

The Effect of Firm-Created Marketing Communication and User-Created Marketing Communication on Consumer-Based Brand Equity

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ABSTRACT

Purpose: This research investigates the effects of firm-created marketing communication (social media advertising, sales promotion, and interactive marketing) and user-created marketing communication (social media word-of-mouth) on consumer-based brand equity, focusing on the mediation role of product development in Egypt.

Design/Methodology: A quantitative approach was employed, gathering data through questionnaires distributed to employees and managers in marketing agencies across Egypt. The sample comprised 479 employees and managers of marketing agencies in Egypt selected using non-random sampling techniques. The gathered data was analyzed by using descriptive statistics and inferential techniques, including correlation and structural equation modeling to test the research hypotheses.

Findings: The findings revealed that firm-created marketing communication significantly enhances consumer-based brand equity, with strong positive correlations observed across various components, including brand awareness and loyalty. User-created marketing communication was also found to positively impact brand equity, underscoring its importance in shaping consumer perceptions. Additionally, the study confirmed that both firm-created marketing communication and user-generated content play vital roles in facilitating effective product development, which in turn enhances brand equity.

Originality/Value: This study provides critical insights for marketers and businesses operating in the Egyptian market, emphasizing the need for tailored marketing communication strategies that effectively enhance consumer-based brand equity. By understanding the interplay between marketing communication and product development, organizations can better engage their target audiences and strengthen brand perceptions.

Keywords: Firm-Created Marketing Communication, User-Created Marketing Communication, Consumer Based Brand Equity, Social Media, and Product Development.

1. Introduction

In the contemporary digital landscape, the emergence of Web technologies has significantly changed how businesses interact with consumers via social networking sites (SNS). Considering billions of users worldwide engaging on platforms like Facebook, brands are leveraging social media to improve their communication and build customer relationships (Wibowo et al., 2020). This transition from traditional marketing to a more interactive, multi-dimensional communication model empowers consumers to shape brand stories, highlighting the importance of distinguishing between firm-created content and user-generated content for effective brand management (Schivinski and Dabrowski 2015).

The COVID-19 pandemic has catalyzed a significant shift in marketing strategies, emphasizing the critical role of both firm-created and user-created marketing communications in building consumer-based brand equity (CBBE). With social media becoming a primary channel for interaction—connecting over 4.20 billion users globally—businesses have had to adapt their approaches to engage effectively with customers (Viaux-Savelon et al., 2021). In Egypt, where digital adoption is

accelerating, firms are increasingly leveraging social media advertising, sales promotions, and interactive marketing to enhance brand visibility and connection (Wei et al., 2023).

User-created marketing communication, particularly through social media word-of-mouth, introduces authentic peer influences that significantly shape consumer perceptions and decision-making processes. The synergy between these two forms of communication highlights the importance of integrating both approaches to maximize impact (Capriotti et al., 2023). Additionally, product development emerges as a vital mediator in this dynamic; innovative product features not only complement marketing efforts but also enhance the perceived value of the brand (Yu, 2022). The significance of information technology and social media cannot be overstated, as they enable real-time interactions and foster a two-way communication model that is more engaging for consumers. As businesses adapt to this digital landscape, understanding how these elements interact becomes essential for creating effective marketing strategies (Hamamah et al., 2024).

Several previous studies concentrated on the effect of firm-created marketing communication and user-created



marketing communication on consumer-based brand equity. By examining the literature, it was observed that a few pieces of literature focused on the relationship between firm-created marketing and consumer brand equity (Alakkas et al., 2022; Arya et al., 2022; Zubair et al., 2022). Moreover, some studies examined the association between user-created marketing communication and consumer-based brand equity (Schivinski and Dabrowski, 2015; Khajuria, 2017; Al-Abdallah et al., 2024); while other studies investigated the impact of firm-created marketing communication on product development (Aljanabi, 2022; Sri and Sasirekha, 2024; Homiga and Anbumozhi, 2024). On the other hand, some studies highlighted the influence of user-created marketing communication on product development (Kaldeen, 2019; Seyyedamiri and Tajrobehkar, 2021; Dzilská et al., 2024), otherwise, a few literature examined the correlation between product development and consumer-based brand equity (Pina et al., 2021; Catherine et al., 2024; Kremer et al., 2024).

Although these studies examined different aspects and contexts of the topic of the current study, none of the previous literature concentrated on investigating the effects of firm-created marketing communication (social media advertising, sales promotion, and interactive marketing) and user-created marketing communication (social media word-of-mouth) on consumer-based brand equity, focusing on the mediation role of product development. Additionally, none of the previous literature examined the relationship between these variables using the dimensions determined in the current study. Furthermore, none of the previous literature examined this relationship in the Egyptian context.

Therefore, this study aims to fill this gap by exploring these dimensions, offering insights into how firms can leverage both marketing communications and product development to strengthen brand equity in the competitive Egyptian market.

2. Literature Review

In this section, the previous literature that highlighted the effect of firm-created marketing communication and user-created marketing communication on consumer-based brand equity is discussed by illustrating the concepts of the variables of the study, in addition to the previous studies that concentrated on the relationship between these variables.

Firm Created Marketing Communication

Firm Created Marketing Communication (FCMC) involves strategies and messages crafted by companies to connect with their target audience, promote their offerings, and enhance brand perception (Sabila and Albari, 2023). This type of communication utilizes various tools, such as advertising, public relations, personal selling, sales promotions, and direct marketing, all aimed at informing, persuading, or reminding consumers about the brand (Kovanovienė et al., 2021). FCMC is designed to influence consumer behavior, cultivate brand loyalty, and secure a competitive edge by delivering messages that align with audience needs and preferences. Ultimately, these communications aim to generate awareness, establish brand values, and impact purchasing decisions (Quayson et al., 2024).

