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Fear of missing out (FOMO) and impulsive buying behavior: The role of social media, self-control, and socio-economic factors

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ABSTRACT

Fear of Missing Out (FOMO) has become an important psychological factor that influences consumer behavior, especially in digital markets. With the rapid growth of social media, FOMO is increasingly associated with impulsive buying behavior. Based on the Stimulus–Organism–Response (S-O-R) framework, this study examines the effect of FOMO on impulse buying behavior (IBB), the mediating role of social media engagement (SME), and the moderating role of self-control (SC). The study uses data collected from 212 social media users and applies Structural Equation Modeling (SEM) to test the proposed model. The results show that FOMO has a significant positive effect on both SME ($\beta = 0.618$, $p < 0.001$) and IBB ($\beta = 0.435$, $p < 0.001$). In addition, SME partially mediates the relationship between FOMO and IBB ($\beta = 0.353$, $p < 0.001$). The findings also indicate that self-control weakens the effect of FOMO on IBB ($\beta = -0.278$, $p < 0.01$), meaning that individuals with higher self-control are less likely to engage in impulsive buying due to FOMO. Furthermore, age significantly moderates the relationship between FOMO and IBB, with younger consumers showing a stronger effect ($\beta = 0.521$, $p < 0.001$, Z-score = 4.612), while gender, education, and income do not have significant moderating effects. This study contributes to the literature by providing a comprehensive view of the role of FOMO in digital consumer behavior and highlighting the psychological processes behind impulsive buying on social media. It also offers practical implications for marketers, policymakers, and consumer protection agencies.

1. Introduction

The rapid digitalization of consumer markets has fundamentally transformed how individuals interact, share experiences, and make purchasing decisions. Social media platforms, particularly Instagram, TikTok, and Facebook, have emerged as powerful influencers of consumer behavior. The rise of social commerce has further accelerated this shift, with global sales reaching approximately $571 billion in 2023. Projections suggest that this figure will grow to $1.2 trillion by 2025 and surge to $8.5 trillion by 2030, reflecting a compound annual growth rate (CAGR) of 26.2%. 67% of global shoppers have made purchases directly through social media, with adoption rates varying by region. Thailand, for instance, reports an exceptionally high adoption rate of 91%.

Impulse buying behavior has been extensively studied in consumer research, with scholars identifying psychological factors, environmental influences, and marketing strategies as key drivers (Iyer et al. 2020). Globally, 89% of consumers have engaged in impulse purchases, with social media platforms playing a significant role in facilitating these unplanned buying decisions. TikTok (55%), Instagram (46%), and Facebook (45%) have been particularly influential, while social media advertising has driven impulsive purchases among 60% of Gen Z consumers.

Despite extensive research on impulse buying, prior studies have primarily examined the broad impact of social media while overlooking the specific role of Fear of Missing Out (FOMO) in shaping impulsive purchasing behavior. Social media is a key driver of FOMO, with 69% of people globally experiencing it in some form. Platforms such as Instagram, Facebook, and Snapchat intensify FOMO by curating content that fosters feelings of exclusion, leading 37% of users to make purchases directly due

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to FOMO-triggered urgency. However, a critical gap remains in understanding how social media engagement mediates the relationship between FOMO and impulse buying. Research suggests that increased social media engagement amplifies exposure to persuasive marketing stimuli, making consumers more susceptible to impulsive spending (Ngo et al., 2024). Additionally, another overlooked factor is self-control, which has long been recognized as a determinant of impulsive tendencies (Baumeister, 2002). While some consumers exhibit strong self-regulatory mechanisms, others struggle to resist impulse-driven consumption. Despite its significance, little empirical research has examined how self-control moderates the FOMO-impulse buying relationship in digital purchasing contexts. Addressing this gap is crucial for understanding consumer vulnerability to FOMO-driven marketing tactics. This study aims to examine the factors empirically influencing impulse buying behavior (IBB) in social media-driven environments, focusing on the roles of FOMO, social media engagement (SME), and self-control (SC). Specifically, the study seeks (1) to investigate the direct effect of FOMO on impulse buying behavior, (2) to examine the mediating role of social media engagement in the FOMO-IBB relationship, and (3) to analyze the moderating effect of self-control in mitigating the influence of FOMO on impulse buying behavior. The findings will provide important advice to digital marketers, particularly concerning the ethical implications of FOMO-based advertising strategies. Understanding how self-control mitigates impulsive tendencies can help businesses design consumer-friendly marketing campaigns that promote responsible spending. Furthermore, this study provides policy recommendations aimed at enhancing consumer awareness and self-regulation, contributing to a more sustainable and responsible digital marketplace.

