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Beyond Social Comparison: The Role of Fear of Exclusion and Narcissism in Driving FoMO and Impulse Buying on TikTok

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Abstract. This study examines the psychological antecedents of Fear of Missing Out (FoMO) and its impact on Flow experience on TikTok and impulse buying behavior among Generation Z users on TikTok in Vietnam. By analyzing data from 223 valid responses using Structural Equation Modeling (SEM), this study highlights a significant shift in user behavior compared to prior literature. Contrary to expectations and previous studies, Social Comparison and Relatedness had no significant influence on FoMO. Instead, Covert Narcissism, Scarcity, and notably, Fear of Exclusion emerged as the primary drivers. Furthermore, the results confirm that FoMO exerts a substantial direct effect on impulse buying behavior, in addition to a partial mediating effect through flow experience. These findings suggest that in a mature social commerce environment, purchasing behavior is driven less by interpersonal comparison and more by internal insecurities and fear of being isolated from trends. This study offers practical implications for marketers to pivot from comparison-based appeals to strategies that leverage scarcity and community inclusion.

Keywords: TikTok Shop, FoMO, Fear of Exclusion, Impulse Buying Behavior, Covert Narcissism, Vietnam Gen Z

1. Introduction

The rise of social commerce has revolutionized consumer interaction with brands by seamlessly blending social media engagement with purchasing opportunities. Platforms such as TikTok, with its signature short-form video format and powerful algorithm-driven personalization, have emerged as a central force in this transformation. Notably, TikTok users exhibit a higher propensity for purchasing products within the app (1.3 times) and discovering new brands and products (1.4 times) than users on other social media platforms (TikTok for Business, 2025). The strong user engagement and purchasing behavior on TikTok have fueled significant financial growth within its social commerce ecosystem. The Gross merchandise value is projected to reach USD 33.2 billion by 2024, more than doubling the previous year's performance (Statista, 2024). This positions TikTok as a formidable competitor against established e-commerce giants. The global impact of TikTok on social commerce is undeniable. In the United States, social commerce sales are expected to reach 71.62 billion in 2024, with TikTok playing a pivotal role in driving this revenue (Capital One Shopping, 2024). The Asia-Pacific region further underscores the dominance of social commerce, accounting for 69% of the global social commerce revenue in 2021. Even in Europe, the market is experiencing substantial growth, projected at a 19% compound annual growth rate through 2028, highlighting the platform's widespread appeal and increasing significance in the global e-commerce landscape (GlobalData, 2024). Consequently, businesses that overlook social commerce platforms such as TikTok risk missing significant opportunities to connect with an actively engaged consumer base and capitalize on a rapidly expanding sales channel.

Within this dynamic environment, the psychological concept of Missing Out (FoMO) has garnered considerable attention as a potential driver of consumer behavior and is often described as a digital disease in the technological age (Betoncu & Ozdamli, 2019). FoMO is believed to play a pivotal role in stimulating impulsive purchasing behavior in social commerce contexts (Parveiz *et al.*, 2023; Widodo, 2023). However, TikTok's unique recommendation algorithm, which prioritizes viral content and rapid trend cycles over consistent brand messaging, presents a challenge to maintaining the state of flow – a feeling of immersion and enjoyment that often precedes impulse buying behaviors (Andon & Annuar, 2023). This necessitates that brands continuously develop innovative and adaptable strategies to leverage FoMO for sustained campaign effectiveness and maintain user engagement without inducing content fatigue, a challenge amplified by the fast-paced nature of the platform. A fundamental concept for understanding consumer behavior on social media, particularly on platforms like TikTok, is the FoMO, which has demonstrated an influence over purchase decisions and user engagement. Given TikTok's rapidly evolving trends and content, FoMO may exert an even more pronounced effect on user behavior than on other platforms. Despite the increasing significance of social commerce on TikTok, research specifically examining the interplay between FoMO, Flow experience on TikTok, and impulse buying behavior on this platform remains limited. Existing studies have concentrated mainly on other social media platforms or have not fully addressed TikTok's distinct characteristics, such as its algorithm-driven content personalization, short-form video format, and integrated live shopping features, all of which could potentially shape these relationships. While broader research has identified social comparison and scarcity as key antecedents of FoMO (N.D. Phuong *et al.*, 2025; Reer *et al.*, 2019; J. Zhang *et al.*, 2022) and recent studies have begun to explore impulse buying on TikTok (Doan & Lee, 2023; Hoang & Khoa, 2022), the specific mechanisms linking FoMO, flow, and impulse buying within the TikTok social commerce environment remain largely unexplored.

Nevertheless, this theoretical framework encounters a significant challenge as TikTok transitions from a social networking platform to a sophisticated, interest-based commerce ecosystem. Unlike Facebook or Instagram, which utilize a Social Graph to connect friends and family, TikTok employs an Interest Graph algorithm that curates content primarily from strangers and influencers based on user preferences. In this scenario, users are less inclined to engage in profound personal comparisons with close peers. Instead, they experience a different form of pressure: the swift turnover of viral trends and

the collective anxiety of being excluded from the community. This raises a crucial question: Does Social Comparison remain the predominant driver of FoMO in 2024, or has it been supplanted by a more existential anxiety-the Fear of Exclusion from the cultural zeitgeist?

