Research Paper

Gender as a moderator for the effect of social media marketing on fast-moving consumer goods sector performance: Insights from managerial employees

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Abstract: This study aims to explore the moderating role of gender in the effectiveness of social media marketing strategies on the performance of firms within the Fast-Moving Consumer Goods sector in Zimbabwe. The central problem addressed is the lack of comprehensive understanding and implementation of gender dynamics in social media marketing, which diminishes campaign efficacy. The research is theoretically underpinned by the Uses and Gratifications Theory and the Elaboration Likelihood Model to explain media engagement and information processing. A quantitative, cross-sectional research design was employed, involving a sample of 360 managerial employees, and data were analysed using Structural Equation Modelling and Hayes' PROCESS macro. The key findings reveal that both ad content quality and ad frequency significantly enhance firm performance. Notably, gender plays a moderating role in the relationship between ad frequency and performance, which indicates that female managers exhibit greater sensitivity to advertising frequency compared to their male counterparts. This study contributes to the existing literature by highlighting the nuanced role of gender in digital marketing strategies, thus providing empirical insights for practitioners to optimize their marketing approaches. Methodologically, the combined use of SEM and Hayes' PROCESS macro provides a more granular examination of moderation effects than previous research, positioning the study as one of the first to empirically isolate which social media marketing dimensions require gender-sensitive strategic adaptation.

Keywords: Social media marketing, FMCG sector, Gender moderation, Ad content quality, Ad frequency, Interactivity

1. Introduction

The Fast-Moving Consumer Goods (FMCG) sector has experienced substantial transformation globally – mostly due to the swift integration of digital technology – with social media marketing serving a crucial function (George & George, 2023). Jowel and Islam (2023) analysed digital marketing methods and found a notable 9.5% revenue increase resulting from synchronised campaigns on Facebook, Instagram, and online sales platforms.

The FMCG sector in Zimbabwe is undergoing a digital transformation, where social media electronic Word-of-Mouth (eWOM) significantly dictates consumer purchase intentions (Nyagadza et al., 2023). Recent empirical evidence suggests that, in this emerging market, consumers are highly responsive to digital marketing stimuli, with their behaviour shaped by psychological factors, such as trust and social influence (Nyagadza et al., 2024). Furthermore, in the Zimbabwean FMCG context, marketing strategies like green branding and digital advertising are increasingly effective at swaying consumer choices among the young and tech-savvy demographic (Chagwesha et al., 2023; Makudza et al., 2024).

The modern marketing environment is characterized by a complex interplay of rapid digital adoption and persistent traditional influences. Mhlanga and Ndhlovu (2023) highlighted that, while digital technologies offer transformative opportunities, their success is contingent

upon local economic and cultural contexts. Santoso and Sudarmiatin (2024) highlighted that the most robust strategy is a blended, multi-channel approach that integrates both digital and conventional media to ensure comprehensive market coverage. The multi-channel strategy allows FMCG managers to engage with various consumer segments authentically and cultivate enhanced brand loyalty (Ahuja & Tabeck, 2024). The FMCG sector in Zimbabwe is crucial to the economy, with companies endeavouring to improve performance via several client retention techniques, such as online marketing and regular contact (Chikazhe et al., 2023). Information and Communication Technologies (ICT) have been recognised as a moderating factor in the correlation between customer retention tactics and organisational performance within the Zimbabwean retail industry (Chikazhe et al., 2023). Despite increasing dependence on social media marketing, Zimbabwean FMCG companies exhibit inconsistent performance in campaign efficacy (Masengu et al., 2021). Ndlovu and Sibanda (2022) note that for 78% of urban Zimbabwean youth, digital engagement driven by trust and authenticity serves as the primary catalyst for brand loyalty and purchasing decisions.

The moderating impact of gender on the success of social media marketing within the FMCG sector has garnered heightened attention both in Zimbabwe and throughout southern Africa and Asia (Chinyuku et al., 2022). South African women are indeed more inclined than men to connect with emotionally impactful and value-consistent marketing messages, influencing brand loyalty and purchase intention (Spasova & Taneva, 2021). Research indicates that women often engage in more comprehensive processing of advertising information, considering various signals and emotional contexts, whereas men tend to focus on key information and functional attributes. Volkova et al. (2023) similarly found that female social media users in China exhibited a more favourable response to advertising employing genuine emotional appeals, which indicates that gender-sensitive marketing increases consumer receptivity worldwide.

The challenge faced by FMCG management teams in Zimbabwe is a lack of comprehension and implementation of gender dynamics in social media marketing strategies, which diminishes the effectiveness of digital marketing efforts (Masengu et al., 2022). Notwithstanding the expansion and strategic significance of social media marketing in Zimbabwe's FMCG sector, there exists a notable deficiency of empirical research that specifically investigates the moderating role of gender on the impact of social media marketing on organisational performance, especially from the viewpoint of managerial employees. Research, including that of Chikazhe et al. (2023), has demonstrated that information and communication technology can significantly moderate the relationship between client retention and performance. The primary objectives of this study are to investigate the impact of social media advertising on FMCG sector performance, to examine the role of ad content quality, ad frequency and interactivity on FMCG sector performance and to analyse the moderating effect of gender on the relationship between social media advertising and FMCG sector performance. The following section explores the foundational theories and hypotheses that guided the study's examination of consumer behaviour in the FMCG sector.

2. Theoretical background and hypotheses

2.1 Theories underpinning the study

This present study is underpinned by the Uses and Gratifications Theory (UGT) and the Elaboration Likelihood Model (ELM). These theories explain how individuals engage with media and the processes that influence their attitudes towards advertising, particularly in the context of FMCG.

The Uses and Gratifications Theory (UGT) offers a fundamental framework for comprehending how individuals proactively seek and employ media to satisfy certain wants (Mutiara & Putri, 2023). Katz et al. (1973) explain that media fulfils multiple functions, assists individuals in alleviating tension and addresses social issues. Consumers function as active agents rather than passive recipients, and choose media content that fulfils their informational, emotional, social, and personal requirements (Katz et al., 1973). In the FMCG sector, UGT is essential as it enables marketers to comprehend the profound, audience-focused reasons that influence social media engagement (Whiting & Williams, 2013). In contrast to conventional media theories that depict consumers as passive recipients, Uses and Gratifications Theory

(UGT) characterises people as active participants who deliberately select social media to fulfil particular psychological and social demands (Du et al., 2023). UGT elucidates the varied motives for customer engagement, encompassing social interaction, information acquisition, and convenience (Whiting & Williams, 2013). Studies demonstrate that men prefer advertising that is information-dense and action-driven, but women are more responsive to emotionally resonant storylines when engaging with FMCG products (Siddiqui & Ali, 2025).

The Elaboration Likelihood Model (ELM), proposed by Petty and Cacioppo (1986), is a dual-process theory elucidating how persuasive communications, including social media marketing, might affect individuals' opinions. The Elaboration Likelihood Model (ELM) proposes two separate pathways to persuasion: the central route and the periphery route (Petty & Cacioppo, 1986). The core approach entails extensive elaboration, wherein individuals meticulously assess message content and arrive at informed conclusions predicated on the calibre of arguments (Xiu et al., 2024). This approach is expected to produce lasting changes in attitudes, which is often utilised when individuals are both motivated and able to digest the information (Manca et al., 2019). In contrast, the peripheral approach entails less elaboration, with individuals depending on superficial indicators like source legitimacy and emotional appeals instead of doing a comprehensive study of the message (Krockow et al., 2025). This technique is typically employed when motivation or capacity to process the message is constrained, which results in transient attitude modifications that are vulnerable to counter-persuasion (Dat et al., 2025). Within the realm of FMCG social media marketing, the Elaboration Likelihood Model underscores the importance of customising marketing messages according to the target audience's degree of involvement and cognitive processing approach (Karunarathne & Thilini, 2022). Consumers of high-involvement products, such as organic baby food or premium skincare items, typically engage in central route processing, and meticulously examine product details including ingredients and health benefits (Minocha & Singh, 2024; Lui & Sam, 2022).