The remainder of this paper is structured as follows. The next section reviews relevant literature on FOMO, impulse buying, and social media engagement. The subsequent section outlines the research methodology, including sampling, data collection, and analytical techniques. The findings section presents the results of the structural model and hypothesis testing. The discussion section examines key findings, theoretical contributions, and managerial implications. Finally, the paper concludes with study limitations and future research directions.

2. Literature review

2.1. FOMO and consumer behavior

FOMO is a psychological phenomenon that influences consumer decision-making by creating a sense of urgency and social pressure. FOMO is defined as anxiety stemming from the belief that others are experiencing rewarding opportunities while one is absent from such experiences (Franchina et al., 2018). This construction has been extensively studied in the context of social media consumption, psychological well-being, and consumer decision-making (Milyavskaya et al., 2018). As digital platforms continuously expose individuals to curated lifestyles and aspirational content, consumers experiencing FOMO often exhibit heightened emotional responses, leading to impulsive consumption behaviors (Franchina et al., 2018). The increasing integration of real-time updates, ephemeral content, and limited-time offers on social media platforms further amplifies the immediacy and exclusivity of purchase decisions. Studies indicate that FOMO-induced behaviors manifest in different consumer segments, particularly among young adults and frequent social media users, where higher levels of FOMO correlate with an increased likelihood of engagement with promotional messages and unplanned purchases (Good and Hyman, 2020). However, while past research has acknowledged FOMO's role in social media-driven consumerism, the underlying mechanisms linking FOMO to impulse buying remain underexplored (Franchina et al., 2018). This study aims to address this gap by investigating how SME mediates the relationship between FOMO and IBB.

2.2. Social media engagement and impulse buying behavior

SME refers to the extent to which users interact with, respond to, and immerse themselves in social media content (Trunfio and Rossi, 2021). Prior literature has identified SME as a key driver of consumer-brand relationships, digital trust, and purchase intentions (Enginkaya and Yılmaz, 2014). Social media engagement is characterized by behavioral, cognitive, and emotional involvement, where users actively participate in discussions, share content, and follow influencer recommendations (Duradoni et al., 2023).

Several studies have highlighted that higher levels of social media engagement are positively associated with impulsive purchasing tendencies, as increased exposure to promotional stimuli heightens perceived product attractiveness and purchase urgency (Pham et al., 2024). Specifically, the algorithmic curation of personalized advertisements, influencer endorsements, and interactive content facilitates consumer-brand interactions, ultimately reducing decision-making latency and increasing the likelihood of unplanned purchases (Ngo et al., 2024). Given these findings, SME is posited as a critical mediating factor in the FOMO-IBB relationship, as individuals experiencing FOMO are likely to engage more deeply with social media content, thereby elevating their susceptibility to impulse buying.

2.3. Self-control as a moderator in digital consumerism

SC has been widely recognized as a key determinant of consumer self-regulation, financial

decision-making, and resistance to persuasive marketing tactics (Baumeister, 2002). Defined as the ability to regulate impulses and override short-term temptations in pursuit of long-term goals, SC serves as an internal mechanism that mitigates impulsive consumption tendencies (Zhao et al., 2025).

Past research suggests that individuals with higher self-control are more likely to engage in deliberate decision-making, evaluate product necessity, and resist external purchase pressures, whereas those with lower self-control tend to exhibit stronger emotional responses to marketing stimuli, leading to spontaneous purchase behavior. In the context of digital consumerism, SC plays a critical role in buffering the effects of FOMO on impulse buying behavior. Studies have demonstrated that consumers with low self-control are more susceptible to FOMO-induced impulsive consumption, particularly in digital environments where instant gratification and ease of transaction are prominent (Servidio, 2021). While existing literature has examined self-control in traditional retail settings, its moderating effect on the relationship between FOMO and impulse buying in social media contexts remains underexplored. This study aims to contribute to this discourse by examining whether self-control weakens the impact of FOMO on impulse buying behavior, thereby serving as a psychological buffer against FOMO-driven consumerism.

2.4. Conceptual framework and hypothesis development

FOMO is a psychological phenomenon that arises from an individual's perception that others are experiencing rewarding events while they are absent. The increasing use of social media platforms has amplified FOMO, as users are constantly exposed to curated online content showcasing aspirational lifestyles, exclusive events, and limited-time promotions. As a result, individuals experiencing FOMO are likely to increase their engagement with social media to stay informed and connected (Franchina et al., 2018). SME encompasses cognitive, emotional, and behavioral interactions with digital content, including liking, commenting, sharing, and actively following influencers or brands (Duradoni et al., 2023). Empirical studies suggest that individuals with higher levels of FOMO demonstrate greater social media usage, heightened responsiveness to notifications, and increased interaction with content that emphasizes exclusivity or scarcity (Brailovskaia and Margraf, 2024). Given this evidence, it is expected that FOMO will significantly enhance SME, leading to the following hypothesis:

H1: FOMO significantly influences SME.

