.5	0.051	0.152
Word-of-Mouth	13.235	9	0.00	0.051	0.152
<b>Brand Attachment</b>	<b>Value</b>	<b>df</b>	<b>Expected Count % Less Than 5</b>	<b>RMSEA</b>	<b>Asymptotic Significance (2-Sided)</b>
Entertainment	14.996	8	0.00	0.057	0.000
Interaction	11.720	8	0.00	0.051	0.000
Trendiness	12.843	6	0.00	0.061	0.000
Customization	2.522	6	16.7	0.027	0.866
Word-of-Mouth	52.578	4	0.00	0.152	0.000
<b>Brand Preference</b>	<b>Value</b>	<b>df</b>	<b>Expected Count % Less Than 5</b>	<b>RMSEA</b>	<b>Asymptotic Significance (2-Sided)</b>
Entertainment	33.522	8	0.00	0.086	0.000
Interaction	65.387	8	0.00	0.120	0.000
Trendiness	14.023	6	0.00	0.064	0.029
Customization	305.010	6	16.7	0.300	0.000
Word-of-Mouth	21.276	4	0.00	0.089	0.000
<b>Brand Loyalty</b>	<b>Value</b>	<b>df</b>	<b>Expected Count % Less Than 5</b>	<b>RMSEA</b>	<b>Asymptotic Significance (2-Sided)</b>
Entertainment	14.613	12	0.00	0.046	0.263
Interaction	12.001	12	0.00	0.042	0.446
Trendiness	13.235	9	0.00	0.051	0.152
Customization	20.097	9	12.5	0.062	0.017
Word-of-Mouth	7.213	6	0.00	0.046	0.302
<b>Buying Commitment</b>	<b>Value</b>	<b>df</b>	<b>Expected Count % Less Than 5</b>	<b>RMSEA</b>	<b>Asymptotic Significance (2-Sided)</b>
Entertainment	5.846	8	0.00	0.036	0.665
Interaction	10.841	8	0.00	0.049	0.211
Trendiness	8.708	6	0.00	0.050	0.191
Customization	88.906	6	16.7	0.162	0.000
Word-of-Mouth	296	4	0.00	0.011	0.990
N of Valid Cases	564				

It is clear from looking at Table 5 that the assumptions were not violated by the measurements that were employed to assess brand association. With the exception of customisation, the count of 12.5, which stayed below 20%, was the predicted value. An equal approved RMSEA level of less than 0.08 was found for each of the five measures, while the other measurements did not breach the fitness threshold. Consequently, the assumption was not shown to be incorrect. Although there was a high projected count of customization (16.7% for both situations), the actual count was still lower than 20%. Calculations of brand attachment revealed that all of the factors, with the exception of personalization, might be considered important. Moreover, the results of Table 5 demonstrate that the measurements did not deviate from the anticipated figure for brand loyalty. In the case of customisation, the projected count was lower than 12.7%, which was below than the threshold of 20% that was considered acceptable. All of the RMSEA values for each and every one of the measurements were inside the specified range of acceptable values. On the basis of Table 5, it is clear that the measures for purchasing commitment were capable of being implemented and did not contradict the premise. Each of the anticipated figures was lower than twenty percent.



According to the Pearson chi-squared test, customisation was the only factor that was significant. The only factor that exceeded the RMSEA range of less than 0.08 was customisation. The Pearson chi-square test was taken into consideration in order to ascertain whether or not the assumption was really broken. As the measurement was 5 x 5, the significance of the test was not taken into consideration in this particular instance.

## 4.2. Hypotheses Testing

In order to establish whether or not the anticipated impact was achieved, we performed five linear regressions and analyzed the statistical results. The independent variables that we choose to include in the study model are as follows: entertainment, interaction, trendiness, customisation, and word-of-mouth online. From Table 6, we can see that the link for brand loyalty was about the same and had a slightly negative value ( $r = -0.068$ ,  $p < 0.05$ ). Because the sample size was only 564, the association was not very strong (in a bad way), but the  $r$  number of  $-0.068$  was still pretty bad. From this, it's clear that the parts of social media marketing hurt people's loyalty to brands. The results of the regression are shown in Table 7, where the coefficient  $\beta$  is measured to be  $-0.060^*$  ( $p < 0.002$ ). The sole significant component that supported the correlation finding was customisation, which was one of the five independent variables.