Moreover, while earlier research highlighted the necessity of a flow state to facilitate purchasing, the introduction of streamlined features such as TikTok Shop and Flash Sales may have modified this mechanism, enabling FoMO to directly trigger impulse buying and circumvent the need for prolonged immersion. To address these gaps, this study aims to re-evaluate and extend the theoretical model of FoMO and impulse buying behavior among Vietnamese Gen Z within the context of a mature social commerce platform. Specifically, this study transcends the traditional focus on social comparison by incorporating Fear of Exclusion and Covert Narcissism as key antecedents. By examining these variables, this study seeks to elucidate whether the drivers of consumer behavior have shifted from interpersonal comparison to internal insecurity and community belonging. The findings are anticipated to provide marketers with updated insights to transition from comparison-based appeals to more effective strategies that leverage scarcity and community inclusion.

2. Literature Review

2.1. Theoretical Framework: S-O-R Paradigm

To elucidate the mechanisms underlying impulse purchasing on TikTok, this study employs the stimulus–organism–response (S-O-R) paradigm (Mehrabian & Russell, 1974) as its principal theoretical framework, the S-O-R model suggests that environmental stimuli (Stimulus) elicit internal emotional and cognitive states (Organism), which in turn lead to behavioral responses (Response) (Khanh *et al.*, 2025; Phu *et al.*, 2026; Yusniar *et al.*, 2025). Within the scope of this study, stimuli are conceptualized as external influences on the TikTok platform, specifically scarcity cues and social pressures stemming from Social Comparison, Relatedness deficits, and Fear of Exclusion. The Organism (O) component represents internal psychological processes, particularly the state Fear of Missing Out, the immersive state of Flow experience on TikTok, and the personality trait of Covert Narcissism. The Response (R) is defined as the resultant behavioral outcome, specifically impulse buying behavior.

2.2. The Interplay of FoMO, Flow Experience, and Impulse Buying on TikTok

The interrelationship between Fear of Missing Out, flow experience, and impulse purchasing on TikTok represents a significant area of inquiry, given the platform's rapid expansion and unique characteristics (Nguyen Duy Phuong *et al.*, 2026). Unlike conventional social media, TikTok's short-form video format fosters an immersive and engaging environment where commerce is seamlessly integrated, potentially intensifying both flow states and FoMO triggers. FoMO is acknowledged as a potent motivator for purchasing behavior within marketing contexts (Hodkinson, 2019), and numerous commercial sectors have effectively harnessed this to stimulate consumer purchases.

However, research specifically investigating the interplay of FoMO, flow experience, and impulse buying on TikTok remains limited. A review of prior studies, summarized in Table 1, indicates that research on these relationships has evolved to explore various psychological and contextual factors. On platforms such as Instagram and Facebook, social comparison and scarcity have been identified as primary antecedents of FoMO. For instance, Reer *et al.* (2019) demonstrated that social comparison mediates the link between well-being and FoMO, while J. Zhang *et al.* (2022) found that scarcity cues, such as limited-time offers, trigger FoMO and lead to impulse buying behaviors. These findings provide a foundation for understanding how FoMO drives consumer behavior. TikTok's distinctive features, such as its algorithm-driven personalized content and live shopping capabilities, appear to amplify both FoMO and flow experiences. Research by Doan and Lee (2023) found that covert narcissism, social comparison, and scarcity significantly increase FoMO, which in turn enhances flow and impulse buying

among Vietnamese Generation Z users. Nguyen *et al.* (2024) highlighted the influential role of TikTok creators in generating FoMO, while Muharam *et al.* (2023) noted the impact of peer influence on purchasing decisions on the platform. The interactive and fast-paced nature of TikTok short videos likely heightens user engagement, fostering more profound flow experiences and more impulsive buying behaviors than Instagram Reels.

Based on a synthesis and review of related studies, it is evident that multiple factors influence the Fear of Missing Out, which is related to impulsive buying behavior through mediating factors, as demonstrated by the studies presented in Table 1. Building on the reviewed literature and reflecting on the study context, this research extends the work of Doan and Lee (2023) by incorporating the hypothesis that Fear of Exclusion affects Fear of Missing Out into the research model to address and clarify the existing research gap.

Table 1. Summary of Factors in Related Previous Studies

Factor	Reer *et al.* (2019)	Shahpasandi *et al.* (2020)	Jingjing Zhang *et al.* (2022)	Alabri (2022)	Park *et al.* (2022)	Muharam *et al.* (2023)	Doan and Lee (2023)
Social comparison	x						x
Scarcity			x				x
Fear of exclusion				x		x	
Relatedness							x
Covert narcissism					x		x
Flow experience		x					x
Fear of missing out	x		x	x	x	x	x
Impulse buying behavior		x	x			x	x

2.3. Hypothesis development

Based on the S-O-R framework and a review of prior literature, this study categorizes the antecedents of FoMO into two distinct groups: Social Factors (external social pressures) and Psychological Factors (internal traits and perceptions). Furthermore, this study hypothesizes the mechanism by which FoMO translates into consumer behavior through flow experience and direct Impulse Buying.