SME has an important effect on consumer decision-making, particularly in digital environments where personalized advertisements, influencer endorsements, and limited-time offers drive purchase behavior (Dessart, 2017). Increased social media interaction enhances exposure to persuasive marketing stimuli, which, in turn, fosters impulsive purchasing tendencies (Ngo et al., 2024). Research indicates that social media platforms leverage algorithmic recommendations and engagement-based content delivery, making consumers more susceptible to promotional messaging and instant purchasing decisions. The interactive nature of social media engagement, where users engage with influencer-driven recommendations, product reviews, and real-time social proof, lowers cognitive resistance and promotes spontaneous consumption behaviors (Chen et al., 2024). Consequently, SME is expected to drive impulsive buying tendencies, leading to the following hypothesis:

H2: SME significantly influences IBB.

IBB is characterized by unplanned, spontaneous purchases driven by emotional triggers rather than rational decision-making (Silvera et al., 2008; Feng et al., 2024). As FOMO causes anxiety and psychological discomfort, individuals may make impulsive purchases to cope with their feelings of exclusion. This is common on social media, where real-time content makes consumers feel more urgency, increasing unplanned buying (Jabeen et al., 2023). Research indicates that consumers driven by fear of missing out are more responsive to limited-time offers, exclusive promotions, and influencer endorsements, which directly influence their impulsive purchasing behavior (Good and Hyman, 2020). Furthermore, the psychological distress caused by FOMO increases individuals' tendency to make impulsive purchases, reinforcing the connection between FOMO and impulse buying (Rodrigues et al., 2021). Therefore, the following hypothesis is proposed:

H3: FOMO significantly influences IBB.

SC refers to an individual's ability to regulate impulses, delay gratification, and resist immediate temptations in favor of long-term benefits (Duckworth et al., 2016). In consumer psychology, self-control has been identified as a critical factor in moderating impulse-driven consumption behaviors (Zhao et al., 2025). Individuals with low self-control are more likely to succumb to emotional triggers, such as FOMO, and engage in reactive purchasing behavior.

Conversely, those with higher self-control exhibit greater cognitive regulation, allowing them to evaluate the necessity of a purchase and resist impulsive spending (Sun et al., 2022). In the context of digital consumerism, SC is expected to weaken the direct impact of FOMO on impulse buying, as individuals with higher self-control are more capable of managing their emotions and limiting their engagement in unplanned consumption. Therefore, the following hypothesis is proposed:

H4: SC moderates the relationship between FOMO and IBB.

Individual socio-economic characteristics, including gender, age, education level, and income, significantly influence consumer decision-making and impulse buying behavior. Gender disparities indicate that women may exhibit a greater propensity for impulse purchases due to heightened emotional sensitivity, whereas younger men demonstrate significant vulnerability in domains such as technology and gaming (Ye, 2025). Age plays a role, with younger consumers—particularly digital natives—more influenced by FOMO-driven marketing than older individuals, who rely more on cognitive evaluations (Rozgonjuk et al., 2021). The level of education influences digital literacy and critical thinking in purchasing decisions; although higher education may diminish impulse buying, it can simultaneously increase vulnerability in aspirational consumption categories. Income level determines financial flexibility, but research suggests that FOMO can override financial constraints, leading both high- and low-income consumers to engage in impulsive purchases (Zhao, 2022). Given these factors, socio-economic characteristics are expected to moderate the FOMO-IBB relationship, with younger, higher-educated, and wealthier individuals more susceptible to FOMO-driven purchases.

H5: Individual socio-economic characteristics (gender, age, education level, and income) moderate the relationship between FOMO and IBB.

The mediating role of SME in the relationship between FOMO and IBB is based on the premise that FOMO increases social media interactions, which in turn elevate exposure to marketing stimuli, ultimately driving impulsive purchases (Franchina et al., 2018; Good and Hyman, 2020; Ngo et al., 2024). Studies have shown that individuals experiencing FOMO actively engage with influencer content, real-time promotions, and limited-edition product drops, all of which contribute to higher purchase intent and reduced decision-making latency (Milyavskaya et al., 2018). Furthermore, research suggests that social media engagement amplifies cognitive and emotional responses to marketing cues, making users more vulnerable to impulse-driven purchasing decisions (Faisal et al., 2020). Given that FOMO heightens individuals' social media activity, it is likely that SME serves as a psychological pathway through which FOMO exerts its influence on impulse buying behavior. Thus, the following hypothesis is proposed:

H6: SME mediates the relationship between FOMO and IBB.

Fig. 1 presents the proposed conceptual model, illustrating the relationships among FOMO, SME, IBB, and SC, providing a comprehensive framework for understanding the psychological mechanisms driving impulse buying behavior in digital environments.