2.2 Key variables

The quality of ad content, including its relevance, accuracy, and perceived value, profoundly influences consumer engagement and brand perception on social media (Jingwu, 2024; Kothari et al., 2025). The efficacy of social media advertising is fundamentally linked to its credibility and perceived authenticity, which directly affect customer attitudes and purchasing inclinations (Kothari et al., 2025). For FMCG brands, trust is essential for establishing lasting client relationships that result in consistent commercial performance (Saputra & Salih, 2023). A study conducted in Herat province revealed that superior visual content markedly improves consumer trust and engagement (Ayoubi & Sadiqi, 2024). A study on the grocery sector in Tanzania revealed that a deliberate and strategic social media presence, significantly reliant on content quality, enhances business performance and fortifies consumer connections (Njunwa, 2024). These findings emphasise that FMCG managers must emphasise high-quality, authentic, and strategically aligned social media material, since it is a critical investment for enhancing brand awareness and fostering customer loyalty.

Creativity entails the generation of novel, distinctive, and suitable ideas that address communication challenges (Tripathy & Maharana, 2015). Creativity is the catalyst that activates a brand's visibility, distinguishing memorable content, and defines brand identity (Yuniarti et al., 2024). This inventiveness is essential for capturing audience attention, distinguishing brands, and leaving a lasting impact in the competitive digital environment. Innovative social media advertising presents a potent approach for FMCG firms seeking to enhance brand recognition and stimulate digital sales among Generation Z customers (Sarda, 2024). Research establishes the imperative for genuine, interactive, and platform-specific material that aligns with Gen Z's ideals (Sarda, 2024). For example, Generation Z prioritises openness and authenticity, with nearly 90% admitting that a brand's social media presence greatly influences their trust (Sarda, 2024). They frequently respond adversely to inauthentic or excessively polished content (Sarda, 2024), preferring User-Generated Content (UGC) for its perceived authenticity and sincerity.

Informativeness in advertising denotes the ability to provide important and relevant information to consumers, enabling them to make informed purchasing decisions (Abdullah, 2024). Hidayat (2023) asserts that consumers are more inclined to investigate and make prompt purchases when provided with readily accessible and informative advertising

regarding items and services. The study demonstrates that social media platforms effectively facilitate connection between consumers and marketers and become essential to their whole marketing plan (Rais et al., 2023). Companies can engage with their customers, building strong and significant relationships (Rais et al., 2023). Studies indicate that habit and informativeness, which are crucial elements of social media involvement, significantly enhance customers' purchasing intentions at fast-food establishments (Rais et al., 2023). The findings indicate that comprehending and utilising social media characteristics enables organisations to formulate more effective marketing strategies and cultivate stronger consumer interactions (Hafez, 2021).

Visual appeal includes the aesthetic and sensory components of marketing content, such as product images, colours, layout, and style, which capture attention and shape perception (Lyu & Huang, 2024; Yahya et al., 2024). Studies suggest that visually engaging material can enhance trust, curiosity, and emotional connection, particularly in digital commerce settings (Marwan et al., 2024; Sunarso et al., 2023). Research conducted by Belliza and Kusumawati (2024) demonstrated that visual appearance is essential, as it establishes the initial impression on e-commerce platforms and affects consumers' purchase decisions. Visual aesthetics can elevate the perceived value of online shopping for customers, and prior research indicates that visual appeal indirectly influences impulsive online purchasing (Yang et al., 2021). Ayoubi and Sadiqi (2024) have shown that visual content, especially high-quality photos and videos, substantially affects consumer trust and engagement.

The ideal frequency of adverts greatly affects the effectiveness of social media campaigns for fast-moving consumer goods (FMCG). Turkyilmaz and Poturak (2017) expand the discourse on electronic word-of-mouth (eWOM) dynamics within social networks, and demonstrate that consistent, credible information dissemination can enhance purchasing decisions. However, the magnitude of this influence depends on the source's familiarity, expertise, and popularity. Turkyilmaz and Poturak's (2017) study emphasises that the frequency of information dissemination functions through social validation mechanisms, assisting consumers in making brand selections within an information-saturated context. Lemel (2021) offers an insight into engagement metrics as indicators of the effects of advertisement frequency. The findings indicate that elevated quantities of likes, comments, and shares are associated with enhanced brand recognition, visibility, and, consequently, sales in the FMCG industries.

Interactivity is a defining characteristic of social media marketing (SMM) that facilitates bidirectional connection between companies and consumers, thereby allowing fast-moving consumer goods (FMCG) brands to cultivate deeper relationships and acquire important insights (Ambilwade & Goyal, 2025). Yousef et al. (2021) examined the crucial issue of how various advertising appeals on social media convert into online engagement and tangible actions. They recognise that engagement measures, like likes, comments, shares, and clicks, do not inherently forecast real-world conduct, and that current models frequently do not correlate online interaction with actions such as donations. Pantano et al. (2019) expand the discourse by demonstrating how interactive social media advertising can improve FMCG performance via consumer interaction, co-creation, and trust establishment. Giombi et al. (2022) elucidate the regulatory and perceptual ramifications of interactive advertising.

Gender markedly affects customer behaviour in the FMCG sector, thus influencing purchasing decisions, brand loyalty, and reactions to marketing initiatives (Khamar, 2023). Research demonstrates divergent decision-making behaviours between men and women in the selection of FMCG products (Khamar, 2023). Women frequently conduct more comprehensive information searches, assessing elements such as product contents and nutritional value, whereas males may emphasise convenience and cost (Khamar, 2023). Brand loyalty reveals gender-related differences, as women display greater loyalty influenced by emotional relationships and perceived product quality (Khamar, 2023). Men, however, may exhibit greater willingness to change brands in response to price discounts or practical advantages (Khamar, 2023). A study conducted by Jeljeli et al. (2022) investigated the mediating influence of gender on social media shopping acceptance in the UAE and revealed that gender significantly mediates the relationship between social media usage and online shopping acceptance, as well as between electronic word-of-mouth and online shopping acceptance.

2.3 Empirical studies and research hypotheses development

Jemal and Melese (2025) demonstrated that high-quality advertising material substantially enhances the performance of FMCG by improving brand recall, thus elevating purchase intent, and fostering robust emotional connections with consumers, ultimately resulting in increased sales and loyalty. Research indicates that brand image is essential for consumer purchasing decisions in the FMCG sector, with high-quality advertising serving as a key element in establishing that image, affecting consumer loyalty and generating repeat purchases (Kumar, 2025; Sri & Harikrishna, 2025). In a fiercely competitive FMCG industry, a robust brand image enables companies to distinguish themselves, cultivate consumer trust, and ultimately enhance sales by fostering positive associations in consumers' perceptions (Kumar, 2025; Sri & Harikrishna, 2025). Effective advertising influences brand perception, defines a brand's identity, distinguishes it from competitors, and cultivates a profound emotional connection with the audience (Kothari et al., 2025). Warille and Wanyama (2025) discovered that advertisements customised to local values, lifestyles, and gender preferences can markedly enhance brand image, and exhibit a significant effect size (β = 0.353), as emotionally resonant and culturally pertinent content is more memorable, persuasive, and cultivates greater brand loyalty. This corresponds with the Elaboration Likelihood Model, which asserts that consumers frequently engage with advertisements via peripheral channels when they possess limited motivation or capacity for in-depth product contemplation (Petty & Cacioppo, 1986). Culturally relevant and visually appealing advertising content cultivates emotional ties, increases the likelihood of consumer engagement and purchases (Sathyanarayana Gowda & Archana, 2024). Thus, it is hypothesised that:

H1: Ad content quality positively influences FMCG sector performance.