The choice that was generated for Hypothesis 1: Sustainability 2019, 11, x FOR PEER REVIEW is clearly suggested and supported by the other values that are negligible. 12 of 26 From Table 6, we can see that the link had a slightly negative value ( $r = -0.068$ ,  $p < 0.05$ ). Because the sample size was only 564, the association was not very strong (in a bad way), but the  $r$  number of  $-0.068$  was still pretty bad. From this, it's clear that the parts of social media marketing hurt people's loyalty to brands. The results of the regression are shown in Table 7, where the coefficient  $\beta$  is measured to be  $-0.060^*$  ( $p < 0.002$ ). The sole significant component that supported the correlation finding was customisation, which was one of the five independent variables. Because of this, we do not accept Hypothesis 1. The multiple regressions for brand loyalty are shown in Table 7. There are many factors. T-value, which is shown by the sign <sup>2</sup> F R | R<sup>2</sup> How important it is Present all the time 7 836 2.053 0.134 0.018 11.946 0.000 Amusement 0.019 0.625 0.532 7.836 2.053 0.134 0.018 Interaction 0.010 + 0.368 + 0.713 The trend line is 0.001 - 0.030 + 0.976. Changes - 0.060 - 3.111 - 0.002 Word

Figure 2. Kendall's tau-b and gamma brand loyalty

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10
Entertainment	6.7128	2.77629	1									
Interaction	5.9734	2.96235	-0.001	1								
Trendiness	6.9663	2.36552	0.476 **	0.224 **	1							
Word-of-Mouth	15.3670	2.04697	0.090 *	0.350 **	0.038	1						
Customization	10.8351	3.89372	0.041	-0.033	0.028	0.104 **	1					
SIVME	45.8556	7.08939						1				
Brand Association	7.5426	1.50781	0.126 **	-0.107 **	0.172 **	0.175 **	0.048	0.139 **	1			
Brand Attachment	8.3333	1.74143	-0.151 **	-0.503 **	0.225 **	0.053	-0.038	0.350 **	-0.176 **	1		
Brand Preference	10.6938	2.05163	0.092 **	0.101 **	0.102 **	0.128 **	0.611 **	0.333 **	-0.054	-0.168 **	1	
Buying Commitment	12.5319	3.68098	0.024	0.073	0.027	0.004	-0.255 **	-0.90 **	0.020	0.062	144 **	1
Brand Loyalty	7.3369	1.82249	0.029	0.005	0.018	-0.024	0.148 **	-0.068 *	0.001	0.001	0.124 **	0.086 *

Table 7. Multiple brand loyalty declines.

Variables	$\beta$	F	R	$\Delta R^2$	T-Value	Significance
Constant	7.836	2.053	0.134	0.018	11.946	0.000
Entertainment	0.019				0.625	0.532
Interaction	0.010				0.368	0.713
Trending	-0.001				-0.030	0.976
Customization	-0.060				-3.111	0.002
Word-of-Mouth	0.004				0.105	0.917

According to the second hypothesis, small and medium-sized enterprises (SMMEs) operating within the Bangladeshi fashion sector have the potential to effectively impact and increase brand preference among residents of Bangladesh. For Bangladeshi fashion companies, there was a strong link between the names that buyers picked ( $r = 0.611$ ,  $p < 0.05$ ), as shown in Table 6. In Table 8, you can see the answer to the regression question. It's possible for changes in the independent variable to explain 58% of the changes in the dependent variable. In other words, the decline line was pretty strong. There was a strong connection between fun, trends, interaction ( $\beta = -0.159, 0.308, 0.110$ ), and electronic word-of-mouth (e-WOM) ( $0.061$ ,  $p < 0.05$ ). That's why we agree with the second null theory.

Table 8. Multiple brand preference regressions

Variables	$\beta$	F	R	$\Delta R^2$	T-Value	Significance
Constant	6.219	56.631	0.584	0.341	9.315	0.000
Entertainment	-0.159				-4.201	0.000
Interaction	0.308				15.607	0.000
Trending	0.110				3.004	0.003
Customization	0.014				0.495	0.621
Word-of-Mouth	0.061				1.915	0.056

As can be seen in Figure 3, the value of trendiness, distinctiveness, and e-WOM all varied greatly over a wide variety of categories. At the level of customization, Kendall's tau-b values shown a strong correlation of 0.502, but at the level of e-WOM, they demonstrated a weak link of 0.212.