Marketing communication encompasses the diverse methods and tools employed by companies to relay messages regarding their products or services to specific audiences. It includes activities focused on product promotion, brand awareness, and consumer engagement (Wahab et al., 2024). Key components of marketing communication are advertising, public relations, sales promotions, direct marketing, and digital marketing, utilizing various channels like television, social media, print, and email. For businesses, effective marketing communication is crucial for highlighting product features and benefits, distinguishing themselves from competitors, and fostering emotional connections with consumers (Widjaja, 2022). In the realm of green marketing, strategies are tailored to emphasize the environmental advantages of products and the company's commitment to sustainability. This not only involves marketing eco-friendly products but also educating consumers about environmental concerns and encouraging responsible purchasing behaviors (Lee and Hung, 2024). Overall, marketing communication is vital in shaping consumer perceptions and influencing buying choices (Correia et al., 2023).

User-Created Marketing Communication

User-Created Marketing Communication (UCC) refers to the collaborative process where consumers generate content related to brands, products, or services, influencing marketing messages and brand perception (Nasrabadi et al., 2024). This approach leverages user-generated content—such as reviews, social media posts, and videos—to enhance authenticity and foster community engagement. UCC emphasizes the importance of reciprocal communication, where brands not only disseminate messages but also actively listen to and engage with consumer contributions, ultimately creating more personalized and effective marketing strategies that resonate with target audiences (Ciuchita et al., 2022).

Product Development

Product development is a holistic process that involves transforming an initial idea into a market-ready product. It begins with idea generation, where potential product concepts are brainstormed based on consumer needs and market opportunities (Motwani et al., 2023). Next, these ideas are refined into viable concepts during the concept development phase. Research and development (R&D) follow, focusing on creating prototypes and conducting tests to ensure functionality and quality. Market research is conducted to understand customer preferences and competitive landscapes, while business analysis evaluates the product's financial viability through cost estimates and projected sales (Babar and Habib, 2021). The design phase finalizes the product's specifications, including aesthetics and user experience. Once the product is ready, commercialization involves launching it into the market with strategic marketing and distribution plans (Zlatanović et al., 2024). Finally, post-launch evaluation gathers customer feedback and monitors performance to identify areas for improvement, ensuring that the product continues to meet market demands and contributes to business success. Effective product development requires close



collaboration across various teams, including marketing, engineering, and production, to ensure alignment with consumer expectations and market trends (Seyyedamiri and Tajrobehkar 2021).

Consumer- Based Brand Equity

Consumer-based brand equity (CBBE) refers to the value a brand gains from consumers' perceptions and experiences, highlighting the emotional and sensory dimensions of brand interactions. It contrasts with earlier theories focused solely on functional attributes, recognizing that consumers are increasingly willing to pay for memorable experiences rather than just tangible products (Catherine et al., 2024). Customer-based brand equity refers to the value a brand adds to a product based on consumer perceptions, feelings, and experiences. It includes factors like brand loyalty, awareness, perceived quality, and associations, as well as emotional connections that foster long-term relationships (Wei et al., 2023).

Research Hypotheses Development

Alakkas et al. (2022) explained the relationship between firm-created marketing communication and consumer-based brand equity. A quantitative approach was employed, and data were collected through surveys from 100 consumers using a multi-stage sampling method. The study revealed a significant positive relationship between effective marketing communication and various components of brand equity, including increased brand awareness, enhanced brand loyalty, improved perceived quality, and stronger brand associations. These findings suggested that firm-created marketing communication was crucial in building consumer-based brand equity, ultimately contributing to enhanced brand performance.

Arya et al. (2022) investigated the impact of firm-created marketing communication on consumer-based brand equity through social networking sites, with brand attachment as a mediating factor. The study analyzed responses from 498 individuals. The results demonstrated a positive relationship between firm-created marketing communication and consumer-based brand equity, particularly when communication on social media platforms is positive. Additionally, brand attachment was found to play a significant mediating role in this relationship.

Zubair et al. (2022) identified the role of marketing communication, both traditional and social media, in shaping consumer-based brand equity across industries such as fashion, mobile services, and soft drinks. A quantitative survey-based approach was used to collect data, and confirmatory factor analysis was conducted to examine the relationships among variables. The results indicated that social media marketing positively affected brand equity elements in the fashion industry while it significantly influenced brand associations, perceived quality, and purchase intentions in the mobile service sector. However, in the soft drink industry, both traditional and social media marketing had no significant impact on brand equity.

Based on the previously mentioned literature: **H1: Firm-Created Marketing Communication has a positive impact on Consumer Brand Equity.**

Schivinski and Dabrowski (2015) investigated the impact of firm-created marketing communication on consumer-based brand equity through social networking sites, with brand attachment as a mediating factor. The study analyzed responses from 498 individuals. The results demonstrated a positive relationship between firm-created marketing communication and consumer-based brand equity, particularly when communication on social media platforms is positive. Additionally, brand attachment was found to play a significant mediating role in this relationship.

Khajuria (2017) clarified how user-created marketing communication on social media, particularly Facebook, affected consumer perceptions of brands and influenced brand equity based on Aaker's model. Data were collected through a survey of 490 students and scholars from the University of Jammu, aged between 20 and 40 years. The analysis revealed that user-generated content significantly impacted consumer perceptions, enhancing brand awareness, loyalty, and perceived quality. As a result, this positive influence contributed to stronger brand equity, indicating that engaging with user-created content effectively bolstered brand perception among young consumers.