Advertising frequency positively influences the performance of the FMCG sector, and acts as a vital catalyst for improving consumer recall and buy intentions (Jemal & Melese, 2025). Repeated exposure to commercials facilitates the entrenchment of a brand in the consumer's memory, a crucial element for success in the cluttered and low-involvement context of the FMCG industry (Sri & Harikrishna, 2025). A study indicated that creative and memorable commercials exert a statistically significant favourable effect on customer purchasing behaviour, which implies that repeated exposure to such adverts considerably affects purchase decisions (Jemal & Melese, 2025). A separate study revealed that memorable advertisements improve brand recall and recognition, frequently resulting in increased brand preference and selection in a competitive market (Jemal & Melese, 2025). A study on the cosmetics business demonstrated that commercials significantly forecast brand awareness, brand loyalty, and consumer purchasing behaviour, thereby emphasising the importance of advertising frequency in shaping customer perception and trust (Sri & Harikrishna, 2025). Thus, it is hypothesised that:

H2: Ad frequency positively affects FMCG sector performance.

Aziz et al. (2024) found that FMCG advertisements on Instagram and Facebook, which encouraged consumers to comment, share stories, or participate in live Q&As, achieved double engagement rates and showed measurable growth in brand community (Shetty et al, 2024). Chikazhe et al. (2023) highlighted that interactivity augmented followership and fostered brand loyalty, which leads to increased repeat purchase rates and word-of-mouth recommendations. Thus, it is hypothesised that:

H3: Interactivity has a positive effect on FMCG sector performance.

The distinct processing of advertising information by genders is a crucial mechanism by which gender influences the relationship between ad content and performance (Spasova & Taneva, 2021). Studies based on the selectivity hypothesis and various cognitive frameworks consistently demonstrate that women exhibit more complex, comprehensive, and elaborative information processing compared to men (Nuweihed & Trendel, 2025). For female consumers, superior advertising content that incorporates several cues such as aesthetic components, relationship themes, and contextual specifics is more likely to undergo profound

processing and, therefore, be more effective (Spasova & Taneva, 2021). Conversely, men are frequently seen to exhibit greater selectivity in their information processing, typically concentrating on a singular, accessible cue to establish brand evaluations (Nuweihed & Trendel, 2025). Consequently, for male consumers, high-quality content is likely to be most impactful when it is direct and feature-oriented, rather than intricate and emotionally nuanced (Spasova & Taneva, 2021). Studies indicate that male audiences are more responsive to informational appeals emphasising product functionality, value and objective characteristics (Nuweihed & Trendel, 2025). Thus, it is hypothesised that:

H4a: Gender plays a moderating role between ad content quality and FMCG sector performance.

The strategic implementation of advertising frequency in the FMCG industry, previously governed by the notion of non-linear performance, is now recognised as considerably more intricate, with recent academic studies emphasising gender as a crucial moderating aspect. Recent research by Sinha et al. (2024) utilised sophisticated approaches, including neuromarketing and eye-tracking, to uncover essential gender disparities in information processing that affect advertisement efficacy and fatigue. The eye-tracking study by Sinha et al. (2024) on FMCG celebrity endorsements revealed that female consumers allocated greater visual attention and exhibited prolonged dwell time on advertising that features female celebrities. In contrast, male consumers demonstrated a greater susceptibility to perceived trustworthiness, indicating a preference for functional messaging rather than solely emotional or visual stimuli. Consequently, female celebrities are more adept at attracting visual attention, while male celebrities are more proficient at augmenting perceived trustworthiness (Sinha et al., 2024). A study examining the impact of electronic word-of-mouth (eWOM) advertising revealed that women were more significantly affected by eWOM and its frequency compared to males, which indicates that women's greater sensitivity to social and relational signals is a crucial factor (Sinha et al., 2024). Thus, it is hypothesised that:

H4b: Gender plays a moderating role between ad frequency and FMCG sector performance.

Empirical research indicates that male and female customers demonstrate divergent psychological and behavioural responses to interactive marketing strategies, affecting their purchase choices and, consequently, the performance of the FMCG sector (Suvadarshini & Rout, 2024). Men, typically more utilitarian in their approach, emphasise the functional elements of the interactive experience (Suvadarshini & Rout, 2024). Studies demonstrate that women generally possess greater hedonic motives for shopping, perceiving it as a social necessity, in contrast to men, for whom it is primarily a functional requirement (Tarka et al., 2022). Consequently, based on this substantial empirical evidence, it is evident that gender significantly influences the relationship between marketing interaction and performance in the FMCG sector (Wnuk and Noga 2023). Thus, it is hypothesised that:

H4c: Gender plays a moderating role between interactivity and FMCG sector performance.

The following figure (Figure 1) gives an overview of the key variables and associated hypotheses, developed as a result of extant findings in the literature review:
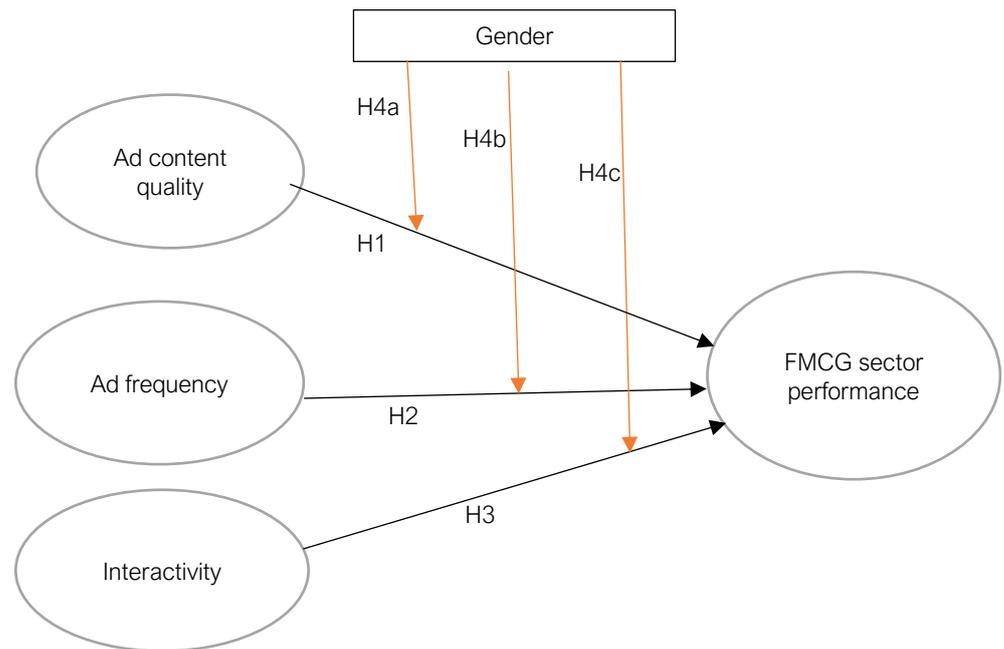
Figure 1. Research study model. Source: *authors' own*

3. Methodology

The research utilised a quantitative, cross-sectional approach to investigate the impact of Social Media Marketing (SMM) aspects on the performance of the FMCG sector and to determine if gender affected these connections.