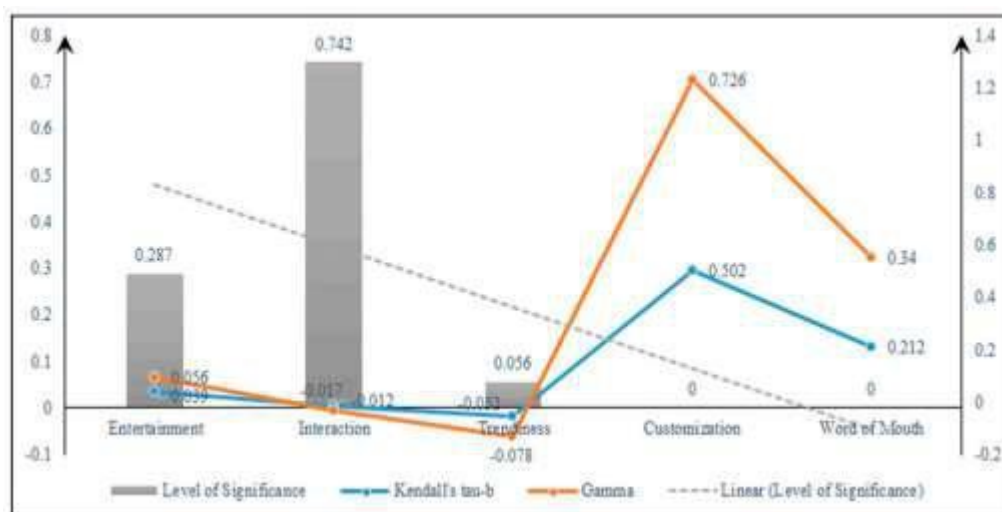


Figure 3. Kendall favors tau-b and gamma.

Attempts are made to determine whether or not small and medium-sized enterprises (SMMEs) operating within the Bangladeshi fashion sector are capable of effectively establishing a favorable brand association. According to Table 6, the link between brand association and small and medium-sized enterprises (SMMEs) was found to be statistically significant ( $r = 0.139$ ,  $p < 0.05$ ). Table 9 demonstrates that the sole factor was significant, with a value of 0.097 ( $p < 0.05$ ), was entertainment. The test results show that small and medium-sized businesses (SMMEs) didn't have a big effect on how buyers felt about brands.

Table 9. Multiple brand-association regressions

Variables	$\beta$	F	R	$\Delta R^2$	T-Value	Significance
Constant	5.827	5.157	0.210	0.044	11.198	0.000
Entertainment	0.097				0.109	0.004
Interaction	0.016				-1.538	0.360
Trending	0.050				6.599	0.119
Customization	-0.035				-4.656	0.164
Word-of-Mouth	0.039				-7.031	0.166

According to the data shown in Figure 4, trendiness, customisation, and e-WOM were all found to be inconsequential. Kendall discovered that the tau-b numbers for e-WOM, customization, and trendiness were 0.054, 0.029, and -0.013, in that order. These numbers were not at all linked to each other.

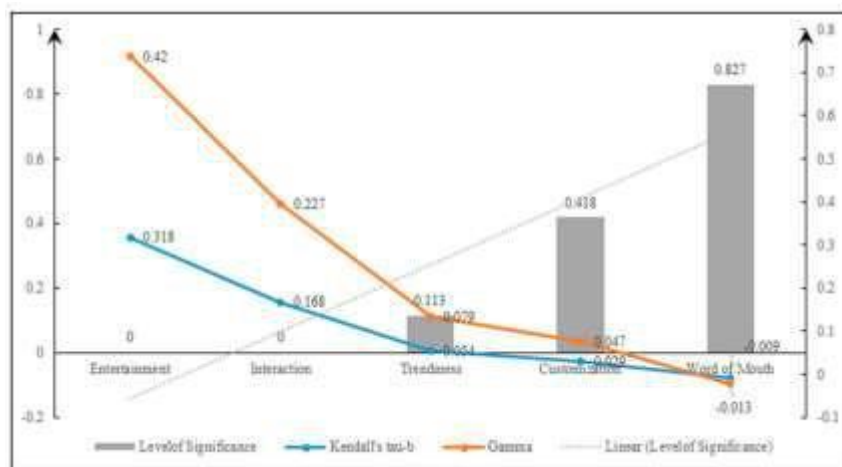


Figure 4. Kendall-tau-b-gamma brand love.