Al-Abdallah et al. (2024) examined the influence of firm-generated content (FGC) on Carrefour's consumer-based brand equity (CBBE) in the Middle Eastern context, specifically in the Kurdistan Region of Iraq (KRI). An online survey was conducted among 1,000 followers of Carrefour's Facebook page, and SmartPLS was utilized to analyze the proposed hypotheses. The findings revealed that informational content, social interactivity, and self-expression had a significant and positive impact on CBBE, with self-expression showing the strongest influence. However, entertainment-oriented content was found to have a non-significant relationship with CBBE.

Based on the previously mentioned literature: **H2: User-created Marketing Communication has a positive impact on Consumer-based Brand Equity.**

Aljanabi (2022) clarified the relationship between firm-created marketing communication and new product development (NPD), focusing on how marketing communication influenced the NPD process. The data was collected from telecommunication firms in the Kurdistan region of Iraq using a self-administered questionnaire, with 272 out of 556 distributed questionnaires returned for analysis. They employed structural equation modeling (SEM) to assess both measurement and structural models. The findings indicated that effective marketing communication positively impacted NPD by providing essential insights into customer preferences and market dynamics.

Furthermore, Sri and Sasirekha (2024) looked at how firm-created marketing communication affects product creation at DermaIndia, a made-up skincare company. Using a mixed-methods approach, the study gathers quantitative data from consumer surveys and qualitative data from interviews with important stakeholders. The results demonstrated that while continuous communication across several channels builds customer trust and brand loyalty, successful communication



methods enhance market positioning, consumer engagement, and brand visibility. The results also highlighted issues like the necessity of more synergy between the product development and marketing teams and the significance of clear and moral communication methods.

Homiga and Anbumozhi (2024) investigated the influence of firm-created marketing communication on product development. The primary data were collected using the questionnaire that was distributed to 94 respondents from the consumers to gather their perspectives. The results indicated that marketing communication acts as a conduit between the target market and the creative team during the design phase, guaranteeing that the final product meets customer needs and expectations. To make sure the product satisfies the needs of the target market group, marketers are essential in converting market insights into practical design specifications. Additionally, decisions about product characteristics, packaging, branding, and pricing are influenced by marketing communication, all of which add to the offering's overall value proposition.

Based on the previously mentioned literature: **H3: Firm-Created Marketing Communication has a positive impact on Product Development.**

Kaldeen (2019) aimed to investigate the impact of user-created marketing communication on product development, focusing on how consumer-generated content influenced brand associations. Utilizing a quantitative approach, the research gathered data from 262 respondents through a standardized online survey, specifically examining three mobile network service providers in Sri Lanka. The findings revealed that user-generated social media communication significantly affected brand associations, demonstrating its vital role in shaping consumer perceptions. The study contributed to the literature by highlighting the importance of user-generated content in the context of product development and providing actionable recommendations for marketers to enhance their social media strategies.

Seyyedamiri and Tajrobehkar (2021) investigated the impact of social content marketing on the effectiveness of new product development in high-tech companies, focusing on e-trust as a potential mediator. Using a descriptive methodology, researchers distributed 430 questionnaires to professionals and managers in relevant departments, ultimately analyzing 384 completed responses with structural equation modeling via Smart PLS software. The findings revealed that while social content marketing and e-trust positively influenced product development effectiveness, e-trust did not mediate this relationship, indicating that other factors may be more influential in this context.

Dzilská et al. (2024) aimed to examine the role of social media in modern marketing communication and its impact on brand

building, market expansion, and customer acquisition. Utilizing a qualitative approach, the authors analyzed existing literature and case studies on social media platforms like Facebook, Twitter/X, and Instagram to understand their influence on consumer behavior and market dynamics. The findings highlighted that social media has become a crucial tool for businesses to disseminate information, promote products, and enhance customer service.

Based on the previously mentioned literature:

H4: User-Created Marketing Communication has a positive impact on Product Development.

Pina et al. (2021) aimed to test the impact of product development on consumer-based brand equity, particularly focusing on how innovative product offerings shape consumer perceptions and brand loyalty. Employing a quantitative research methodology, the investigation analyzed data from various consumer segments to assess the relationship between product innovation and brand equity. The results indicated that effective product development positively influenced consumer-based brand equity, with significant findings highlighting those enhancements in product features and quality led to increased brand loyalty and perceived value among consumers.

Catherine et al. (2024) aimed to investigate the impact of product development on consumer-based brand equity in the context of the evolving metaverse economy. Employing a qualitative methodology, the study analyzed existing literature and case studies of brands engaging in virtual commerce, particularly focusing on the integration of digital currency and immersive technologies like augmented reality and artificial intelligence. The results indicated that effective product development strategies significantly enhanced consumer-based brand equity by creating unique and engaging experiences that resonated with consumers' preferences in virtual environments.

Kremer et al. (2024) aimed to investigate the impact of design heuristics on consumer-based brand equity through sustainable product development. The methodology employed a novel multivariate visual approach, integrating Sunburst Charts and Radial Heat Maps, which facilitated a comprehensive analysis of design heuristics concerning ecological sustainability. The study revealed that by enhancing knowledge sharing among designers, the visual tools significantly improved the decision-making process in product development. Results demonstrated that the effective application of design heuristics led to the creation of sustainable products that resonated with consumers, thereby strengthening brand equity.

Based on the previously mentioned literature:

H5: Product Development has a positive impact on Consumer-Based Brand Equity.