3.1. Participant selection and sampling

The target population for this study was managerial employees within the FMCG sector in Zimbabwe. This specific population was selected based on their direct involvement in strategic decision-making regarding marketing, which made their insights particularly valuable for addressing the research objectives. The research employed a quantitative, cross-sectional design.

A non-probability sampling approach, specifically a combination of purposive sampling and convenience sampling, was utilised to select the participants. Purposive sampling was justified as participants were deliberately selected based on their expertise and specific characteristics as managerial employees in the FMCG sector. The goal was to access individuals with relevant knowledge of social media marketing and firm performance. This method allowed for a deeper understanding of a niche population that might be challenging to reach via random sampling. Concurrently convenience sampling was also employed, as managers were selected based on their accessibility and willingness to participate.

3.2 Instrument development and validation

The research instrument was a structured questionnaire designed to measure the dimensions of social media marketing and the dependent variable of firm performance (PERF). SMM was implemented through three dimensions: Ad Content Quality (ADCQ), Ad Frequency (ADFQ), and Interactivity (INTR), with performance evaluated using a sample of 360 managerial personnel from Zimbabwe's FMCG sector.

All survey items were developed based on established literature and measured on a multi-point Likert scale. The instrument comprised sections addressing these ADCQ, ADFQ, INTR) and performance (PERF) with specific items (e.g., smm6, smm7, smm8, smm9 for ADCQ) used to operationalize each construct. Reliability, which refers to the internal consistency of the measures, was assessed using Cronbach's alpha (α) and Composite

Reliability (CR). Validity was established through the assessment of both convergent and discriminant validity. Convergent validity was evaluated using factor loadings and the Average Variance Extracted (AVE).

3.3. Data collection

Following the validation of the research instrument, data were collected using the structured questionnaire administered to the sample of 360 managerial employees across various FMCG firms in Zimbabwe. The administration involved a systematic process designed to reach the targeted individuals. Both physical and online data collection methods were used to effectively reach managers in different locations. The use of questionnaires allowed for the collection of quantitative data efficiently from a large sample. The general procedure involved gaining formal permissions from management of participating companies. Questionnaires were then distributed, and strict adherence to ethical compliance was maintained, including obtaining informed consent from all participants and preserving anonymity. After collecting the data, it was prepared for analysis using IBM SPSS and Amos 23 statistical software, which involved processes such as cleaning and coding the quantitative data.

3.4 Data analysis

The collected quantitative data were prepared for analysis using IBM SPSS and Amos 23 statistical software packages. The analysis was conducted in several sequential stages, beginning with preliminary analyses and model fit assessment. Initial analyses included Confirmatory Factor Analysis (CFA), which was performed to verify the adequacy of the measurement model. Model fit was evaluated using several indices, including the Goodness-of-Fit Index (GFI), Root Mean Square Error of Approximation (RMSEA), Normed Fit Index (NFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), and the Chi-square/df ratio.

Hypothesis testing followed, utilising Structural Equation Modelling (SEM) with the Maximum Likelihood (ML) method to test the direct relationships between the SMM dimensions and performance (H1, H2, H3). To test the moderating effect of gender on these relationships (H4a, H4b, H4c), Hayes' PROCESS macro (Model 1) was employed. For this analysis, gender was dummy coded (0 = female, 1 = male), allowing for the evaluation of main effects and interaction terms to determine gender's significant influence. The collected quantitative data were analysed using Structural Equation Modelling (SEM) to investigate the proposed relationships. SEM was employed because it allowed for the simultaneous testing of complex relationships among latent variables and observed measures, which is suitable for examining the effects of SMM dimensions on performance with gender as a moderator.

The analysis was conducted in two sequential stages: measurement model assessment and structural model assessment. Measurement model assessment involved Confirmatory Factor Analysis (CFA) to verify the adequacy of the measurement model. Model fit was evaluated using several indices, including the Goodness-of-Fit Index (GFI), Root Mean Square Error of Approximation (RMSEA), Normed Fit Index (NFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), and the Chi-square/df ratio. Discriminant validity was affirmed by minimal inter-construct correlations.

Structural correlations and hypothesis testing followed, utilising SEM with the Maximum Likelihood (ML) method to test the direct relationships (H1, H2, H3). To evaluate gender as a moderator in the associations between SMM characteristics and performance (H4a, H4b, H4c), moderation analyses employed Hayes' PROCESS macro (Model 1), with gender dummy coded (0 = female, 1 = male).

4. Findings

The sample consisted of 360 managerial employees from the FMCG sector. Table 1 presents the demographic features of the participants. The variables encompass gender, age, education, work experience, the size of the FMCG firm as indicated by staff count, and the firm's economic classification.

Table 1: Socio economic characteristics of participants. Source: *authors' own*

Variable	Responses	N	%
Gender	Female	225	63
	Male	135	37
Age	18–25	83	24
	26–35	109	31
	36–45	66	19
	46–55	92	26
Education	Secondary school certificate	127	35
	Bachelor's degree	112	31
	Master's & above	121	34
Experience	< 5yrs	137	38
	6 - 10 yrs	85	24
	11 - 15 yrs	62	17
	> 16 yrs	76	21
Position	Supervisor	102	28
	Middle Manager	90	25
	Senior Manager	70	20
	Other Staff	98	27
FMCG category	Food & Beverages	91	25
	Personal care	83	23
	Household products	101	28
	Hardware	85	24
Number of employees	< 10	69	19
	11 - 20	85	24
	20 - 30	63	17
	31 - 40	68	19
	> 41	75	21

4.1 Reliability and validity

Hair Jr. et al. (2021) observed that indicator reliability pertains to the correlation between an indicator and its construct. The suggested loadings must exceed 0.70, which indicates that the indicator variable accounts for 70% of the variance (Hair Jr. et al., 2021). Cronbach's alpha and Composite Dependability (C.R.) were employed as suitable measures to assess internal consistency dependability (Cheung et al., 2024). Discriminant validity was confirmed through minimal inter-construct correlations. Table 2 displays the outcomes of the convergent validity evaluation, as well as assessment of internal consistency reliability.

Table 2: Validity & reliability assessment. Source: authors' own

Variables	Dimensions	Items	Loadings	Cronbach's alpha	C.R	AVE
Social Media Marketing (SMM)	Ad Content Quality (ADCQ)	smm6	0.88	0.95	0.95	0.83
		smm7	0.86			
		smm8	0.93			
		smm9	0.96			
	Ad Frequency (ADFQ)	smm1	0.93	0.96	0.97	0.87
		smm2	0.92			
		smm3	0.94			
		smm5	0.95			
	Interactivity (INTR)	smm11	0.91	0.92	0.92	0.70
		smm12	0.88			
		smm13	0.81			
		smm14	0.80			
		smm15	0.78			
Performance (PERF)	Performance (PERF)	pf1	0.80	0.93	0.93	0.75
		pf2	0.87			
		pf3	0.87			
		pf4	0.86			
		pf5	0.92			

All C.R. values for the constructions above 0.7 indicate acceptable internal consistency (Cheung et al., 2024), and all AVE values were above the minimum acceptable criterion of 0.50, indicating sufficient convergent validity. The minimum acceptable criterion for AVE is 0.50 (Haji-Othman et al., 2024). The minimum reported AVE of 0.70 in Table 2 was for interactivity, whilst the maximum figure of 0.87 was in connection to ad frequency. The correlation coefficients provide insights into multi-collinearity and discriminant validity (Kyriazos & Poga, 2023). Table 3 presents the correlation coefficients among the latent constructs in this research.