We discovered that small and medium-sized enterprises (SMMEs) operating within the Bangladeshi fashion sector were capable of effectively establishing an emotional relationship, also known as brand attachment. The link led to a finding that was both very strong and very important. A  $\beta$  value of 0.245, -0.134, and -0.227, in that order, showed that eWOM, trends, and customizing were the most important things found ( $p < 0.001$ ). People knew about the Bangladeshi fashion industry through small and medium-sized businesses (SMMEs), as shown in Table 10. Not only did this knowledge make a statistical difference, it was also strong. The results of the regression study can be seen in Table 10. The way the people felt about the brand was linked to each other. Have fun, talk to other people, and look good were all important ( $p < 0.05$ ), as shown in Figure 5. Kendall found tau-b numbers of -0.359, -

0.287, and -0.193, which showed a strong link. The acceptance of Hypothesis 4 is thus supported by these findings.

Table 10. Multiple brand attachment regressions.

Variables	$\beta$	F	R	$\Delta R^2$	T-Value	Significance
Constant	7.614	30.053	0.461	0.212	11.198	0.000
Entertainment	0.004				0.109	0.913
Interaction	-0.031				-1.538	0.125
Trending	0.245				6.599	0.000
Customization	-0.134				-4.656	0.000
Word-of-Mouth	-0.227				-7.031	0.000

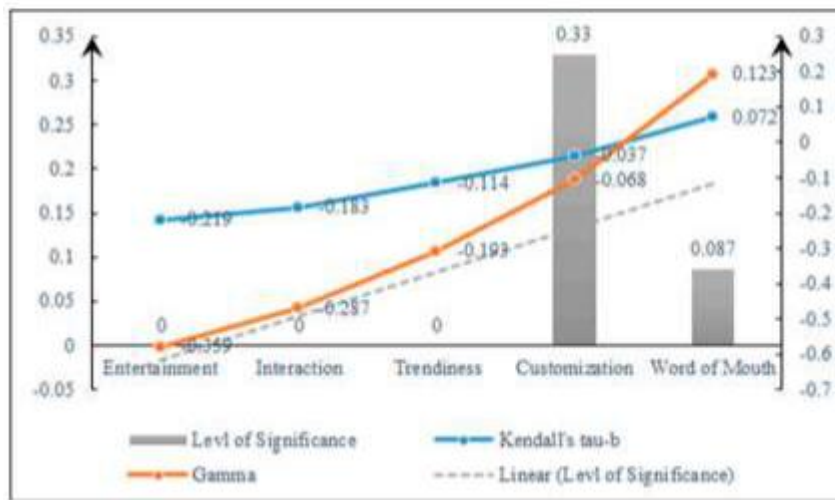


Figure 5. Kendall's tau-b and gamma brand attachment.

Nevertheless, the connection was unfavorable, although it was not particularly weak. The decision to make a purchase was negatively impacted as a result of this negative value. The discovery demonstrates that if the number of SMMEs is grown by one hundred units, then the influence will drop by ninety units over time. There are other factors that may be shown in Table 11 in the regression of purchase commitment. Consequently, we are unable to accept Hypothesis 5 due to the fact that it shown that the importance of the independent components was less than fifty percent.

Table 11. Multiple purchasing commitment regressions

Variables	B	F	R	$\Delta R^2$	T-Value	Significance
Constant	12.645	11.231	0.302	0.091	10.913	0.000
Entertainment	0.018				0.276	0.782
Interaction	-0.242				-7.063	0.000
Trending	0.114				1.796	0.073
Customization	0.106				2.155	0.032
Word-of-Mouth	0.038				0.686	0.493

Only interaction and customization were found to be statistically significant ( $p < 0.05$ ) in the data as shown in Figure 6. The other factors were deemed unsuccessful. Kendall's tau-b numbers for interaction were 0.096 and -0.325 for customization. This means that the link

between the two is very weak for interaction and fairly strong for customization. So, they give reasons why the null hypothesis should not be accepted.