2.3.1. Social Factors: Social Comparison, Relatedness, and Fear of Exclusion

Social Comparison Theory, introduced by Festinger (1954), suggests that individuals determine their social and personal value by comparing themselves to others. This evaluative process becomes more pronounced when individuals face uncertainty about their own situations (Kruglanski & Mayseless, 1990). On social media platforms like TikTok, users are often exposed to the curated highlights of others, which depict superior lifestyles, popular products, or enticing experiences. Such upward comparisons can trigger negative emotions, such as envy, resentment, and anxiety (Smith, 2000). As a result, these feelings of inadequacy and relative deprivation intensify the fear of missing out, acting as direct precursors to FoMO (Reer *et al.*, 2019). Based on this theoretical framework, this study proposes the following hypotheses:

H1: Social comparison has a positive effect on Fear of missing out.

Self-Determination Theory (SDT), a pivotal framework in motivational psychology, posits that humans have three fundamental needs: autonomy, competence, and relatedness (Deci & Ryan, 1980). Of these, relatedness-defined as the aspiration to connect with others and to feel a sense of belonging closely linked to the concept of FoMO (Przybylski *et al.*, 2013). When individuals' need for relatedness is satisfied, they experience feelings of being valued and cared for, which alleviates their anxiety about social status. In contrast, when this need is unmet or hindered, individuals become acutely aware of social signals and are more prone to anxiety about being excluded (Muharam *et al.*, 2023). In this

scenario, FoMO acts as a regulatory mechanism, driving individuals to engage compulsively with social media to make up for their lack of meaningful social connections. Consequently, this study proposes the hypothesis that:

H2: Relatedness negatively affects Fear of missing out

Moreover, the apprehension of being excluded from social groups can intensify the experience of FoMO. Social exclusion, characterized by the removal or alienation from a social group, poses a threat to fundamental psychological needs such as self-esteem, connection, and belonging (F. M. Schneider *et al.*, 2017; Williams & Jarvis, 2006). When individuals perceive themselves as excluded, they may encounter increased anxiety and a heightened desire to engage in social activities to restore a sense of belonging (Maner *et al.*, 2007). Empirical evidence indicates that individuals with a pronounced fear of social exclusion are more susceptible to experiencing FoMO, as they are more attuned to the experiences of others and fear being left out (Alabri, 2022). Consequently, the following hypothesis is proposed:

H3: Fear of exclusion positively affects Fear of missing out

2.3.2. Individual and Psychological Factors: Covert Narcissism and Scarcity

Overt narcissism is typified by grandiosity and exhibitionism, whereas covert narcissism is characterized by hypersensitivity to criticism, insecurity, and a subtle sense of entitlement (Wink, 1991). Individuals exhibiting this trait possess a fragile self-esteem that is heavily dependent on external validation. As noted by Dickinson and Pincus (2003), covert narcissists frequently experience elevated levels of social anxiety and a fear of negative evaluation. Within the realm of social commerce, this vulnerability is manifested as an increased sensitivity to rejection (Park *et al.*, 2022). Consequently, covert narcissists are susceptible to experiencing FoMO, not solely due to a desire for connection, but also because of an intense anxiety that missing out on trends or products signifies a personal failure or a loss of status relative to others.

H4: Covert narcissism positively affects Fear of missing out

Scarcity is characterized by the perceived limited availability of a product in terms of both time and quantity. According to the Commodity Theory (Brock, 1968), the value of a commodity is directly proportional to its unavailability. When a product is perceived as scarce, it generates psychological urgency and increases its desirability (Lynn, 1989). On TikTok, this effect is amplified by features such as Flash Sales, countdown timers, and real-time inventory alerts. These marketing stimuli create a competitive environment where the opportunity to purchase is fleeting. As noted by (Hodkinson, 2019), scarcity marketing strategies directly exploit the fear of missing out on a beneficial transaction, compelling consumers to make decisions under emotional pressure rather than through rational deliberation.

H5: Scarcity positively affects Fear of missing out

2.3.3. The Mechanism: From Anxiety to Immersion and Action

Flow Theory, as proposed by Csikszentmihalyi (1975), describes a state of optimal experience marked by complete absorption and an altered perception of time. Although traditionally linked to enjoyment, recent research indicates that flow may also function as a coping strategy for digital anxiety. Individuals experiencing FoMO endure a persistent concern about missing rewarding experiences (Przybylski *et al.*, 2013; Uyen *et al.*, 2025). To mitigate this psychological tension, users engage in vigilant monitoring of social media feeds. TikTok algorithmic features, particularly its infinite scroll and personalized For You page, exploit this anxiety, enabling a seamless transition from checking updates to deep immersion. Nguyen *et al.* (2024) emphasized that TikTok creators significantly contribute to this process by employing engaging hooks that ensnare anxious users in prolonged viewing sessions. In this scenario, FoMO acts as a catalyst, propelling users into a flow state as they strive to stay abreast of the cultural zeitgeist.

H6: Fear of missing out positively affects flow experience on TikTok.