Table 3: Correlations between the ADFQ, ADCQ, INTR and PERF. Source: *authors' own*

Relationship	Coefficient
ADFQ1 <--> INTR1	0.24
ADCQ1 <--> PERF1	0.38
ADFQ1 <--> ADCQ1	0.16
ADCQ1 <--> INTR1	0.23
ADFQ1 <--> PERF1	0.45
INTR1 <--> PERF1	0.39

All independent variables exhibited minimal pairwise correlations, indicating that they satisfied the criteria for discriminant validity (Ronkko & Cho, 2020). Confirmatory factor analysis (CFA) was utilised to assess the adequacy of the measurement model. In the process, all latent constructs were correlated using IBM SPSS Amos to assess several estimations, including correlation coefficients, internal consistency and reliability metrics, model fit indices, and model explanatory power.

Figure 2 illustrates how each latent construct (ADCQ, ADFQ, INTR, PERF) is operationalized by its specific observed indicator variables (items). The objective was to assess the degree to which these indicator variables accurately represented their corresponding underlying constructs, a process integral to establishing convergent validity. In the context of the structured questionnaire used as the research instrument, items were grouped into specific sections. The Social Media Marketing (SMM) dimensions were measured using 13 items derived from validated scales. Specifically, Ad Content Quality (ADCQ) and Ad Frequency (ADFQ) each comprised four factors (e.g., smm6 to smm9 for ADCQ, and smm1 to smm5 for ADFQ), whereas Interactivity (INTR) included five items (smm11 to smm15). Conversely, Performance (PERF) comprised five components (pf1 to pf5) forming a distinct section of the instrument.
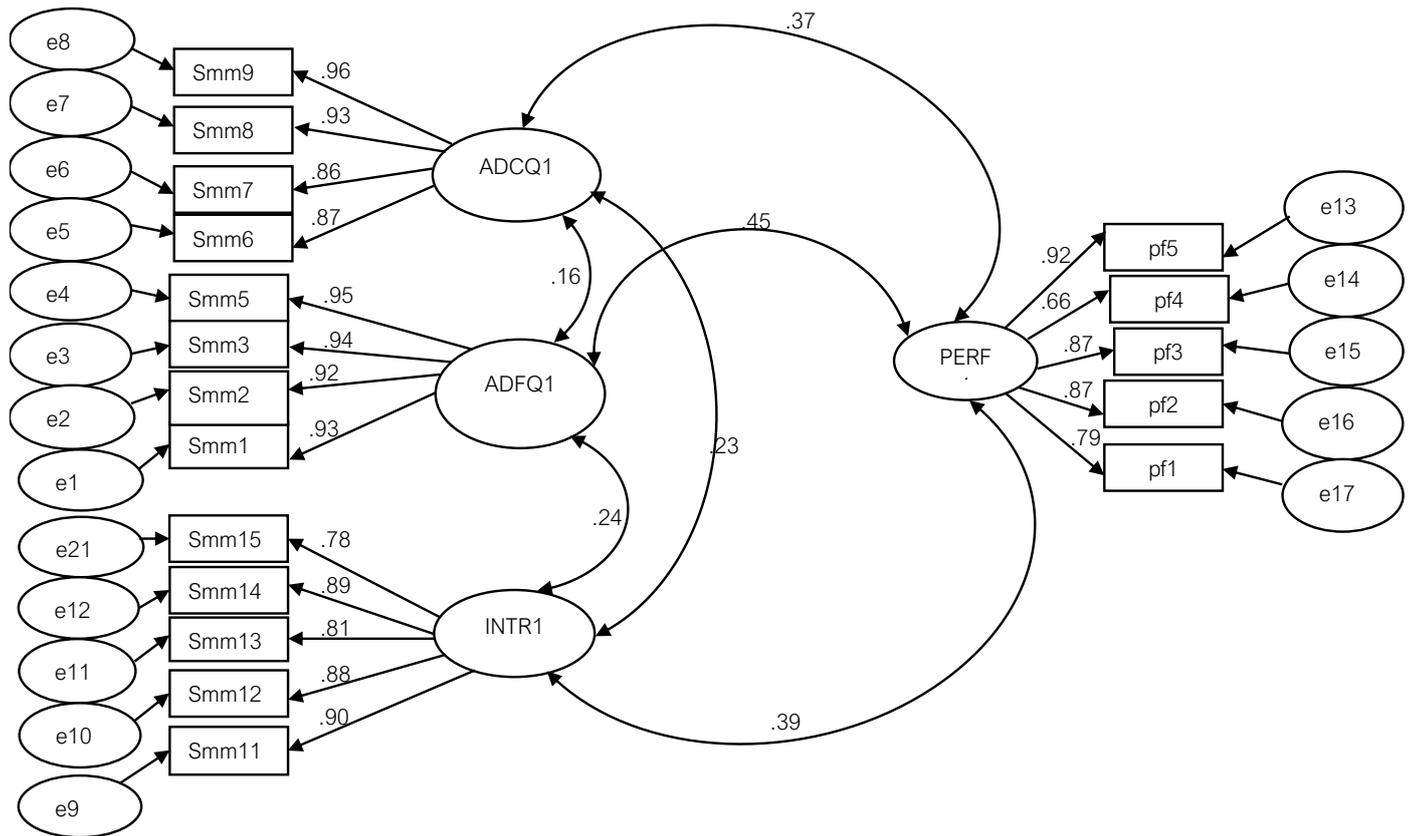
Figure 2: Visual representation of the measurement model. Source: *authors' own*

All latent variables in the model were intercorrelated, as illustrated by the curved arrows in Figure 2. Correlation coefficients among the constructs were acquired alongside the factor loadings as part of the Confirmatory Factor Analysis (CFA) process to ensure discriminant validity and a proper model fit before proceeding to the structural model assessment. This approach ensured that the instrument was both reliable and valid for data analysis.

The adequacy of the measurement model was crucial prior to proceeding with the request for the structural equation model. Model fit indices assess whether the measurement model appropriately aligns with the data (Sathyanarayana & Mohanasundaram, 2024). The results and accompanying comments are reported in Table 4.

Table 4: Measurement model fit indices. Source: *authors' own*

Index	Coefficient	Remarks
GFI	0.926	> 0.90, acceptable fit
RAMSEA	0.046	< 0.05 showing good fit
NFI	0.958	> 0.95 showing good fit
TLI	0.972	> 0.95 showing good fit
CFI	0.976	> 0.95 showing good fit
Chisq/df	2.169	< 0.05 showing good fit

The Goodness-of-Fit Index (GFI) indicates the proportion of variation in the sample explained by the predictive model (Olivares et al., 2024). GFI values beyond 0.90 are deemed excellent, while those surpassing 0.80 are regarded as satisfactory (Sathyanarayana & Mohanasundaram, 2024). In this study, a GFI of 0.926 was deemed acceptable. Yin et al. (2025) observed that a Root Mean Square Error of Approximation (RMSEA) value below 0.05 signifies a close match to the model's analysed data, but a value between 0.05 and 0.08 suggests a fit that is almost adequate. A RMSEA score of 0.046 suggests an excellent model fit (Perry et al., 2015). Concerning the Tucker-Lewis Index (TLI), Comparative Fit Index (CFI) and Normed Fit Index (NFI), with values over 0.95 in conjunction with a Chi-square/df ratio below 5, are deemed appropriate (Dash & Paul, 2021). The measuring model for the investigation have met the criteria of the fit indices.