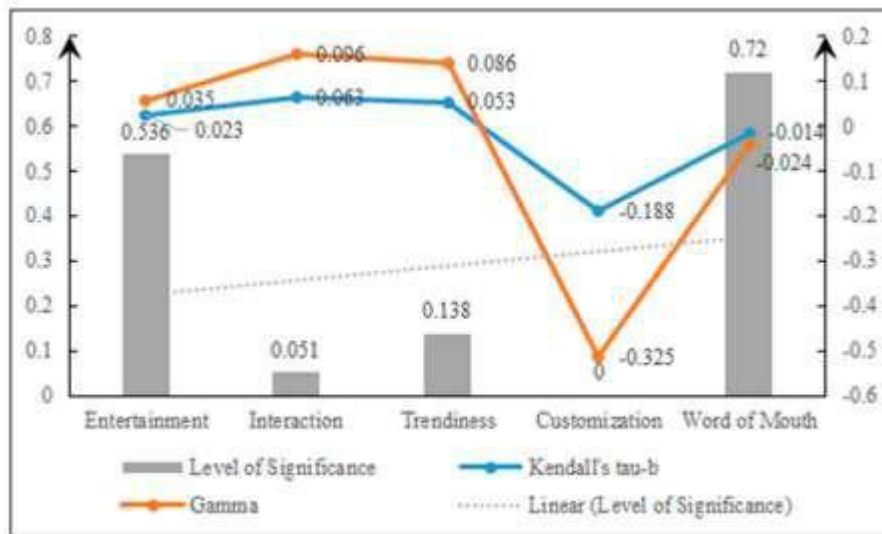


Figure 6. Kendall's tau-b and gamma buying commitment indicators.

### 4.3. Summary of Hypotheses Testing

The outcomes of the hypothesis are summarized in Figure 7, which may be seen below. The data show that the independent factors of tailoring for brand connection and fun for brand loyalty made a big difference in the end result. It was also decided that the final measuring conclusion of purchasing commitment should be disregarded because of their impacts. 2019 Sustainability, 11th Edition, x FOR RESULTS OF THE PEERS 16 of 26 This is Figure 6.

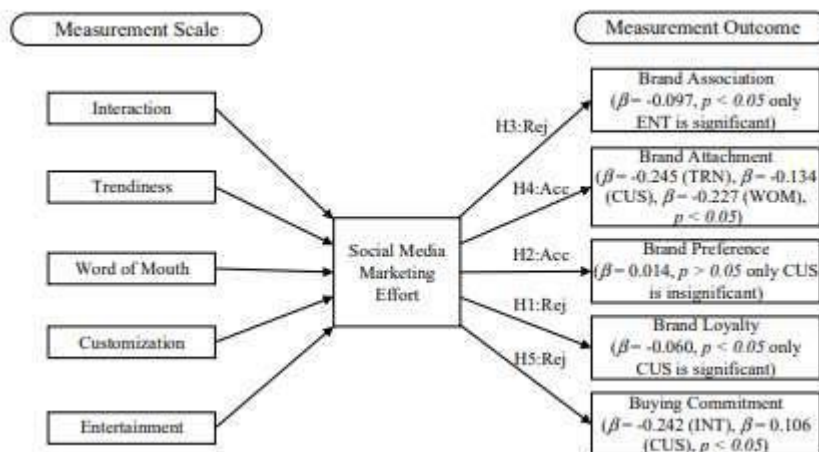


Figure 7. Hypothesis testing summary. AC = acceptance, REJ = rejection, ENT = entertainment, CUS = customization, TRN = trending, WOM = word-of-mouth, INT = interaction).

Table 12 shows a description of the breakdown of the accepted independent variables, and Figure 7 shows a collection of the most important statistical measurement data. Brand connection had three factors, while brand choice had four. The other two parts of brand recognition were thrown out because they had four separate factors that were thought to be

wrong. Among the five independent variables, the purchasing commitment was approved for two of them (interaction and customisation). However, the buying commitment was also refused since fewer than fifty percent of the independent variables were accepted.