3. Research methodology

To expand the body of knowledge on impulse buying behavior in social media-driven consumption, this study employs a quantitative research design to examine the relationships between FOMO, SME, IBB, and SC. A structured self-administered questionnaire was created and disseminated to a sample of social media users who have participated in online shopping. The targeted population consisted of individuals aged 18 and above with active usage of social networking platforms, including Facebook, Instagram, TikTok, and Twitter.

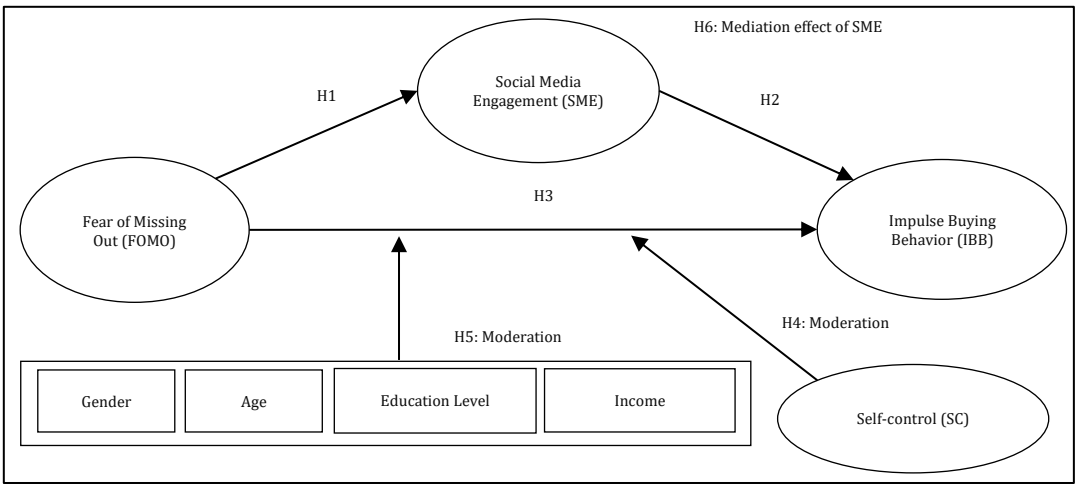

Fig. 1: The proposed conceptual framework

The data collection process was conducted via online survey platforms, leveraging social media groups, e-commerce communities, and direct outreach to potential respondents. The survey included an explanatory cover letter, assuring participants of confidentiality and anonymity and

confirming their voluntary participation. To ensure data quality, responses were screened for completion rate and response consistency before proceeding with further analysis. A sample size determination was based on Structural Equation Modeling (SEM) guidelines. According to Gerbing (1988), at least 150 participants are recommended for SEM, while other researchers suggest a minimum of 200 responses or at least 5 cases per estimated parameter. Since this study contained 15 observable variables, the minimum required sample size was 15 × 10 = 150. A total of 300 survey invitations were sent out, resulting in 228 completed responses (a response rate of approximately 76%). Following data screening, 212 usable responses remained, exceeding the minimum requirement for SEM analysis. The questionnaire comprised two main sections: (1) demographic and behavioral aspects related to respondents and (2) measurement items assessing the key constructs. Measurement items were adapted from validated prior scales and were rated on a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). This study measures four key constructs: FOMO, SME, IBB, and SC. FOMO was measured by four items adopted and modified from Abel et al. (2016). SME was measured by four items adapted from Ni et al. (2020) and Duradoni et al. (2023). IBB was measured by four items modified from Weun et al. (1998). SC was measured by three items based on earlier works by Manapat et al. (2021) as a brief measure appropriate for reducing respondent burden in an online survey context, although it may not fully capture the multidimensional nature of self-control. Table 1 illustrates the constructions and measurement scales of this study.

4. Result

4.1. Descriptive statistics results

Table 2 summarizes the demographic profile of the 212 respondents. A slight majority were female (52.8%), and most were aged 20–29 (42.5%) or 30–39 (25.9%). Social media usage was generally high, with 39.6% reporting more than 3 hours of daily use. Among the social media platforms reported (multiple responses allowed), LINE (91.0%), Facebook (89.6%), and TikTok (85.8%) were the most frequently used. Impulse purchases were most common for clothing and fashion (73.1%) and beauty and skincare products (62.3%). Monthly spending on impulsive purchases was moderate overall, with more than half of the respondents (55.1%) spending between $14 and $84 per month.