While previous research, such as that conducted by Doan and Lee (2023), identified no direct correlation, this posits a direct pathway facilitated by the evolution of platforms. Impulse buying is characterized as an unplanned and sudden urge to purchase a product with minimal consideration of the consequences (Rook, 1987). Drawing upon Drive-Reduction Theory, the phenomenon of FoMO induces a state of discomfort characterized by deprivation and social insecurity. Consumers are thus motivated to alleviate this drive. On a well-established social commerce platform like TikTok, purchasing a trending product functions as an immediate mechanism for restoring a sense of belonging and alleviating anxiety associated with missing out (Hodkinson, 2019). Recent empirical evidence substantiates this direct relationship. For example, Rachman *et al.* (2024) demonstrated that FoMO tendencies significantly predict impulse buying behavior across various digital contexts. Additionally, Muharam *et al.* (2023) found that peer conformity on TikTok Shop exerts significant pressure to align with trends, directly leading to impulsive purchase decisions to maintain social belonging. Contrary to previous findings that suggested flow as a necessary mediator, the current streamlined integration of TikTok Shop enables users to convert their anxiety directly into purchasing actions without requiring a prolonged period of immersion.

H7: Fear of missing out positively affects Impulse buying behavior on TikTok

Flow experience on TikTok serves as a significant predictor of online consumer behavior. When individuals enter a flow state, they experience diminished self-consciousness and reduced cognitive control (Duy *et al.*, 2025; Hoffman & Novak, 1996). This psychological condition results in a suspension of disbelief and critical thinking, rendering users more susceptible to external stimuli. Hoang and Khoa (2022) highlight that the TikTok short-form video format fosters a distinctive immersive environment where the lines between entertainment and commerce become indistinct. Users in a flow state are less inclined to scrutinize the commercial intent of a video and more likely to respond emotionally to product appeals. Consequently, the immersive enjoyment associated with the flow state lowers the barrier to spending, leading to spontaneous purchasing behavior, a finding consistently corroborated by the social commerce literature (Shahpasandi *et al.*, 2020; Thanh *et al.*, 2025).

H8: Flow experience on TikTok positively affects impulse buying behavior.

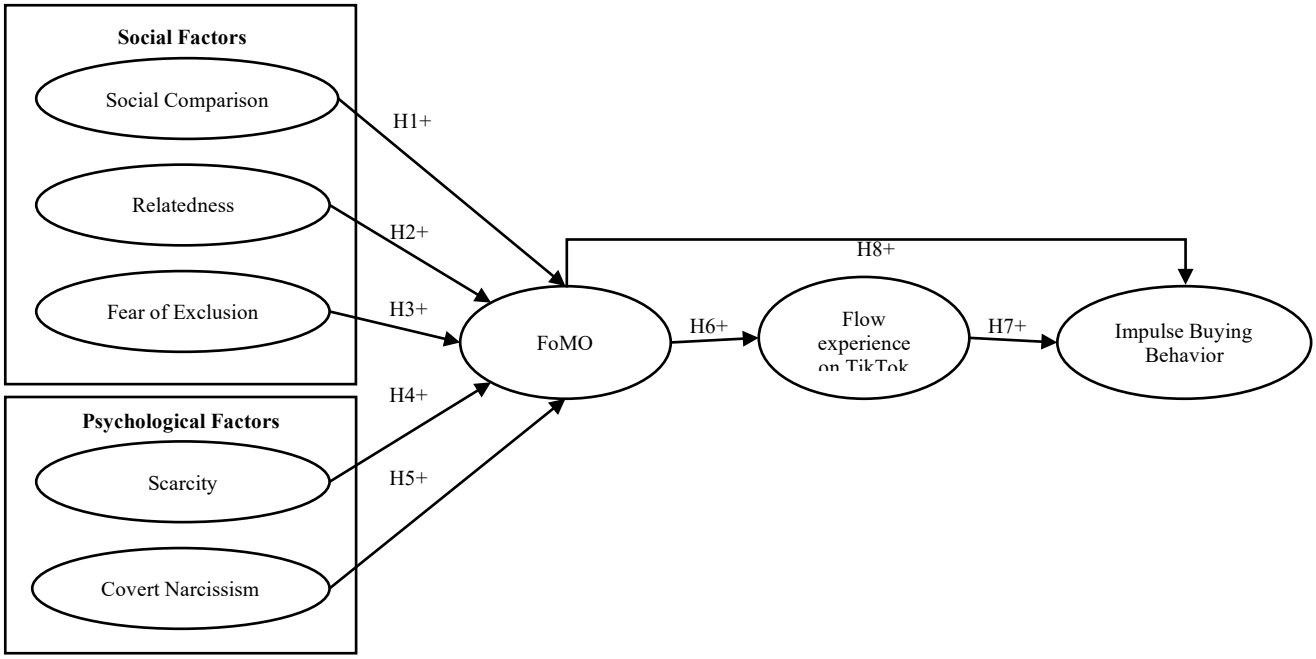

Fig.1: Research model

3. Methodology

This study employs a quantitative research approach and a deductive method to test the proposed theoretical model. The research process was conducted in two stages: (1) a preliminary pilot study to assess the reliability and validity of the measurement scales, and (2) a formal quantitative survey to collect empirical data for Structural Equation Modeling (SEM) analysis.