3. Research Methodology



This research employs a quantitative methodology to investigate the impact of firm-created marketing communication (social media advertising, sales promotions, and interactive marketing) and user-created communication (social media word-of-mouth) on consumer-based brand equity in Egypt, with product development as a mediating factor. A structured questionnaire was distributed to 530 employees and managers of marketing agencies in Egypt aged 18 to 50, achieving a 90.3% response rate with 479 valid responses. Data analysis involves descriptive statistics and inferential techniques, including correlation and structural equation modeling to test the research hypotheses. Ethical considerations include informed consent and confidentiality of participant responses. Limitations include potential generalizability issues due to the specific demographic focus and convenience sampling method. This methodology aims to provide insights for marketers seeking to enhance brand equity through effective communication strategies and product development. Based on the hypotheses, the framework was

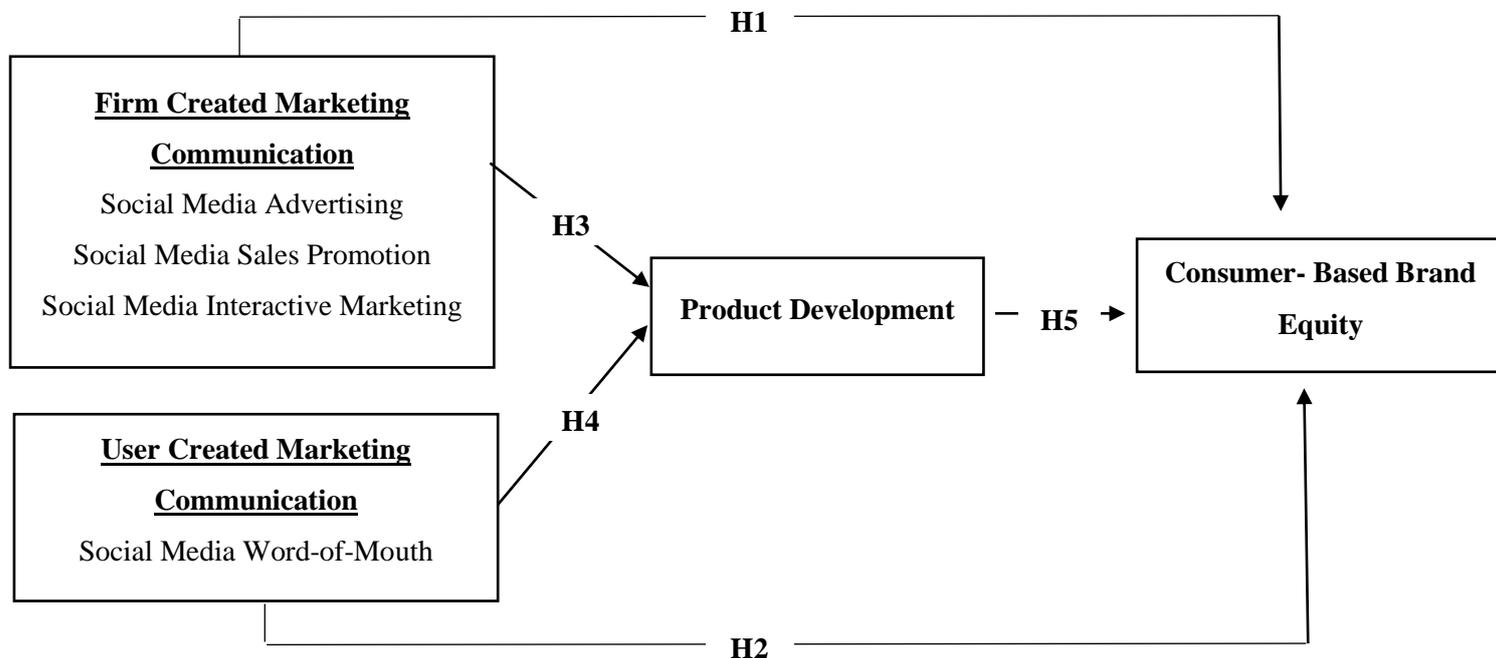
H2: There is a significant relationship between User-Created Marketing Communication and Consumer-Based Brand Equity.

H3: A significant relationship exists between Firm-Created Marketing Communication and Product Development.

H4: There is a significant relationship between User-Created Marketing Communication and Product Development.

H5: There is a significant relationship between Product Development and Consumer-Based Brand Equity.

To understand the demographics of the study participants, table 1 provides a comprehensive overview of their profiles, including gender, income level, educational attainment, and age distribution. The analysis revealed a notable gender imbalance, with males constituting 60.1% and females 39.8%, which may influence the study's outcomes. Most participants were in the income range of 5000 to less than 10000 (46.1%), reflecting a middle-income status. In terms of education, master's degree holders represented the largest group at 34.2%, indicating a high



concluded as shown in Figure 1.

Figure 1: Research Framework

This research aims to examine the effect of firm-created marketing communication and user-created marketing communication on consumer-based brand equity with the mediation of product development in Egypt. Accordingly, research hypotheses are constructed as follows.

H1: There is a significant relationship between Firm-Created Marketing Communication and Consumer-Based Brand Equity.

level of educational attainment. The age distribution was relatively balanced, with 36.1% of respondents aged 26-40 and 35.2% aged 18-25, contributing to a variety of perspectives.