Table 1: Constructs and items of this study

Constructs	Items	Observed variables
FOMO	FOMO1	I fear missing out on trending products that others purchase.
	FOMO2	I feel anxious when I see others buying limited-edition or exclusive items online.
	FOMO3	Social media makes me feel pressured to buy products before they sell out.
	FOMO4	I frequently check social media to ensure I am not missing out on the latest shopping trends.
SME	SME1	I actively engage with brands on social media (likes, shares, and comments).
	SME2	I follow influencers and bloggers for shopping recommendations.
	SME3	I spend a significant amount of time browsing products on social media.
	SME4	Social media ads and promotions strongly influence my purchasing decisions.
IBB	IBB1	I frequently make spontaneous purchases without planning.
	IBB2	When I see an attractive product on social media, I buy it immediately.
	IBB3	I regret my purchases after acting impulsively.
	IBB4	Social media promotions easily entice me to buy products online.
SC	SC1	I can resist the urge to buy things that I do not need.
	SC2	I often reflect before making a purchase decision.
	SC3	I set personal spending limits and stick to them.

4.2. Measurement model

To assess the reliability and validity of the constructs, Confirmatory Factor Analysis (CFA) was conducted. The constructs include FOMO, SME, IBB, and SC. The convergent validity of the measurement model was confirmed, as all factor loadings exceeded 0.7, indicating strong indicator reliability. Additionally, the Composite Reliability (CR) values for all constructs were above 0.7, and the Average Variance Extracted (AVE) values exceeded the threshold of 0.5 (Table 3), meeting the criteria suggested by Hair et al. (2010). The discriminant validity was also confirmed using Fornell and Larcker's (1981) criterion, where all constructs demonstrated strong discriminant validity, as the square root of each AVE (ranging from 0.747 to 0.863) was higher than the corresponding inter-construct correlations. This indicates that each construction is distinct from the others in the model (Table 4). The model fit indices suggest that the CFA model provides a good fit to the data (χ^2 = 624.837, df = 285, CMIN/df = 2.192). The CFI (0.961) and TLI (0.956) exceed the 0.90 threshold, indicating strong model fit. The RMSEA (0.052) falls below 0.08, further confirming acceptable model fit. Thus, the measurement model demonstrates strong reliability, convergent validity, and discriminant validity, making it appropriate for hypothesis testing.

4.3. Structural model and hypothesis testing

Following the establishment of a satisfactory measurement model, the structural model was estimated. The SEM results indicated a strong model fit (χ^2 = 647.238, df = 290, CFI = 0.957, RMSEA = 0.049), confirming that the structural paths could be reliably interpreted. The structural path estimates

are presented in Table 5. The results indicate that FOMO has a strong and significant positive effect on social media engagement (β = 0.618, p < 0.001), supporting H1. In addition, SME significantly predicts Impulse Buying Behavior (β = 0.572, p < 0.001), confirming H2. FOMO also exerts a direct positive influence on IBB (β = 0.435, p < 0.001), thereby supporting H3.

Table 2: Descriptive statistics

Item	Description	Sample	Percentage
Gender	Male	100	47.2
	Female	112	52.8
Age group	Less than 20	35	16.5
	20–29	90	42.5
	30–39	55	25.9
	40–49	20	9.4
	50-59	9	4.2
	Above 60	3	1.5
Education level	High school or below	70	33.0
	Undergraduate degree	110	51.9
	Postgraduate degree	32	15.1
Income (USD)	Below $559	85	40.1
	$559 – $978	70	33.0
	$979 – $1,397	32	15.1
	$1,397 – $2,794	18	8.5
	Above $2,794	7	3.3
Social media usage (hours/day)	Less than 1 hour	18	8.5
	1–2 hours	46	21.7
	2–3 hours	64	30.2
	More than 3 hours	84	39.6
Frequently used social media platforms (multiple responses)	Facebook	190	89.6
	Instagram	136	64.2
	TikTok	182	85.8
	X (Twitter)	97	45.8
	LINE	193	91.0
	Others	20	9.4
Type of products purchased impulsively (multiple responses)	Clothing and fashion	155	73.1
	Beauty and skincare	132	62.3
	Electronics and gadgets	68	32.1
	Food and beverages	45	21.2
	Others	18	8.5
Amount spent on impulse purchases (per month) (USD)	Less than $14	40	18.9
	$14–$28	55	25.9
	$28 – $84	62	29.2
	$84–$140	31	14.6
	$140–$280	16	7.6
	Above $280	8	3.8

N: 212; Missing data are not shown; 1 USD: 35.78 Baht

Table 3: Factor loadings, composite reliability, and AVE

Construct	Factor loadings	t-value	CR	AVE	Cronbach's alpha
FOMO			0.901	0.694	0.910
FOMO1	0.842	-			
FOMO2	0.864***	15.21			
FOMO3	0.829***	13.98			
FOMO4	0.796***	12.84			
SME			0.889	0.667	0.899
SME1	0.794	-			
SME2	0.868***	15.89			
SME3	0.823***	14.37			
SME4	0.778***	11.93			
IBB			0.921	0.746	0.926
IBB1	0.856	-			
IBB2	0.872***	15.64			
IBB3	0.905***	16.32			
IBB4	0.819***	13.92			
SC			0.791	0.558	0.784
SC1	0.733	-			
SC2	0.762***	11.49			
SC3	0.746***	10.93			