4.2 Descriptive statistics

Descriptive statistics (Table 5) indicate that managerial personnel in the FMCG industry regarded their firms' performance favourably, with a mean of 4.46 and a standard deviation of 0.58 on the performance scale. In the realm of social media marketing, ad frequency had the highest mean score (M = 3.56, SD = 1.34), closely succeeded by interactivity (M = 3.52, SD = 1.15) and ad content quality (M = 3.51, SD = 1.38). The standard deviations for the SMM aspects reveal substantial variety in respondents' perceptions, with ad content quality exhibiting the greatest dispersion, which indicates a broader range of opinions regarding the quality of social media advertising content (Urrego et al., 2024).

Table 5: Descriptive statistics for ADCQ, ADFQ, INTR and PERF. Source: *authors' own*

Variable	Sub dimensions	N	Mean	Std. Dev
Social Media Marketing (SMM)	Ad Content Quality (ADCQ)	360	3.51	1.38
	Ad Frequency (ADFQ)	360	3.56	1.34
	Interactivity (INTR)	360	3.52	1.15
Performance	Performance (PERF)	360	4.46	0.58

4.3 Structural Model results

Figure 3 shows the results of the structural model developed to test the effects of SMM dimensions on Performance. The measuring model derived from CFA was satisfactory. The research conducted structural equation modelling (SEM) utilising latent variables. The parameters of interest were calculated utilising the Maximum Likelihood (ML) method in IBM SPSS Amos 23 (Collier, 2020). Following the construction of the SEM route model, the fit indices were re-evaluated prior to discussing the outcomes of the structural model.
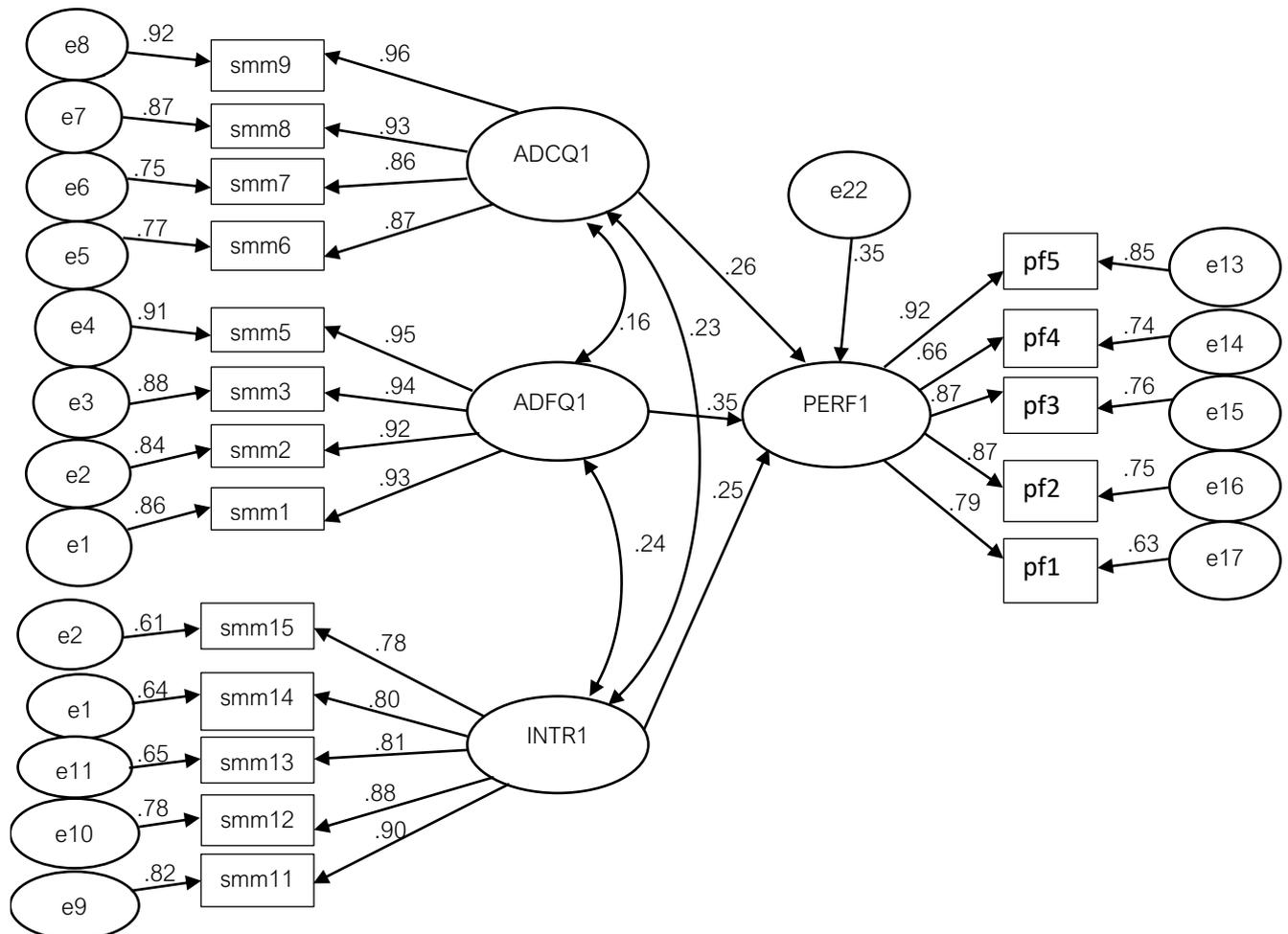
Figure 3: Full structural model, the effect of SMM dimensions on Performance. Source: *authors' own*

Table 6 exhibits the standardised regression coefficients and p-values derived from the SEM analysis. The coefficients indicate the magnitude and orientation of the links among the constructs in the model.

Table 6: Standardized SEM regression coefficients. Source: *authors' own*

Paths	Coefficient	P-values
Ad Content Quality → Performance	0.263	0.00
Ad Frequency → Performance	0.351	0.00
Interactivity → Performance	0.245	0.00

The findings demonstrated a favourable and statistically significant impact of ad content quality on the performance of the FMCG industry (β = 0.263, p < .001). This indicates that superior advertising content correlates with enhanced performance outcomes in the FMCG sector (Pushkar & Rajput, 2023). An enhancement of one unit in ad content quality would yield a performance alteration of around 0.263 units.

Ad frequency shows a favourable and statistically significant impact on the performance of the FMCG industry (β = 0.351, p < .001). This indicates that increased exposure to social media marketing correlates with enhanced performance levels. The findings of the research indicate that enterprises that successfully utilise social media frequently achieve enhanced sales growth and superior financial results via techniques such as targeted advertising (Soelaiman & Ekawati, 2022). Social media diminishes marketing expenses, enhances customer interactions, and offers essential market and consumer data for product development (Soelaiman & Ekawati, 2022). The analysis demonstrated that involvement on social media platforms positively and significantly influenced the performance of the FMCG sector (β = 0.245, p < .001). This discovery indicates that the degree of brand engagement with consumers via interactive elements (including comments, polls, and personalised responses) significantly enhances performance outcomes in the FMCG sector (Tibokbe & Shankar, 2025).

4.4 The moderating effect of gender

A moderated regression analysis was performed in IBM SPSS utilising Hayes' PROCESS macro. Model 1 intended to examine the effect of a moderator on the association between an independent variable and a dependent variable (Coutts & Hayes, 2022). In each model, one aspect of social media marketing (ad frequency, ad content quality, or interactivity) was designated as the independent variable, FMCG sector performance was identified as the dependent variable, and gender (coded 0 = female, 1 = male) was incorporated as the moderator. The PROCESS macro produced estimates for the primary effects of the independent variable and gender, together with the interaction term (the product of the independent variable and gender) to evaluate moderation. The result included model fit statistics (R^2, F, p), coefficient estimates with t-tests, and R^2 change values to assess if the inclusion of the interaction term significantly enhanced the model (Frost, 2019). Table 6 shows the results of the moderation effects of gender on the effect of ad frequency on performance.