The measurement scales were inherited and adapted from established studies to ensure content validity. A standard translation and back-translation process (Brislin, 1970) was rigorously applied to translate the original English scales into Vietnamese, ensuring linguistic equivalence and cultural appropriateness for Vietnamese Gen Z users. The questionnaire consisted of 31 items measured on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

The questionnaire used in this study consisted of 31 Likert scale questions, measured on a scale from 1 to 5, ranging from strongly disagree to agree strongly. The measurement scales were adapted from previous research as follows: Social Comparison (SCO) scale with 3 items from S. M. Schneider and Schupp (2011), Relatedness (REL) scale with 3 items from Chen *et al.* (2015), Covert Narcissism (NAR) scale with 3 items from Hendin and Cheek (1997), Scarcity (SCA) scale with 4 items from Wu *et al.* (2012), Fear of Exclusion (ESC) scale with 3 items from Gilman *et al.* (2013), Flow experience on TikTok (FLO) scale with 5 items from Agarwal and Karahanna (2000), Fear of Missing Out (FOM) scale with 5 items from Przybylski *et al.* (2013) and Impulse buying behavior (IMP) scale with 5 items from Rook (1987).

Data were collected using a non-probability convenience sampling method, targeting Gen Z consumers in Vietnam. To ensure the eligibility of respondents, screening questions were employed to select only individuals who (1) actively use TikTok and (2) have prior experience purchasing products via TikTok Shop. The data collection comprised two phases: A pilot survey with 34 respondents was conducted. Reliability analysis using Cronbach's alpha confirmed that all subscales possessed adequate internal consistency (Cronbach's alpha > 0.7). A total of 300 questionnaires were distributed via online channels (Microsoft Forms) and direct distribution. After data cleaning to remove incomplete or straight-lining responses, 223 valid responses were retained for the final analysis, yielding a 74.3% response rate.

The collected data were processed using SPSS 20.0 and AMOS 24.0. The analysis followed a two-step approach recommended by Anderson and Gerbing (1988): Measurement Model Assessment: Cronbach's Alpha and Exploratory Factor Analysis (EFA) were first used to assess reliability. Subsequently, Confirmatory Factor Analysis (CFA) was conducted to evaluate convergent validity, discriminant validity, and model fit using indices such as CFI, TLI, and RMSEA. Structural Model Assessment: Structural Equation Modeling (SEM) was applied to test the hypothesized relationships and path coefficients between the latent constructs.

The survey results revealed the following key characteristics of respondents: female gender (136 people, accounting for 61%); age range from 18 to 25 years old (211 people, accounting for 94.63%); university education level (183 people, accounting for 82.06%); student occupation (218 people, accounting for 97.76%); income below 5 million VND (187 people, accounting for 83.85%); TikTok usage time between 1 and 5 hours (193 people, accounting for 86.54%); and purchase frequency of less than 5 times (212 people, accounting for 95.06%).

4. Findings

4.1. Reliability

Table 2 presents the Cronbach alpha test results. All measurement scales had Cronbach alpha coefficients greater than 0.6, and the item-total correlation coefficients of all observed variables were

greater than 0.3. Therefore, all measurement scales achieved acceptable reliability (Nunnally & Bernstein, 1994).

Table 1. Analysis of Cronbach's alpha

Scale	Code	No. of Item	Cronbach Alpha	Smallest Corrected Item-Total Correlation
Social comparison	SCO	3	0.748	0.555
Relatedness	REL	3	0.748	0.541
Covert narcissism	NAR	3	0.783	0.598
Scarcity	SCA	4	0.824	0.577
Fear of exclusion	ESC	3	0.9	0.781
Flow experience on TikTok	FLO	5	0.827	0.582
FoMO	FOM	5	0.918	0.693
Impulse buying behavior	IMP	5	0.888	0.701

Table 3 presents the exploratory factor analysis results. All 31 observed variables had KMO coefficients greater than 0.5, with a Sig. < 0.05 and eigenvalues > 1. The total extracted variance was greater than 50%, and all factor loadings were greater than 0.5, indicating that the 31 observed variables effectively explained the data variance, according to Hair *et al.* (2019), these values demonstrate that the observed variables are correlated with each other, and the factors are meaningful and consistent with the proposed hypotheses.

Table 2. Exploratory factor analysis results

Factor	No. of Item	Factors Loading	Kaiser-Meyer-Olkin Measure	Bartlett Test (Sig)	Variance (%)
1. Independent variables					
Social comparison	3	0.734 – 0.819	0.819	0.000	71.648%
Relatedness	3	0.708 – 0.850			
Covert narcissism	3	0.713 – 0.834			
Scarcity	4	0.734 – 0.819			
Fear of exclusion	3	0.836 – 0.860			
2. Mediating variables					
Flow experience on TikTok	5	0.739 – 0.814	0.801	0.000	59.591%
FoMO	5	0.794 – 0.909	0.878	0.000	75.436%
3. Dependent variable					
Impulse buying behavior	5	0.810 – 0.857	0.878	0.000	69.140%

4.2. Confirmatory factor analysis (CFA)

Table 4 demonstrates strong convergent validity according to Anderson and Gerbing (1988) criteria. The Standardized Regression Coefficients ranged from 0.656 to 0.904, with all Average Variance Extracted (AVE) values exceeding the recommended 0.5 threshold (minimum value: 0.503). Additionally, all Composite Reliability (CR) values met the required standards, with the lowest value being 0.752.