***: p < 0.001; FOMO1, SME1, IBB1, and SC1 are fixed parameters. Model fit indices: χ^2 (df = 285): 624.837; CMIN/df: 2.192; GFI: 0.902; CFI: 0.961; TLI: 0.956; RMSEA: 0.052

Table 4: Discriminant validity

Construct	FOMO	SME	IBB	SC
FOMO	0.833			
SME	0.612	0.817		
IBB	0.695	0.721	0.864	
SC	-0.431	-0.389	-0.456	0.747

Table 5: Structural model estimates

Hypothesis	Relationship	Estimate (β)	Result
H1	FOMO → SME	0.618***	Supported
H2	SME → IBB	0.572***	Supported
H3	FOMO → IBB	0.435***	Supported

***: p < 0.001; R^2 values: SME: 0.375; IBB: 0.623

To test the moderating effect of SC on the relationship between FOMO and IBB, a moderation analysis was conducted. The study initially computed factor scores for the key constructs and created interaction terms between SC and FOMO to evaluate their influence on IBB. The interaction terms were subsequently included in the structural equation model to examine whether SC weakens the direct effect of FOMO on IBB. The results of this moderation analysis are summarized in Table 6.

Table 6: Moderation analysis of SC in the relationship between FOMO and IBB

Hypothesis	Path	Interaction effect (β)	C.R.	Result
H4	FOMO × SC → IBB	-0.278**	-3.82	Significant

**: p < 0.01; C.R.: Critical ratio

The results indicate that self-control significantly moderates the relationship between FOMO and IBB. The negative interaction term (β = -0.278, C.R. = -3.82, p < 0.01) suggests that higher levels of self-control attenuate the positive effect of FOMO on impulse buying behavior. This finding supports H4, confirming that individuals with stronger self-regulatory mechanisms are less likely to engage in impulsive purchases driven by FOMO.

To test H5 and examine whether socio-economic characteristics moderate the relationship between FOMO and IBB, a multi-group analysis was performed in AMOS. Gender and education were analyzed as naturally categorical variables (male vs. female; below bachelor's degree vs. bachelor's degree or above). For income, respondents were split into low- versus high-income groups using the median split technique (median monthly income = USD 1,162; low ≤ 1,162 vs. high > 1,162). Age was categorized using a theoretically meaningful cut-off (≤ 30 years vs. > 30 years). Structural models were estimated for each group, and differences in regression weights were assessed using critical ratios (z-scores) (Table 7).

Table 7: Pathwise moderation effect: Group differences

		Structural path and direction FOMO → IBB			Result
		Estimate (β)	P	z-score	
Gender	Male	0.428***	0.000	-1.231	Not supported
	Female	0.442***	0.000		
Age	Younger (≤ 30 years old)	0.521***	0.000	4.612***	Supported
	Older (> 30 years old)	0.318***	0.000		
Education	Low (below bachelor's degree)	0.412***	0.000	-1.328	Not supported
	High (bachelor's degree or above)	0.449***	0.000		
Income	Low (≤ 1,162 USD)	0.430***	0.000	-1.417	Not supported
	High (> 1,162 USD)	0.438***	0.000		

***: p < 0.001

Table 7 presents the results of the socio-economic multi-group moderation analysis. The findings reveal that age significantly moderates the FOMO-IBB relationship, whereas gender, education, and income do not exhibit significant moderating effects. The results indicate that FOMO has a significant and positive impact on IBB for both younger (β = 0.521, p < 0.001) and older (β = 0.318, p < 0.001) consumers. The effect is significantly more pronounced among younger consumers, as indicated by the critical ratio (Z-score = 4.612), thereby corroborating the hypothesis that age influences the relationship. These results demonstrate that younger individuals exhibit a markedly greater influence of FOMO on impulsive purchasing behavior than their older counterparts. Conversely, no significant differences were found for gender (Z-score = -1.231), education level (Z-score = -1.328), or income (Z-score = -1.417), indicating that these factors do not significantly moderate the relationship between FOMO and IBB. As a result, H5 is partially supported.

Beyond the moderation effects, a bootstrapping analysis (5,000 samples) was performed to examine the mediating effect of SME on the relationship between FOMO and IBB. SME significantly mediates the relationship between FOMO and IBB, confirming a partial mediation effect (Table 8). Specifically, the direct effect of FOMO on IBB remains significant (β = 0.435, p < 0.001), while the indirect effect through SME is also significant (β = 0.353, p < 0.001). Thus, H6 is supported.