Table 1: Descriptive Analysis of the Profiles of the Respondents

Item	Category	Frequency N=479	Percent %
Gender	Male	288	60.1
	Female	191	39.8
Income Level	Less than 5000	160	33.4
	5000- less than 10000	221	46.1
	10000- less than 15000	39	8.14
	15000 or above	59	12.3
Bachelor's Degree	Students	122	25.4
	Graduated	103	21.5
	Master's Degree	164	34.2
	Doctorate Degree	90	18.7
Age	18 -25	175	35.2
	26-40	173	36.1
	41- 60	85	17.7
	60+	46	9.6

The current study utilized a questionnaire as a tool to gather the data to investigate the effects of firm-created marketing communications (social media advertising, sales promotions, and interactive marketing) as well as user-generated communications (social media word-of-mouth) on consumer-based brand equity, considering the mediation of product development in Egypt. The questions are crafted to assess these variables and cite their sources, as the participants responded on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). To measure the variables of the study, the researcher extracted the statements from the literature that examined the effects of firm-created marketing communications and user-generated communications on consumer-based brand equity such as (Naidoo, 2011; Lee and Leh, 2011; Brajawidagda and Chatfield, 2016; Wowak et al., 2016; Ebrahim, 2020; Masa'deh et al., 2021).

The researcher depended on the literature to determine the construct and measurement of the previously illustrated variables. As for the independent variable, firm-created marketing communications (social media advertising, sales promotions, and interactive marketing), the researcher depended on previous studies, such as Naidoo (2011), Brajawidagda, and Chatfield. (2016), and Masa'deh et al. (2021). To evaluate the efficacy of "social media advertising", participants were asked to rate their agreement with statements such as "I am satisfied with the quality of advertisements I see on social media", "Social media advertisements influence my decision to purchase products", and "The advertisements I encounter on social media are relevant to my interests and needs" (Naidoo, 2011). Similarly, "social media sales promotions" were evaluated through statements like "We continuously monitor social media

to quickly address false information and provide accurate updates during emergencies and disasters", "Our organization is committed to sharing timely and relevant information with the public, enhancing collaboration and response efforts", and "We improve communication with citizens and partner agencies, ultimately reducing risks and increasing community awareness during crises" (Brajawidagda, and Chatfield., 2016). Otherwise, to examine social media interactive marketing, the questionnaire included items such as "I can easily express my opinions on this brand's social media", "Two-way communication is available through this brand's social media", and "Information can be shared with other people via this company's social media" (Masa'deh et al. (2021).

Regarding the measurement of the second independent variable, user-generated communications (social media word-of-mouth), the study explored the variable with participants responding to statements extracted from Ebrahim (2020), and modified to suit the topic of the current study, like "I want to tell my friends about the brand's services through its social media", "I want to post materials from the brand's social media accounts to my site, Facebook page, and Twitter", and "I want to let my friends know what I think about the services I got from this company on social media".

Furthermore, the mediator variable "product development" was measured through statements such as "Customer feedback is actively considered in our product development process", "Our organization prioritizes innovation when developing new products", and "Collaboration between different departments (e.g., marketing, R&D, and sales) is encouraged during product development" (Wowak et al., 2016). On the other hand, to evaluate the dependent variable "consumer-based brand equity" the questionnaire incorporated statements like "The brand is



highly dependable”, “The brand is safe for use or consumption”, and “The brand offers high-quality products” (Lee and Leh., 2011).

4. Finding and Results

The research hypotheses were rigorously tested using structural equation modeling (SEM) with AMOS version 24. The process commenced with the creation of a measurement model to validate the foundational structure of the research model. Confirmatory factor analysis (CFA) was subsequently employed to evaluate the appropriateness of the measurement model for the dataset. Afterward, checks were conducted to confirm that the assumptions of normality and multicollinearity were satisfied. Additionally, descriptive analyses were performed using SPSS version 25 to provide an overview of the study variables and respondent profiles.

Validity and Reliability Analysis

Table 2 presents the validity and reliability analysis for the study's key variables, highlighting important metrics such as Average Variance Extracted (AVE) and Cronbach’s alpha. Social Media Advertising has an AVE of 88.627 and a Cronbach’s alpha of .936, with factor loadings for its items ranging from .881 to .894, indicating strong reliability and construct validity. Social Media Sales Promotion follows closely with an AVE of 88.928 and a Cronbach’s alpha of .938, showing similarly high item loadings between .886 and .892. Social media Interactive Marketing exhibits the highest AVE at 90.727 and a Cronbach’s alpha of .949, with loadings between .903 and .910, affirming its exceptional reliability. Social Media Word-of-Mouth, Product Development, and Consumer-Based Brand Equity also demonstrate good reliability, with Cronbach’s alphas of .919, .931, and .930, respectively, and strong item loadings ranging from .838 to .891.

Table 2: Validity and Reliability Analysis

Variables	AVE %	Cronbach’s α	Items	Factor Loading
Social Media Advertising	88.627	.936	SMA1	.894
			SMA2	.881
			SMA3	.884
Social Media Sales Promotion	88.928	.938	SMS1	.892
			SMS2	.886
			SMS3	.889
Social Media Interactive Marketing	90.727	.949	SMI1	.903
			SMI2	.908
			SMI3	.910
Social Media Word-of-Mouth	86.040	.919	SMwom1	.838
			SMwom2	.851
			SMwom3	.893
Product Development	87.927	.931	CBBE1	.875
			CBBE2	.871
			CBBE3	.892
Consumer- Based Brand Equity	87.786	.930	PD1	.864
			PD2	.879
			PD3	.891

Descriptive Analysis of Research Variables

Table 3 presents a descriptive analysis of the study's key variables, including mean scores and standard deviations. Social Media Advertising has a mean score of 3.26 and a standard deviation of 1.190, indicating a moderate perception of its effectiveness. Similarly, Social Media Sales Promotion has a mean of 3.27 and a slightly lower standard deviation of 1.174, reflecting a comparable level of perceived effectiveness. Social media Interactive Marketing shows a mean of 3.25 with a higher standard deviation of 1.366, suggesting greater variability in

responses. In contrast, Social Media Word-of-Mouth has the lowest mean score at 2.93 and a standard deviation of 1.097, indicating it is viewed as less influential. Product Development received the highest mean score of 3.75 with a standard deviation of 1.146, reflecting a positive perception of its significance. Lastly, Consumer-Based Brand Equity has a mean of 3.72 and a standard deviation of 1.175, indicating strong consumer perceptions of brand value.