Table 3. Standardized regression coefficients, AVE, and CR of the measurement model

Latent Variable	Measurement Variable	β	CR	AVE
Social comparison	SCO3	0.709	0.753	0.504
	SCO2	0.668		
	SCO1	0.750		
Relatedness	REL3	0.742	0.752	0.503
	REL2	0.706		
	REL1	0.677		
Covert narcissism	NAR3	0.812	0.782	0.547
	NAR2	0.743		
	NAR1	0.656		
Scarcity	SCA4	0.739	0.825	0.543
	SCA3	0.641		
	SCA2	0.796		
	SCA1	0.763		
Fear of exclusion	ESC3	0.833	0.901	0.753
	ESC2	0.879		
	ESC1	0.890		
Flow experience on TikTok	FLO5	0.609	0.808	0.515
	FLO4	0.694		
	FLO3	0.694		
	FLO2	0.806		
	FLO1	0.745		
FoMO	FOM5	0.855	0.919	0.697
	FOM4	0.721		
	FOM3	0.813		
	FOM2	0.904		
	FOM1	0.869		
Impulse buying behavior	IMP5	0.812	0.889	0.615
	IMP4	0.780		
	IMP3	0.765		
	IMP2	0.783		
	IMP1	0.780		

Table 4. Correlation coefficients between latent variables and square roots of AVE

	SCO	REL	NAR	SCA	ESC	FLO	FOM	IMP
SCO	**0.710**							
REL	0.380	**0.709**						
NAR	0.029	0.381	**0.740**					
SCA	0.212	0.571	0.429	**0.737**				
ESC	-0.060	0.262	0.654	0.358	**0.868**			
FLO	0.363	0.568	0.214	0.428	0.089	**0.717**		
FOM	0.078	0.388	0.689	0.516	0.629	0.272	**0.835**	
IMP	0.093	0.315	0.467	0.569	0.493	0.391	0.587	**0.784**

Note: The values listed diagonally are the square roots of the AVE of the variables.

Following Fornell and Larcker (1981), as presented in Table 5, the square root of AVE for each variable is greater than the other correlation coefficients, which indicates that the discriminant validity is achieved in this study.

Furthermore, the goodness of fit of the model was assessed using multiple fit indices, as recommended by Hair *et al.* (2019). All values satisfied the acceptable fit criteria, indicating that the model factors aligned well with the collected data (Table 6).

Table 5. Goodness-of-fit indices of the measurement model

GOF Index	Acceptable Values	Value Obtained
CMIN/DF	≤ 5 (Bagozzi & Yi, 1988; Bentler & Bonett, 1980)	1.626
TLI	>0.92 (Hair et al., 2019)	0.924
CFI	>0.92 (Hair et al., 2019)	0.934
RMSEA	< 0.07 with CFI ≥ 0.92 (Hair et al., 2019)	0.053

Note: CMIN/DF = the ratio of the chi-square value to the degree of freedom; TLI = Tucker-Lewis index; CFI = comparative fit index; RMSEA = root mean square error of approximation.

4.3. Structural Equation Modelling (SEM)

Table 7 shows that all values satisfied the acceptable fit criteria proposed by Hair *et al.* (2019), demonstrating that the model factors aligned well with the data.

The research hypotheses were tested using path estimates, critical ratios (t-values), and p-values. Relationships between variables are significant when t-values are above 1.96, and p-values are below 0.05. Table 8 shows that six hypotheses of this study were found to be statistically significant, as the t values were above 1.96 and the values were below 0.05, while two of the hypotheses were not found to be significant.

More specifically, H1 was rejected, as the relationship between social comparison (SCO) and FoMO (FOM) was found to be non-significant (t-value = 0.483, p = 0.629). Similarly, H2 was not accepted, with relatedness (REL) showing no significant influence on FoMO (t-value = 0.261, p = 0.794). In contrast, H5 is accepted, as covert narcissism (NAR) demonstrated a strong positive effect on FoMO (β = 0.390, t = 4.234, p < 0.001). H4 is also accepted, with scarcity (SCA) significantly influencing FoMO (β = 0.245, t = 3.122, p = 0.002). H3 is accepted as well, since fear of exclusion (ESC) showed a significant positive relationship with FoMO (β = 0.290, t = 3.638, p < 0.001). Regarding the downstream effects, H6 was accepted, as FoMO (FOM) significantly influenced flow experience on TikTok (FLO) (β = 0.283, t-value = 3.676, p < 0.001), and H7 was accepted, with flow experience on TikTok (FLO) positively impacting impulse buying behavior (IMP) (β = 0.233, t-value = 3.350, p < 0.001). Most notably, H8 revealed the strongest effect in the model, with FoMO (FOM) exerting a substantial influence on impulse buying behavior (IMP) (β = 0.540, t-value = 7.461, p < 0.001). In summary, the results indicate that six hypotheses (H3, H4, H5, H6, H7, and H8) are accepted, while two hypotheses (H1 and H2) are not accepted. Covert narcissism emerged as the strongest predictor of FoMO, and FoMO had the most pronounced direct effect on impulse-buying behavior. Social comparison and relatedness did not significantly contribute to the model.