Table 8: Mediation analysis

Hypothesis	Direct effect	Indirect effect	Result
H6: SME mediates the relationship between FOMO and IBB.	0.435***	0.353***	Partial mediation

***: p < 0.001

5. Discussion

This study contributes to the growing body of literature on consumer psychology and digital marketing by empirically examining the impact of FOMO on IBB in the context of SME and SC. Grounded in the Stimulus-Organism-Response (S-O-R) framework, the findings provide strong empirical evidence supporting the psychological mechanisms underlying digital consumerism, particularly in highly interactive online environments. Based on the results of 212 samples, the findings showed that FOMO significantly influences IBB, reinforcing the premise that consumers experiencing anxiety over

missing out on experiences or products are more likely to engage in unplanned purchases. This aligns with previous studies (Franchina et al., 2018) that have linked FOMO to heightened emotional arousal and spontaneous decision-making. The psychological discomfort associated with FOMO reduces rational deliberation, making consumers more susceptible to impulsive consumption. The results also emphasize the mediating role of SME in the FOMO-IBB relationship.

Consumers who experience FOMO tend to engage more actively with social media, increasing their exposure to persuasive marketing tactics, including influencer endorsements, limited-time offers, and algorithm-driven promotions. This reinforces the idea that social media acts as a stimulus, amplifying impulse-driven consumption (Ngo et al., 2024). Notably, the partial mediation effect suggests that while social media intensifies the impact of FOMO, impulse buying tendencies are also directly influenced by FOMO-induced emotional distress.

The results of the moderation analysis revealed that SC significantly moderates the relationship between FOMO and IBB. The negative interaction effect indicates that consumers with higher self-regulatory capacity are significantly less prone to FOMO-induced impulsive purchases. This finding is consistent with prior research emphasizing self-control as a cognitive buffer against emotional decision-making (Baumeister, 2002; Zhao et al., 2025). It also aligns with self-regulation theory, which posits that individuals with greater inhibitory control can delay gratification and resist external pressures to consume impulsively (Duckworth et al., 2016).

For the ranges of individual socio-economic characteristics (gender, age, education level, and income) as the moderators of the relationship between FOMO and IBB, the results of multiple group analysis found that age significantly moderates the effect of FOMO on IBB, with younger consumers displaying stronger susceptibility to FOMO-driven purchases than older individuals. This finding supports previous studies (Rozgonjuk et al., 2021) suggesting that younger digital natives, particularly Gen Z and Millennials, are more immersed in social media ecosystems, making them more vulnerable to real-time digital persuasion techniques. In contrast, gender, education level, and income did not exhibit significant moderating effects, suggesting that FOMO-driven consumption is more psychologically than socio-economically driven.

The absence of significant moderating effects based on gender, education level, and income merits deeper theoretical scrutiny. A plausible account posits that FOMO primarily functions as an affective and psychological process that overrides conventional socio-economic demarcations (Alabri, 2022; Milyavskaya et al., 2018). In contrast to utilitarian purchasing choices, which are frequently limited by financial resources or informed by educational attainment, FOMO-triggered impulse buying remains predominantly emotion-led, ignited by immediate social comparisons and sensations of exclusion within digital spaces (Nguyen and Nguyen, 2025). Thus, individuals spanning diverse income and educational strata may display equivalent susceptibility upon exposure to FOMO-provoking social media content.

Moreover, the ubiquity of social media platforms, coupled with the standardizing influence of algorithmic curation, may erode the pertinence of established demographic differentiators in online consumption (Nguyen and Nguyen, 2025). Tactics like influence endorsements, customized recommendations, and urgency-driven promotions furnish comparable persuasive prompts across users irrespective of gender, education, or income, thereby diminishing the moderating impact of these socio-economic attributes. From a gender standpoint, this non-significant moderation could signify a homogenization of e-commerce practices between male and female cohorts, especially among digitally immersed populations, indicating that FOMO-fueled impulse buying no longer manifests as a gender-differentiated pattern in social commerce arenas (Reisenwitz and Fowler, 2023).

This study makes several notable contributions to the literature on consumer psychology, digital marketing, and behavioral economics. Firstly, this research extends the Stimulus-Organism-Response (S-O-R) model by integrating FOMO as an external stimulus, social media engagement as the organism (mediator), and impulse buying as the response (behavioral outcome). The results validate that FOMO-induced psychological states affect digital consumerism via social media interactions. Secondly, prior studies have examined general social media effects on impulse buying (Iyer et al., 2020; Zheng et al., 2019), but this research isolates FOMO as a key psychological trigger and demonstrates how it operates through social media engagement and self-control mechanisms. Thirdly, this study provides empirical evidence that self-control moderates FOMO-induced impulsive consumption, reinforcing self-regulation theories in the digital commerce space (Baumeister, 2002). This emphasizes how important it is to consider individual differences in self-regulation capacity when studying impulse buying behavior. Lastly, the research outlines generational variations in FOMO susceptibility, confirming that younger consumers are at higher risk of digital impulse buying due to heightened social media exposure and engagement. This study supports age-related digital consumer behavior theories.