Table 3: Descriptive Analysis for the Variables

Variables	N	Mean	Std. Deviation	Minimum	Maximum
Social Media Advertising	479	3.26	1.190	1.00	5.00
Social Media Sales Promotion	479	3.27	1.174	1.00	5.00
Social Media Interactive Marketing	479	3.25	1.366	1.00	5.00
Social Media Word-of-Mouth	479	2.93	1.097	1.00	5.00
Product Development	479	3.75	1.146	1.00	5.00
Consumer- Based Brand Equity	479	3.72	1.175	1.00	5.00

Regression Assumptions

The Variance Inflation Factor (VIF) values for all variables are shown in Table 5, which indicates that there is no issue with multicollinearity in our multiple linear regression

model. Since all VIF values fall within the acceptable range of 1 to 5 and are significantly lower than the threshold of 10, it suggests that multicollinearity is not a problem.

Table 4: VIF Values for Research Variables

Research Variables	VIF
Social Media Advertising	3.223
Social Media Sales Promotion	3.438
Social Media Interactive Marketing	3.685
Social Media Word-of-Mouth	2.071
Product Development	3.971
Consumer- Based Brand Equity	3.223

Table 5 provides an informal assessment of normality for various social media marketing variables and consumer-based brand equity through skewness and kurtosis statistics. Most variables show slight left skewness, indicating a concentration of higher values, while social media word-of-mouth is nearly normally distributed. All kurtosis values are negative, suggesting that the

distributions are flatter than normal with lighter tails. These findings imply that, although the data leans toward higher values, it does not conform to a perfect normal distribution, which may require consideration of data transformations or the use of non-parametric tests for further analyses.

Table 5: Informal Testing of Normality

	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Social Media Advertising	-.283	.112	-.827	.223
Social Media Sales Promotion	-.434	.112	-.695	.223
Social Media Interactive Marketing	-.409	.112	-1.100	.223
Social Media Word-of-Mouth	.112	.112	-.400	.223
Product Development	-.366	.112	-1.034	.223
Consumer- Based Brand Equity	-.364	.112	-1.094	.223

Testing Hypotheses

Correlation assesses both the strength and direction of the relationship between two variables, with coefficients ranging from -1 to 1. A value close to 1 indicates a strong positive relationship, while -1 indicates a strong negative relationship and a value around 0 suggests little to no linear relationship. In this study, correlation and path analyses were conducted using SEM to test the hypotheses, employing Spearman correlation for not normally distributed data, as detailed in Table 6, the results reveal strong positive correlations among the research variables. Social Media Advertising shows a significant correlation with

Product Development and Consumer-Based Brand Equity, indicating its critical role in enhancing these areas. Social Media Sales Promotion also exhibits strong connections with both Product Development and Consumer-Based Brand Equity, reinforcing the idea that promotional strategies are integral to brand success. Social Media Interactive Marketing demonstrates the highest correlation with Product Development and a substantial link to Consumer-Based Brand Equity, highlighting its effectiveness. While Social Media Word-of-Mouth displays moderate correlations, it remains significantly connected to both Product Development and Consumer-Based Brand Equity.



Table 6: Correlations Matrix for the Research Variables

		1.	2.	3.	4.	5.	6.
Social Media Advertising	Spearman Correlation	1.000	.816**	.783**	.695**	.797**	.784**
	Sig. (2-tailed)	.	.000	.000	.000	.000	.000
Social Media Sales Promotion	Spearman Correlation	.479	.479	.479	.479	.479	.479
	Sig. (2-tailed)	.816**	1.000	.824**	.679**	.803**	.802**
Social Media Interactive Marketing	Spearman Correlation	.000	.	.000	.000	.000	.000
	Sig. (2-tailed)	.479	.479	.479	.479	.479	.479
Social Media Word-of-Mouth	Spearman Correlation	.783**	.824**	1.000	.723**	.823**	.820**
	Sig. (2-tailed)	.000	.000	.	.000	.000	.000
Product Development	Spearman Correlation	.479	.479	.479	.479	.479	.479
	Sig. (2-tailed)	.695**	.679**	.723**	1.000	.691**	.684**
Consumer- Based Brand Equity	Spearman Correlation	.000	.000	.000	.	.000	.000
	Sig. (2-tailed)	.479	.479	.479	.479	.479	.479

The results of the Confirmatory Factor Analysis (CFA) validate the significance of all variables and their indicators, reinforcing the overall robustness of the model designed to assess the impacts of firm-created marketing communication (social media advertising, sales promotion, and interactive marketing) alongside user-created marketing communication (social media word-of-mouth) on consumer-based brand equity (CBBE). Furthermore, the study investigates the mediating role of product development (PD) within these relationships. According to the CFA results presented in Table 7, most constructs showed

significant item loadings, with PD having the highest loading on CBBE at .318, indicating a considerable mediating effect. The firm-created marketing communication variables (SMA, SMS, and SMI) also display strong associations with CBBE, with estimates of .237, .165, and .225, respectively, underscoring their important roles in shaping consumer perceptions. In contrast, the relationship between social media word-of-mouth and CBBE yields a lower estimate of .072, yet remains significant (p = 0.004), suggesting its impact is less substantial compared to other marketing strategies.