In Table 12, the statistical measures are presented in their entirety.

Hypothesis	Significant Variables	Unstandardized ( $\beta$ )	Total Number of Independent Variables	Number of Significant Variables	p-Value	Confidence Interval	T-Value	Acceptance or Rejection
H1	BL→CUS	-0.060	5	1	0.002	0.05 (95%)	-3.111	Rejected
	BP→ENT	-0.159			0.001	0.05 (95%)	-4.201	
H2	BP→INT	0.308	5	4	0.001	0.05 (95%)	15.607	Accepted
	BP→TRN	0.110			0.001	0.05 (95%)	3.004	
	BP→WOM	0.061			0.056	0.05 (95%)	1.915	
H3	BAS→ENT	0.097	5	1	0.004	0.05 (95%)	0.109	Rejected
	BAT→TRN	0.245			0.001	0.05 (95%)	6.599	
H4	BAT→CUS	-0.134	5	3	0.001	0.05 (95%)	-4.656	Accepted
	BAT→WOM	-0.227			0.001	0.05 (95%)	-7.031	
H5	BC→INT	-0.242	5	2	0.001	0.05 (95%)	-7.063	Rejected
	BC→CUS	0.106			0.032	0.05 (95%)	2.155	

## 5 Conclusions

The objective of this study was to investigate the effect that social media marketing has on community involvement and lovemark, as well as the subsequent impact that these factors have on brand loyalty. Prior research has examined the use of just two social networking sites (SNSs), notably Facebook and Twitter (Godey et al., 2016). However, we contend that consumer data collected on a specific social networking site (SNS) may not be a reliable indicator of real-world customer behavior. Customers have accounts on many SNSs, some of which are more popular than others. As a result, we investigated the impact that social media marketing has on community participation and lovemark by using social networking platforms (including Facebook, Instagram, Snapchat, and Twitter) that have pages dedicated to luxury fashion businesses. The underlying ideas, which included the lovemark theory, the engagement theory, and the brand equity theory, served as the foundation for the study concept that was developed. A favorable effect on community participation and lovemark was shown to be associated with SMMA, according to the research. In addition, we discover that there are favorable connections between lovemark, community participation, and brand loyalty respectively. It was also discovered that SMMA does not have any direct effect on the loyalty of consumers to a brand.

## Reference

1. Chiche, A.; Yitagesu, B. Part of speech tagging: A systematic review of deep learning and machine learning approaches. *J. Big Data* 2022, 9, 1–25. [Google Scholar] [CrossRef]
2. Chakraborty, D.; Dash, G. Using the consumption values to investigate consumer purchase intentions towards natural food products. *Br. Food J.* 2022, 125, 551–569. [Google Scholar] [CrossRef]
3. Dietz, C.; Berthold, M.R. KNIME for Open-Source Bioimage Analysis: A Tutorial. In *Focus on Bio-Image Informatics*; Springer International Publishing: Cham, Switzerland, 2016; Volume 219, pp. 179–197. [Google Scholar] [CrossRef]