For managerial and policy implications, the findings offer practical guidance for marketers, policymakers, and consumer protection agencies in shaping ethical digital marketing strategies. Firstly, while scarcity marketing tactics (e.g., flash sales, countdown timers, influencer exclusives) can drive conversions, brands should balance urgency-driven strategies with responsible marketing ethics. Overexposure to FOMO-inducing stimuli can lead to consumer regret and reduced brand trust. Secondly,

since social media engagement amplifies the FOMO-IBB link, brands should focus on targeted engagement strategies. AI-driven personalized recommendations and content moderation can be optimized to cater to consumer self-control levels. Thirdly, brands can integrate educational messaging in marketing campaigns, such as encouraging mindful spending and providing purchase reflection tools before checkout. Fourthly, given the strong link between FOMO, social media, and impulse buying, policymakers should consider stricter guidelines on scarcity-based digital advertising tactics (e.g., transparency in influencer promotions and misleading urgency claims).

Finally, consumer education programs should focus on developing self-control strategies for online shopping, particularly among young adults who are highly susceptible to FOMO-driven impulse spending.

6. Conclusion

The purpose of this study was to investigate how FOMO influences IBB and to examine the mediating role of SME together with the moderating effect of SC, as well as the potential variations across different socio-demographic factors such as age, gender, education, and income. Based on a sample of 212 social media users, the findings demonstrate that FOMO significantly impacts IBB, with SME serving as a partial mediator of this relationship. This suggests that individuals experiencing higher levels of FOMO are more engaged with social media, which increases their exposure to persuasive marketing tactics, leading to impulsive purchases. The findings further reveal that SC negatively moderates the FOMO-IBB relationship, indicating that individuals with higher self-control are less susceptible to FOMO-driven impulse buying. Additionally, among individual social characteristics, age was found to have a significant moderating effect, with younger consumers exhibiting greater susceptibility to FOMO-induced impulsive consumption. These insights contribute to consumer psychology and digital marketing literature by deepening the understanding of how psychological, behavioral, and demographic factors interact to shape impulse buying behavior in social media-driven environments.

Despite its contributions, this study has some limitations. First, it relies on self-reported survey data, which may be subject to response biases, such as social desirability and recall errors. Future research should consider incorporating behavioral data or experimental methods to validate these findings. Second, self-control was measured using a brief three-item scale. Although this measure demonstrated acceptable reliability, it may not fully capture the multidimensional nature of self-control compared to more comprehensive and established instruments, which should be considered when interpreting the moderation results. Third, the cross-sectional design of the study limits causal inferences. Despite the theoretical grounding of the proposed relationships (e.g., FOMO influencing social media engagement), we should interpret them as associative rather than definitive causal effects. Longitudinal or experimental research designs could provide a more robust understanding of the causal dynamics underlying FOMO-driven impulse buying behaviors over time. Fourth, the sample was drawn using a convenience sampling approach and primarily consists of young and highly active social media users (e.g., 42.5% aged 20–29), which may restrict the generalizability of the findings to older, less digitally engaged, or broader consumer populations. Fifth, the moderation analysis of socio-economic characteristics relied on binary categorization of continuous variables (age, education level, and income). Although this approach facilitates interpretability in multi-group analysis, it may lead to a loss of information and reduced statistical power. Consequently, some potential moderating effects may not have been fully detected.

Future research should investigate a broader spectrum of demographic cohorts to better delineate variations in FOMO-induced consumer behavior. Moreover, subsequent studies could enhance the proposed framework by integrating additional psychological and contextual constructions, such as financial literacy as a moderator, impulsivity as a mediator, or digital well-being as a mitigating factor on the indirect pathway from fear of missing out to impulse buying via social media engagement. Validation of these augmented models would afford a more refined comprehension of digital impulsive purchasing dynamics.

List of abbreviations

AVE	Average variance extracted
CAGR	Compound annual growth rate
CFI	Comparative fit index
CMIN	Minimum discrepancy
CR	Composite reliability
C.R.	Critical ratio
df	Degrees of freedom
FOMO	Fear of missing out
Gen Z	Generation Z
GFI	Goodness-of-fit index
IBB	Impulse buying behavior
N	Sample size
R^2	Coefficient of determination
RMSEA	Root mean square error of approximation
S-O-R	Stimulus–organism–response
SC	Self-control
SEM	Structural equation modeling
SME	Social media engagement
TLI	Tucker–Lewis index
Z-score	Standard score
χ^2	Chi-square

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Compliance with ethical standards

Ethical considerations

This study was reviewed and approved (or granted exemption) by the Ethics Committee for Human Research, Bangkok University (Reference No. 416812073). All participants provided informed consent prior to participation. Participation was voluntary, and anonymity and confidentiality were ensured throughout the study. The research was conducted in accordance with the Declaration of Helsinki.

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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