Table 7: Item Loading after Confirmatory Factor Analysis

			Estimate	S.E.	C.R.	P
CBB	<---	SMA	.237	.026	9.086	***
CBB	<---	SMS	.165	.026	6.463	***
CBB	<---	SMI	.225	.023	9.875	***
CBB	<---	SMW	.072	.025	2.852	.004
CBB	<---	PD	.318	.027	11.604	***
SMS3	<---	SMS	1.000			
SMS2	<---	SMS	.981	.031	31.362	***
SMS1	<---	SMS	1.009	.032	31.906	***
SMI3	<---	SMI	1.000			
SMI1	<---	SMI	.981	.027	35.664	***
SMwom3	<---	SMW	1.000			
SMwom2	<---	SMW	.885	.031	28.149	***
SMwom1	<---	SMW	.867	.032	27.035	***
PD3	<---	PD	1.000			
PD2	<---	PD	.974	.031	31.144	***
PD1	<---	PD	.966	.033	29.496	***
CBBE1	<---	CBB	1.000			
CBBE2	<---	CBB	.946	.052	18.201	***
CBBE3	<---	CBB	.947	.049	19.206	***
SMI2	<---	SMI	1.022	.028	36.448	***
SMA3	<---	SMA	1.000			
SMA2		SMA	.995	.033	30.361	***
SMA1		SMA	1.034	.033	31.609	***

The model fit indices are all within their acceptable levels, where CMIN/DF = 14.730 , CFI = .816 , and RMSEA = .169. finally, this section offered the empirical investigation of the research

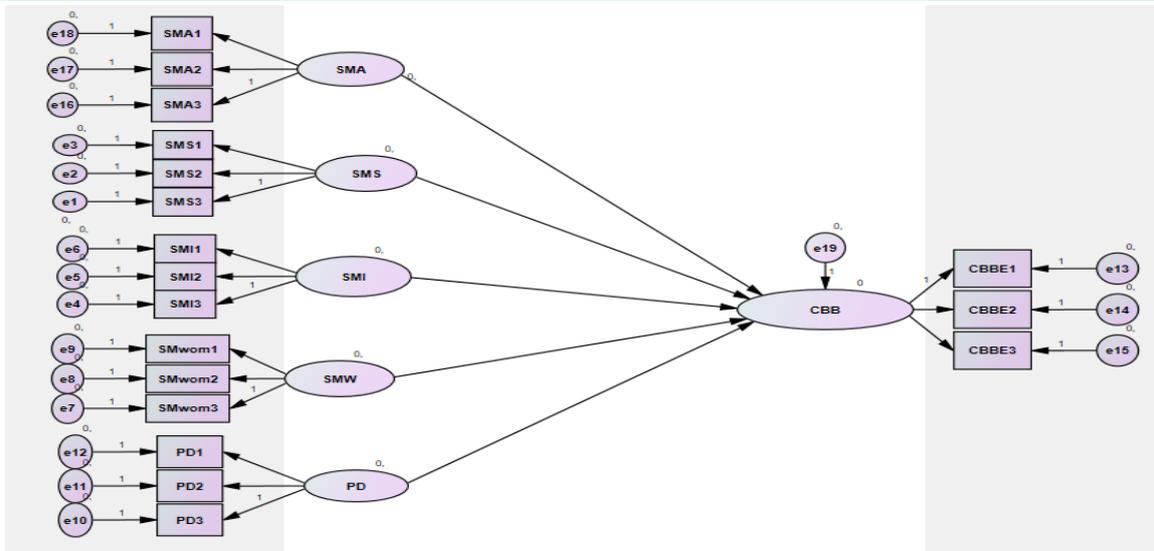


Figure 2: SEM for Research Variables

The SEM analysis illustrates the effects of various social media marketing elements on consumer-based brand equity (CBBE). The path coefficients reveal that Product Development (PD) has the strongest positive impact on CBBE, with a coefficient of .478, indicating its critical role in enhancing brand perceptions. Firm-created marketing communication elements also demonstrate significant effects, with Social Media Advertising (SMA) exhibiting a strong influence at .360, followed closely by social media Interactive Marketing (SMI) at .390. In contrast, social media sales promotion (SMS) has a moderate effect on

CBBE, represented by a coefficient of .248, while social media word-of-mouth (SMW) has the weakest impact at .107. The model's R-squared value of .584 indicates that 58.4% of the variance in consumer-based brand equity is explained by these factors, highlighting the overall effectiveness of the model in capturing the dynamics of consumer perceptions influenced by social media marketing. This analysis underscores the importance of PD and firm-created marketing communications as key drivers of brand equity

Table 8: SEM Analysis for the impact of the research variables.