4. de Vries, L.; Gensler, S.; Leeflang, P.S. Popularity of Brand Posts on Brand Fan Pages: An Investigation of the Effects of Social Media Marketing. *J. Interact. Mark.* 2012, 26, 83–91. [Google Scholar] [CrossRef]
5. Dash, G.; Sharma, K.; Yadav, N. The diffusion of mobile payments: Profiling the adopters and non-adopters, Roger's way. *J. Retail. Consum. Serv.* 2023, 71, 103219. [Google Scholar] [CrossRef]
6. Dash, G.; Chakraborty, D. Digital Transformation of Marketing Strategies during a Pandemic: Evidence from an Emerging Economy during COVID-19. *Sustainability* 2021, 13, 6735. [Google Scholar] [CrossRef]
7. Dwivedi, Y.K.; Ismagilova, E.; Hughes, D.L.; Carlson, J.; Filieri, R.; Jacobson, J.; Jain, V.; Karjaluoto, H.; Kefi, H.; Krishen, A.S.; et al. Setting the future of digital and social media marketing research: Perspectives and research propositions. *Int. J. Inf. Manag.* 2020, 59, 102168. [Google Scholar] [CrossRef]
8. Elkington, J. Partnerships from cannibals with forks: The triple bottom line of 21st-century business. *Environ. Qual. Manag.* 1998, 8, 37–51. [Google Scholar] [CrossRef]
9. Fillbrunn, A.; Dietz, C.; Pfeuffer, J.; Rahn, R.; Landrum, G.A.; Berthold, M.R. KNIME for reproducible cross-domain analysis of life science data. *J. Biotechnol.* 2017, 261, 149–156. [Google Scholar] [CrossRef]
10. Gordon, R.; Carrigan, M.; Hastings, G. A framework for sustainable marketing. *Mark. Theory* 2011, 11, 143–163. [Google Scholar] [CrossRef]
11. Karmugilan, K.; Pachayappan, M. Sustainable manufacturing with green environment: An evidence from social media. *Mater. Today Proc.* 2020, 22, 1878–1884. [Google Scholar] [CrossRef]
12. Kitchenham, B.; Charters, S. Guidelines for Performing Systematic Literature Reviews in Software Engineering. *Engineering* 2007, 45, 1051. [Google Scholar]
13. Kautish, P.; Dash, G. Environmentally concerned consumer behavior: Evidence from consumers in Rajasthan. *J. Model. Manag.* 2017, 12, 712–738. [Google Scholar] [CrossRef]
14. Kaur, B.; Gangwar, V.P.; Dash, G. Green Marketing Strategies, Environmental Attitude, and Green Buying Intention: A Multi-Group Analysis in an Emerging Economy Context. *Sustainability* 2022, 14, 6107. [Google Scholar] [CrossRef]
15. Lee, K. Opportunities for green marketing: Young consumers. *Mark. Intell. Plan.* 2008, 26, 573–586. [Google Scholar] [CrossRef]
16. Minton, E.; Lee, C.; Orth, U.; Kim, C.-H.; Kahle, L. Sustainable Marketing and Social Media. A Cross-Country Analysis of Motives for Sustainable Behaviors. *J. Advert.* 2012, 41, 69–84. [Google Scholar] [CrossRef]
17. Ottman, J.A.; Stafford, E.R.; Hartman, C.L. Avoiding Green Marketing Myopia: Ways to Improve Consumer Appeal for Environmentally Preferable Products. *Environ. Sci. Policy Sustain. Dev.* 2006, 48, 22–36. [Google Scholar] [CrossRef]

18. Rex, E.; Baumann, H. Beyond ecolabels: What green marketing can learn from conventional marketing. *J. Clean. Prod.* 2007, 15, 567–576. [Google Scholar] [CrossRef] [Green Version]
19. Rajput, S.; Dash, G.; Upamannyu, N.; Sharma, B.K.; Singh, P. Social media campaigns and domestic products consumption: A study on an emerging economy. *Cogent Bus. Manag.* 2022, 9, 2143018. [Google Scholar] [CrossRef]
20. Sharma, C.; Sakhuja, S.; Nijjer, S. Recent trends of green human resource management: Text mining and network analysis. *Environ. Sci. Pollut. Res.* 2022, 29, 84916–84935. [Google Scholar] [CrossRef] [PubMed]
21. Sharma, C.; Batra, I.; Sharma, S.; Malik, A.; Hosen, A.S.M.S.; Ra, I.-H. Predicting Trends and Research Patterns of Smart Cities: A Semi-Automatic Review Using Latent Dirichlet Allocation (LDA). *IEEE Access* 2022, 10, 121080–121095. [Google Scholar] [CrossRef]
22. Tseng, M.-L.; Islam, M.S.; Karia, N.; Fauzi, F.A.; Afrin, S. A literature review on green supply chain management: Trends and future challenges. *Resour. Conserv. Recycl.* 2019, 141, 145–162. [Google Scholar] [CrossRef]
23. Xie, L.; Chen, Z.; Wang, H.; Zheng, C.; Jiang, J. Bibliometric and Visualized Analysis of Scientific Publications on Atlantoaxial Spine Surgery Based on Web of Science and VOSviewer. *World Neurosurg.* 2020, 137, 435–442.e4. [Google Scholar] [CrossRef]