Table 6. Goodness-of-fit indices of the structural model

GOF Index	Acceptable Values	Value Obtained
CMIN/DF	≤ 5 (Bentler & Bonett, 1980; Bagozzi & Yi, 1988)	1.782
TLI	>0.92 (Hair et al., 2019)	0.905
CFI	>0.92 (Hair et al., 2019)	0.916
RMSEA	< 0.07 with CFI ≥ 0.92 (Hair et al., 2019)	0.059

Note: CMIN/DF = the ratio of the chi-square value to the degree of freedom; TLI = Tucker-Lewis index; CFI = comparative fit index; RMSEA = root mean square error of approximation.

Table 7. Hypotheses testing results

Hypotheses	Estimate	S.E.	C.R.	P	Finding
H1: FOM <--- SCO	.032	.115	.483	.629	Rejected
H2: FOM <--- REL	.022	.125	.261	.794	Rejected
H3: FOM <--- ESC	.290	.081	3.638	***	Accepted
H4: FOM <--- NAR	.390	.094	4.234	***	Accepted
H5: FOM <--- SCA	.245	.101	3.122	.002	Accepted
H6: FLO <--- FOM	.283	.051	3.676	***	Accepted

Hypotheses	Estimate	S.E.	C.R.	P	Finding
H7: IMP <--- FOM	.540	.068	7.461	***	Accepted
H8: IMP <--- FLO	.233	.098	3.350	***	Accepted

Note: Estimate = Standardized Regression Weights (Path Estimate); S.E. = Standard Error; C. R. = Critical Ratio (t-value); P Value = significance value; *** = $p < 0.001$.

5. Discussion

This study examines the intricate relationship between psychological precursors, Flow experience on TikTok, and impulse buying behavior within the evolving framework of TikTok Social Commerce in Vietnam. By differentiating between social and psychological motivators, the findings provide a nuanced reassessment of consumer behavior that both supports and significantly diverges from existing literature.

Contrary to initial expectations and findings from previous social media studies, this study identified no significant relationship between Social Comparison or Relatedness and FoMO. This outcome challenges the applicability of the Social Comparison Theory (Festinger, 1954) within the specific context of TikTok's contemporary algorithm. We propose that this discrepancy arises from the platform transition from a Social Graph (connecting friends) to an Interest Graph (connecting users with content). On TikTok, interactions are often transient and based on entertainment value rather than profound interpersonal connections. Consequently, the pressure to keep up with peers or the need for deep emotional bonding (relatedness) is insufficient to provoke anxiety about missing out. This suggests that for Gen Z users, the fear is not about losing connection with specific peers but rather a broader anxiety about disconnecting from the digital trend itself.

The phenomenon of FoMO appears to be primarily driven by internal psychological vulnerabilities rather than external comparisons. Covert Narcissism has emerged as the most significant predictor of FoMO (beta=0.390), corroborating the findings of Dickinson and Pincus (2003) and extending the work of Park *et al.* (2022). This suggests that individuals with fragile self-esteem are susceptible to the threat of being overlooked. For these individuals, failing to engage with a trend is perceived as a failure to affirm their self-concept. Moreover, Fear of Exclusion has been identified as a crucial new determinant (beta=0.290). Unlike the general need for relatedness, this variable encapsulates the specific existential anxiety associated with being excluded from a collective experience. Marketing strategies that exploit this fear drive purchase decisions by framing non-participation as social isolation (Indrawati *et al.*, 2023). This indicates a shift in the motivational driver from envy to fear of isolation.

The study reaffirms that scarcity remains a potent antecedent of FoMO (beta=0.245), consistent with Commodity Theory (Brock, 1968). In the context of live commerce, scarcity is not merely a perception but a tangible reality. Features such as real-time inventory counters and limited-time Flash Sale banners engender a visceral sense of urgency. This supports Hodkinson (2019) assertion that scarcity marketing capitalizes on the fear of missing out on a beneficial transaction, compelling consumers to act swiftly to avoid future regret.

Our analysis identifies two distinct pathways leading to impulse buying behavior, offering a more comprehensive perspective than previous single-path models. Indirect Pathway (Flow-Mediated): In alignment with Hypothesis 6 and Hypothesis 8, FoMO incentivizes users to engage deeply with the platform (beta=0.283), culminating in a state of flow that subsequently facilitates Impulse Buying (beta=0.233). This supports the notion that immersive entertainment diminishes cognitive resistance, rendering users more susceptible to shoppertainment tactics (Shahpasandi *et al.*, 2020). Direct Pathway (Fast-Track): Notably, the study reveals a robust direct effect of FoMO on Impulse Buying (beta=0.540), which is significantly stronger than the indirect pathway. This finding diverges from Doan and Lee (2023) but aligns with Drive-Reduction Theory. It suggests that the seamless integration of the TikTok Shop enables users to immediately alleviate their anxiety through a purchase, without necessitating a prolonged flow state. Purchasing acts as an immediate coping mechanism to mitigate the psychological

tension of FoMO. This underscores a critical evolution in user behavior: on mature platforms like TikTok, the gap between anxiety and action has been reduced to a single click.