Table 6: The moderation of gender on ad frequency and performance. Source: *authors' own*

Model Summary						
R	R-square	MSE	F	df1	df2	p
.48	.23	0.27	34.65	3.00	356.00	.00
Model						
	B	se	t	p	LLCI	ULCI
constant	3.67	.30	12.21	0.00	3.08	4.26
ADFQ	0.22	.07	3.26	0.00	0.09	0.35
Gender	0.89	.33	2.75	0.01	0.25	1.53
ADFQ x Gender	-0.42	.09	-4.86	0.00	-0.60	-0.25
Test(s) of highest order unconditional interaction(s):						
	R-square-change	F	df1	df2	p	
ADFQ x Gender	0.05	23.61	1.00	356.00	0.00	

Table 6 demonstrates that the comprehensive model accounted for 23% of the variance in FMCG sector performance, and the whole model was statistically significant. F(3, 356) = 34.65, p < .001. An examination of the primary effects demonstrated that ad frequency significantly and positively predicted performance (b = 0.22, t (356) = 3.26, p = .001), which suggests that more exposure to social media advertisements correlated with improved performance results (Pragathi & Reddy, 2024). Moreover, gender exerted a substantial positive influence on performance (b = 0.89, t (356) = 2.75, p = .006), with men managerial personnel exhibiting superior performance scores compared to their female counterparts. The interaction impact between ad frequency and gender was statistically significant (b = -0.42, t(356) = -4.86, p < .001). The findings from the unconditional interaction test indicate that incorporating the interaction term into the model produced a R² change of .05, with the F-test for this change being statistically significant (F(1, 356) = 23.61, p < .001).Table 7 shows the results of the moderation effects of gender on the effect of ad content quality on performance.

Table 7: The moderation of gender on ad content quality and performance. Source: *authors' own*

Model Summary						
R	R-square	MSE	F	df1	df2	p
.56	.32	0.24	54.62	3.00	356.00	.00
Model						
	B	se	t	p	LLCI	ULCI
constant	4.00	.94	42.69	0.00	3.82	4.18
ADCQ	0.18	.02	7.33	0.00	0.13	0.22
Gender	-0.30	.14	-2.10	0.04	-0.58	-0.02
ADCQ x Gender	-0.04	.04	-0.96	0.34	-0.11	0.04
Test(s) of highest order unconditional interaction(s):						
	R-square-change	F	df1	df2	p	
ADCQ x Gender	0.00	0.93	1.00	356.00	0.34	

Table 7 indicates that the comprehensive model accounted for 32% of the variance in FMCG sector performance, and the entire model was statistically significant (F (3, 356) = 54.62, p < .001). An examination of the primary effects demonstrated that the quality of ad content was a significant positive predictor of performance (b = 0.18, t (356) = 7.33, p < .001), which suggests that superior advertising material correlated with improved performance results. Gender exerted a notable adverse impact on performance (b = -0.30, t (356) = -2.10, p = .036), as male managerial personnel exhibited inferior performance scores compared to their female colleagues. The interaction impact between ad content quality and gender was not statistically significant (b = -0.04, t(356) = -0.96, p = .34). The outcomes of the unconditional interaction test indicate that incorporating the interaction term into the model produced a R² change of 0.00, and the F-test for this change was not statistically significant (F(1, 356) = 0.93, p = 0.34).Table 8 shows the results of the moderation effects of gender on the effect of interactivity on performance.

Table 8: The moderation of gender on interactivity and performance. Source: *authors' own*

Model Summary						
R	R-square	MSE	F	df1	df2	p
.50	.25	0.25	40.49	3.00	356.00	.00
Model						
	B	se	t	p	LLCI	ULCI
constant	4.05	.11	35.46	0.00	3.82	4.28
INTR	0.16	.03	5.45	0.00	0.10	0.22
Gender	-0.30	.18	-1.67	0.09	-0.65	-0.05
INTR x Gender	-0.04	.05	-0.72	0.47	-0.14	0.06
Test(s) of highest order unconditional interaction(s):						
	R-square-change	F	df1	df2	p	
INTR x Gender	0.00	0.52	1.00	356.00	0.47	

Table 8 indicates that the comprehensive model accounted for 25% of the variance in FMCG sector performance, and the entire model was statistically significant (F (3, 356) = 40.49, p < .001). An in-depth analysis of the primary effects demonstrated that interactivity

was a significant positive predictor of performance (b = 0.16, t (356) = 5.45, p < .001), which suggests that increased interaction between brands and consumers on social media correlated with improved performance outcomes. Gender did not exhibit a statistically significant main influence on performance (b = -0.30, t (356) = -1.67, p = .096). However, the negative coefficient indicates a propensity for male managerial personnel to report inferior performance scores compared to their female counterparts. The interaction effect between interactivity and gender was not statistically significant (b = -0.04, t (356) = -0.72, p = .47). The results of the unconditional interaction test indicate that the incorporation of the interaction term into the model produced a R² change of 0.00, and the F-test for this change was not statistically significant (F(1, 356) = 0.52, p = 0.47).

5. Discussion

The findings demonstrate that ad frequency (β = 0.351, p < .001) considerably improves performance in the FMCG industry, highlighting the importance of sustaining visibility in a competitive market. This effect is particularly pronounced among female managers, which indicates that gender affects the understanding and use of frequency insights in management settings (Sinha et al., 2024).

The quality of ad content exhibits a substantial positive correlation with performance (β = 0.263, p < .001), which underscores the essential importance of high-quality, original material in enhancing engagement. The moderation analysis reveals that gender does not significantly influence this association, which suggests that both male and female managers acknowledge the importance of quality content. Nonetheless, female managers indicated superior overall performance levels, implying that gender-related factors may continue to affect outcomes (Xie et al., 2025)

Interactivity significantly influences performance (β = 0.245, p < .001), thereby augmenting consumer involvement via interactive elements like polls and quizzes. The analysis indicates no substantial gender moderation in this association, which suggests that good interaction tactics are advantageous for all managerial demographics. This reinforces the findings of Li et al. (2023), who observed that strategic interactivity effectively engages all consumers, with no substantial gender moderation in the overall association between interactivity and engagement.

The study aimed to explore how gender moderates the effect of social media marketing (SMM) on performance in the Fast-Moving Consumer Goods (FMCG) sector, specifically through the dimensions of ad content quality, ad frequency, and interactivity. The findings offer nuanced insights into existing literature, as not all proposed hypotheses were supported with the same statistical significance.