			Estimate	R ²
CBB	<---	SMA	.360	.584
CBB	<---	SMS	.248	
CBB	<---	SMI	.390	
CBB	<---	SMW	.107	
CBB	<---	PD	.478	

5. Research Discussion and Conclusion

This study assessed five hypotheses, all of which were supported by the data, revealing strong positive correlations among the research variables. The findings highlighted the significant influence of both firm-created and user-created marketing communications on consumer-based brand equity and product development. Notably, Social Media Advertising emerged as crucial for enhancing both Product Development and Brand Equity, with strong correlations emphasizing its effectiveness. Additionally, Social Media Sales Promotion and Interactive Marketing were identified as essential for brand success,

confirming the effectiveness of promotional strategies. The Confirmatory Factor Analysis (CFA) affirmed the model's robustness, with Product Development demonstrating a significant mediating effect on Brand Equity. While firm-created marketing variables showed strong links to brand equity, Social Media Word-of-Mouth had a lesser yet still significant impact. Overall, these results highlight the critical role of strategic marketing communication and product development in shaping consumer perceptions and loyalty, suggesting that businesses should utilize these insights to optimize their marketing strategies



The first hypothesis posits a significant relationship between firm-created marketing communication and consumer-based brand equity. The results of the analysis demonstrated a strong positive correlation, indicating that strategic marketing efforts by firms effectively enhance brand perceptions and consumer loyalty. Thus, this hypothesis is supported, the discussion surrounding the relationship between marketing communication and consumer-based brand equity highlighted that the findings of the studies reviewed are largely consistent with the results of the hypotheses tested in this research. The first hypothesis, which posits a positive impact of firm-created marketing communication on consumer-based brand equity, is supported by various studies, including those by Alakkas et al. (2022) and Arya et al. (2022). Both studies demonstrate significant positive relationships between effective marketing communication and components of brand equity, aligning well with the findings of this research.

The second hypothesis examines the relationship between user-created marketing communication and consumer-based brand equity. The findings revealed a notable positive impact of user-generated content on brand equity, confirming its role in enhancing brand awareness and loyalty, which means this hypothesis was also supported. For the second hypothesis, concerning the impact of user-created marketing communication on consumer-based brand equity, the results aligned with Khajuria (2017) and the works of Al-Abdallah et al. (2024). These studies affirmed that user-generated content enhances brand perceptions, supporting the hypothesis that user-created marketing communication positively influences brand equity.

The third hypothesis explains the link between firm-created marketing communication and product development. The results showed a substantial positive correlation, suggesting that effective marketing communications are essential for understanding customer preferences and fostering innovation. Therefore, this hypothesis was supported, the third hypothesis, which investigated the impact of firm-created marketing communication on product development, was also corroborated by Aljanabi (2022), Sri and Sasirekha (2024), and Homiga and Anbumozhi (2024). Their findings suggested that effective marketing communication positively influences new product development, supporting the results found in this research.

The fourth hypothesis investigates the relationship between user-created marketing communication and product development. Although the effectiveness of user-generated content varied, the analysis still indicated a significant positive relationship, affirming that this hypothesis was supported, in examining the fourth hypothesis, related to user-created

marketing communication's effect on product development, the studies by Kaldeen (2019) and Seyyedamiri and Tajrobehkar (2021) indicated that user-generated content significantly influences product development, affirming the positive relationship hypothesized.

The final hypothesis addresses the connection between product development and consumer-based brand equity. The study found a strong positive relationship, highlighting the importance of innovation and quality in product offerings for maintaining strong consumer connections. Consequently, this hypothesis was also supported. Lastly, the fifth hypothesis, which investigated the impact of product development on consumer-based brand equity, was supported by the findings of Pina et al. (2021) and Catherine et al. (2024). Their research underscored that effective product development leads to enhancements in brand equity, confirming the positive relationship posited in this study.

In summary, the study affirmed that both firm-created and user-created marketing communications played significant roles in shaping consumer-based brand equity and product development. The findings were largely consistent with existing literature, highlighting the interconnectedness of these factors. However, variations in the impact of user-created content and the need for context-specific strategies suggest areas for further exploration. Overall, businesses should leverage effective marketing communication strategies to enhance brand equity while considering the diverse influences of user-generated content across different sectors.

6. Research Implications

This study enhanced our understanding of marketing communication by providing insights into the distinct roles of firm-created and user-created content in shaping consumer-based brand equity and product development. It emphasized the importance of effective communication strategies. It highlighted the mediating role of emotional connections, suggesting areas for future research into how these dynamics operate across various contexts and industries. Additionally, the findings encouraged deeper explanation of the interplay between marketing communication and consumer preferences, paving the way for more nuanced theoretical frameworks.

Practical Implications:

Practically, the study provides actionable insights for businesses seeking to enhance their marketing strategies. Companies should prioritize the creation of both engaging firm-generated content and encouraging user-generated contributions to foster a strong brand presence. Emphasizing emotional connections could differentiate brands in competitive markets,



allowing for deeper consumer loyalty. Moreover, businesses must be adaptable, tailoring their marketing approaches to reflect the specific dynamics of their industry, ensuring that messaging resonates effectively with diverse audiences. By integrating feedback and insights from marketing communication into product development, organizations could not only innovate more successfully but also align their offerings with consumer needs, ultimately driving growth and improving brand equity.

7. Research Recommendations and Limitations

From a practical point of view, Egyptian companies have to invest in focused advertising and promotional efforts in tune with customer preference to complement their firm-created marketing communication efforts. Interactive social media engagement on user-generated content can be a strategic way to foster brand authenticity and trust. Egyptian companies should integrate customer feedback into product development processes to drive innovation and market relevance. Furthermore, marketing and product development teams should work in synergy to further ensure that new products meet consumer expectations. Additionally, data-driven social media tactics can help businesses improve brand awareness and engagement, which in turn can drive up consumer-based brand equity.

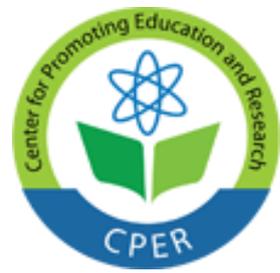
On the other hand, future studies are advised to conduct a long-term study to examine the effects of marketing communication developed by companies and consumers on

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