6. Conclusion

6.1. Theoretical Implications

This study makes three substantial contributions to the literature on social commerce and consumer psychology in the digital age:

First, it challenges the hegemony of Social Comparison Theory in the context of modern algorithmic platforms. Previous studies on Facebook or Instagram (Reer *et al.*, 2019) have assumed mainly that upward comparison with peers is the primary driver of FoMO. However, our findings provide empirical evidence for a paradigm shift. In the TikTok Interest Graph ecosystem, purchasing behavior is no longer driven by the desire to outperform specific social ties (Strong Ties) but by the anxiety of disconnecting from the collective cultural flow (Fear of Exclusion). This necessitates a revision of the theoretical models applied to short video platforms, suggesting that Fear of Exclusion is a more relevant construct than Relatedness or Social Comparison.

Second, this study extends the application of the S-O-R framework by integrating personality traits with platform-specific mechanisms. By validating Covert Narcissism as a key antecedent, this study highlights that FoMO is not merely a social phenomenon but a manifestation of internal vulnerability and the need for validation. This enriches the organism component of the S-O-R model, proving that individual psychological traits significantly moderate how users process external scarcity cues.

Third, this study offers a critical update on the FoMO-Flow-Purchase mechanism. While earlier research by Doan and Lee (2023) emphasized the mediating role of flow, our discovery of a dominant direct path supports the Drive-Reduction Theory. This suggests that the evolution of platform features has shortened the psychological distance between Anxiety and Action. Theoretically, this implies that in mature social commerce environments, impulse buying serves as an immediate coping mechanism for digital anxiety and functions independently of deep immersion.

6.2. Managerial Implications

For brands and marketers engaging with TikTok, the findings indicate a strategic shift from aspiration-based marketing to strategies centered on inclusion and urgency.

In light of the diminishing role of social comparison as a primary motivator, brands should cease utilizing content that incites envy and competition among users. Instead, marketing strategies should leverage the Fear of Exclusion. Actionable Tactic: Develop challenge campaigns or utilize trending sounds that promote a sense of collective participation. Marketing messages should position the product not as a status symbol to surpass others, but as a means to become part of a community. Employ micro-influencers to cultivate a perception of widespread adoption, rather than relying on endorsements from distant celebrities.

The validation of scarcity highlights the significance of flash sale mechanics. Actionable Tactic: Marketers should fully exploit TikTok Shop's real-time features, such as visible inventory counters and countdown stickers in livestreams. These visual cues directly trigger the primal anxiety of missing a fleeting opportunity, thereby converting viewers into buyers.

Recognizing covert narcissism as a motivator, brands should craft messages that offer subtle validation and insider status. Actionable Tactic: Develop exclusive or early access campaigns for followers. Offer products that enable users to signal their trendiness or unique tastes. The content should reassure users that owning the product validates their identity and prevents them from being left behind by the zeitgeist.

As the Fear of Missing Out directly leads to purchasing (Fast-Track), any friction in the checkout process can disrupt the impulse. Actionable Tactic: Brands must optimize their TikTok Shop

configurations to ensure the shortest possible click-to-buy journey. Redirecting users to external websites should be avoided. Employ livestream shopping where moderators consistently remind viewers to Buy Now to immediately alleviate their anxiety, capitalizing on the direct FoMO-to-Purchase pathway.

6.3. Limitations and Further research

While this study offers fresh perspectives on TikTok social commerce in Vietnam, it has some shortcomings. Acknowledging these limitations is crucial for interpreting the results and setting the stage for future research. First, the demographic scope of this study was relatively narrow. The data were primarily collected from Gen Z users living in Ho Chi Minh City. While this group represents the core user base of TikTok, it does not reflect the behaviors of older generations (Gen Y and Gen X) or consumers in rural areas, who might exhibit different psychological responses to trends and scarcity. Future studies should aim for a more stratified sample across different age groups and geographies to verify whether these findings hold for the broader Vietnamese population. Second, the reliance on cross-sectional data presents technical constraints. As all variables were measured at a single point in time, we could infer correlations but could not definitively claim causality. For instance, does FoMO cause impulse buying, or do frequent impulse buyers develop higher FoMO? Longitudinal designs or experimental methods in future research could better untangle these causal relationships over time. Third, this study focused exclusively on the TikTok platform. Given the rise of similar short video formats like Facebook Reels and YouTube Shorts, it remains unclear whether the Fear of Exclusion mechanism is unique to the TikTok algorithm or a general feature of short-form video consumption. Comparative studies across these platforms would be valuable for isolating platform-specific effects. Finally, there is an opportunity to explore other moderating variables in future studies. Factors such as income levels, financial literacy, and Brand Trust may buffer the impact of FoMO on purchasing decisions. We encourage future researchers to incorporate these variables to build a more holistic model of consumer behavior.

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