The empirical results confirm that SMM dimensions significantly drive performance in the FMCG sector, with varying degrees of gender's moderating influence. The study established several key hypotheses concerning the impact of social media marketing (SMM) dimensions on Fast-Moving Consumer Goods (FMCG) sector performance, and the potential moderating role of gender. The empirical analysis, primarily utilising Structural Equation Modelling (SEM) and Hayes' PROCESS macro, provided a mixed set of results regarding the acceptance of these hypotheses, with direct effects generally supported while moderation effects were more nuanced (p. 9). All three hypotheses predicting direct positive relationships between SMM dimensions and performance were accepted. Specifically, H1 was supported, confirming that ad content quality positively influences FMCG sector performance (β= 0.263, p < .001). Similarly, H2 was accepted, indicating that ad frequency shows a favourable and statistically significant impact on performance (β= 0.351, p < .001). H3 was also supported, as involvement on social media platforms was found to positively and significantly influence the performance of the FMCG sector (β= 0.245, p < .001). However, the hypotheses relating to the moderating effect of gender yielded more specific results. H4b, which proposed that gender plays a moderating role between ad frequency and FMCG sector performance, was accepted (p < .001). The interaction effect was statistically significant (b = -0.42, p < .001), indicating that female managers exhibit greater sensitivity to advertising frequency compared to their male counterparts. Conversely, H4a and H4c were not supported. The interaction impact between ad content quality and gender was not statistically significant (p = .34), suggesting a lack of gender moderation in this relationship. Similarly, the interaction effect

between interactivity and gender was not statistically significant (p = .47), implying that effective interactivity strategies are universally beneficial across genders.

The acceptance of H1, H2, and H3 aligns with prior research affirming the general positive impact of SMM on business outcomes. The study's novel contribution, however, lies in the specific gender moderation findings (H4b accepted, H4a and H4c rejected), which refine the application of established theories like the Uses and Gratifications Theory (UGT) and the Elaboration Likelihood Model (ELM). Regarding H4b, the significant moderating effect of gender on the relationship between ad frequency and performance is a key insight. Female managers were found to be more sensitive to ad frequency than their male counterparts (b = -0.42, p < .001), indicating that consistent, frequent messaging holds higher perceived value for women in management roles. This supports previous eye-tracking research suggesting women engage in more comprehensive, context-sensitive information processing, where frequency acts as an important social signal, while men focus on more utilitarian aspects (Sinha et al., 2024; Spasova & Taneva, 2021).

The rejection of H4a and H4c indicates that the value of high-quality content and engaging interactive features is universally recognised across both male and female managers. This suggests that "gratifications" sought from these SMM dimensions, such as information acquisition and social interaction, are not distinctly gender-specific in a B2B managerial context. While general literature points to gender differences in emotional vs. functional appeals in consumer-facing ads (Siddiqui & Ali, 2025), this study's B2B context suggests that managerial staff, regardless of gender, prioritize core quality and functionality attributes equally when assessing the strategic value for firm performance.

This study adds significant value to the literature by moving beyond general SMM effectiveness to pinpoint exactly which SMM dimensions require a gender-sensitive approach at the managerial level, and which can be standardized. It offers empirical support for tailoring marketing execution (e.g., ad scheduling/frequency) based on target audience gender demographics, while confirming that fundamental investments in quality content are universally valuable.

6. Implications

6.1 Theoretical implications

This research significantly extends the application of the Uses and Gratifications Theory (UGT) and the Elaboration Likelihood Model (ELM) by introducing gender as a critical moderating variable within a managerial and B2B context. The study demonstrates that while established models like ELM suggest two processing routes (central and peripheral), gender moderates which route is more effective for specific SMM dimensions. The finding that ad frequency has a more pronounced impact on female managers' perceptions aligns with research suggesting that women engage in more comprehensive and context-sensitive information processing compared to men's more selective, feature-focused processing styles. This provides a more granular understanding of the 'selectivity hypothesis' in a digital marketing context.

By showing that managers of both genders value high-quality content and interactivity equally, the study suggests that the "gratifications" sought (e.g., information acquisition, social interaction) from SMM are universal when it comes to quality and engagement features. The theoretical contribution lies in isolating frequency as a gender-sensitive element of gratification, where consistency of messaging provides a higher perceived value for women managers than for men in this specific industry context.

6.2 Practical implications

The implications of the present study urge a move away from generic SMM strategies towards data-driven, gender-aware approaches to optimize return on investment (ROI) in the FMCG sector. Given the finding that ad frequency is a more sensitive and impactful metric for female managers, marketers should tailor their scheduling strategies. Campaigns targeting product categories predominantly managed by or consumed by women (e.g., certain personal care or

household products) should ensure a consistent, frequent presence to enhance brand recall and customer engagement effectively.

　　　The lack of significant gender moderation for ad content quality and interactivity means that resources invested in creating high-quality visuals, informative messaging, and engaging interactive features (polls, quizzes, live Q&As) will yield strong performance results across all target demographics. Managers can develop a unified content strategy for these dimensions, as both genders recognize their importance in driving consumer engagement and brand loyalty. While overall quality is universally valued, managers should heed existing literature suggesting that men often prefer functional and objective characteristics in ads, while women are more responsive to emotionally resonant storylines and social cues. FMCG firms can fine-tune creative content within a universal quality framework to subtly appeal to these inherent processing differences. The observation that female managerial personnel exhibited superior overall performance levels in certain moderation models in the ADCQ model implies that companies may benefit from leadership development and talent retention strategies that leverage the specific insights and sensitivities that female managers bring to the digital marketing space.

7. Conclusions and future research directions

The study concludes that SMM is a crucial driver of performance in the FMCG sector. The analysis demonstrated a positive and statistically significant impact on performance for all three dimensions of SMM examined: ad content quality ($\beta = 0.263$, $p < .001$), ad frequency ($\beta = 0.351$, $p < .001$), and interactivity ($\beta = 0.245$, $p < .001$). This confirms that investing in high-quality, frequent, and interactive social media campaigns directly correlates with improved performance outcomes. These findings align with Tibokbe and Shankar (2025), who highlighted the importance of consistent visibility and brand engagement for enhancing brand recall and customer loyalty in competitive markets.

　　　The study also confirmed the critical moderating role of gender in the relationship between SMM and performance, albeit in a nuanced way. The moderation analysis found that gender significantly influences the relationship between ad frequency and FMCG sector performance. This suggests that the effectiveness of advertising frequency is not uniform across genders, and a one-size-fits-all approach is insufficient. For instance, the findings indicate that consistent and frequent brand messaging may have a more pronounced impact on female managers' perceptions and strategies compared to their male counterparts. This finding supports prior research, which found that women are often more affected by the frequency of electronic word-of-mouth (eWOM) and are more sensitive to social signals in marketing (Sinha et al., 2024).

　　　In contrast, the study found no significant moderating effect of gender on the relationship between ad content quality and performance ($p = .34$), or between interactivity and performance ($p = .47$). This implies that effective strategies for creating high-quality content and fostering interactivity are universally beneficial across managerial demographics. Both male and female managers appear to recognize the value of engaging and high-quality content. Therefore, while FMCG companies should tailor their ad frequency strategies based on gender, they can develop a unified approach for content quality and interactive elements to improve performance for all consumer segments. This research extends existing theories by demonstrating that gender differences are a crucial strategic variable for specific digital marketing dimensions (Febrian & Husna, 2023) and add a layer of complexity to how these strategies are applied in practice.

　　　This study opens several avenues for further investigation to enhance the robustness and generalizability of its findings. Future research should address the limitations of a cross-sectional design by implementing experimental designs to establish causality between SMM dimensions and performance, and by utilizing longitudinal studies to evaluate the enduring effects of advertising techniques over time. Integrating objective performance indicators (e.g., actual sales data) alongside self-reported managerial data may also mitigate potential biases.To evaluate the generalizability of these gender moderating effects, cross-country validation is essential. In particular, a comparison of results between developed markets and other emerging economies is advocated. Future studies should integrate other contemporary dimensions of social media marketing, such as influencer intensity, platform-specific traits

(e.g., TikTok vs. LinkedIn marketing) and sentiment analysis, to provide more comprehensive campaign data and understand their interactions with gender across different FMCG categories.

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