

Fear of Missing Out (FoMO) and Preferential Hunting Behavior on E-Commerce Platforms: A Case Study of Shopee and Lazada

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Abstract. This study investigated the psychological mechanism through which Fear of Missing Out (FoMO) influenced consumers' preferential hunting behavior on two leading e-commerce platforms in Vietnam: Shopee and Lazada. Drawing on an integrated theoretical framework combining FoMO theory, self-determination theory, scarcity theory, social influence theory, and perceived value theory, the research examined how FoMO affected deal-seeking intentions and behaviors through multiple pathways. A structural equation model was developed and tested using data collected from Vietnamese e-commerce users through an online survey. The analysis revealed that FoMO significantly influenced perceived scarcity, perceived benefits, and consumer sentiment, which subsequently shaped deal-seeking intention and actual preferential hunting behavior. The model demonstrated substantial explanatory power for both deal-seeking intention and preferential hunting behavior. Additionally, social influence and online shopping experience were confirmed as significant moderators, with social influence amplifying FoMO's effects on perceptions and experience, strengthening the intention-behavior relationship. The findings advanced theoretical understanding of FoMO in commercial contexts and provided actionable insights for designing psychologically attuned promotional strategies in emerging e-commerce markets.

Keywords: Fear of Missing Out (FoMO), Preferential Hunting Behavior, Deal-Seeking Intention, Scarcity Perception, Consumer Sentiment, Social Influence, E-commerce Marketing.

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1 Introduction

The proliferation of digital commerce has fundamentally transformed consumer behavior patterns globally, with particularly profound effects observed in rapidly developing markets across Southeast Asia. Vietnam represents a compelling case study of this digital transformation, where e-commerce has experienced explosive growth, with the market value projected to reach \$23 billion by 2025 [1]. Within this burgeoning digital marketplace, two platforms – Shopee and Lazada – have emerged as dominant forces, collectively capturing over 60% of Vietnam’s e-commerce market share. These platforms have distinguished themselves through aggressive promotional strategies that leverage time-sensitivity, exclusivity, and gamification to drive consumer engagement and purchasing behavior.

Shopee, backed by Sea Group, has pioneered a mobile-first approach with gamified elements such as in-app games, coins, and daily check-in rewards that transform the shopping experience into an interactive engagement. Similarly, Lazada, under Alibaba’s ownership, has implemented a sophisticated promotional ecosystem featuring flash sales, time-limited vouchers, and membership-tiered benefits that create a perpetual sense of urgency and exclusivity [2]. Both platforms have systematically incorporated psychological triggers designed to stimulate immediate consumer action through limited-time offers, countdown timers, inventory warnings, and social proof indicators.

Within this strategically designed digital environment, a distinctive consumer behavior pattern has emerged – what this study conceptualizes as “preferential hunting behavior.” This phenomenon describes consumers’ systematic and proactive pursuit of promotional deals, characterized by vigilant monitoring of flash sales, strategic timing of purchases, and dedicated effort to secure limited-quantity offers before they expire or sell out. Unlike general browsing or routine purchasing, preferential hunting involves an intentional, often vigilant approach to e-commerce engagement specifically oriented toward capturing perceived opportunities before they vanish [3]. The psychological underpinnings of this behavior pattern appear closely linked to Fear of Missing Out (FoMO), defined by Przybylski, et al. [4] as “a pervasive apprehension that others might be having rewarding experiences from which one is absent.” While initially studied in social media contexts, FoMO has increasingly been recognized as a powerful driver of consumer behavior in commercial environments. In e-commerce settings, this anxiety manifests as concern about missing advantageous deals, limited-edition products, or exclusive promotions that others might secure first [5]. The intersection of FoMO with carefully designed e-commerce environments creates a psychologically charged decision context [6]. When Shopee displays “95% claimed” beneath a flash sale item or Lazada implements a prominent countdown timer, these elements potentially trigger FoMO responses by signaling imminent loss of opportunity. The resulting psychological pressure may drive consumers toward accelerated decision-making and heightened emotional engagement with promotional offers [1]. Understanding this relationship between FoMO and preferential hunting behavior has significant implications for both psychological theory and e-commerce strategy, particularly in rapidly developing digital economies where promotional intensity continues to escalate.

The remainder of this article is organized as follows: Section 2 presents the theoretical foundation, literature gap, and proposed research model with hypotheses. Section 3 outlines the research methodology, including sampling strategy and analytical approach. Section 4 reports the empirical results from both measurement and structural model assessments. Section 5 discusses the theoretical and practical implications of the findings, and Section 6 concludes with limitations and future research directions.

2 Theoretical Foundation and Research Gap

This section starts with the generic introduction to the theoretical foundations for FoMO. Then it discusses the research gap and proceeds with the research model and the developed hypotheses.

2.1 Theoretical Foundation

The theoretical foundation for understanding FoMO-driven consumer behavior spans multiple psychological and behavioral frameworks. FoMO theory, as developed by [4], establishes that individuals experience psychological discomfort when perceiving that others are enjoying rewarding experiences from which they are excluded. In digital commerce contexts, this extends beyond social experiences to economic opportunities, where consumers may experience similar distress when observing others securing favorable deals or exclusive products [2].

Self-Determination Theory (SDT) provides complementary insights by identifying how FoMO relates to fundamental psychological needs. According to Ryan and Deci [7], human motivation is shaped by three core needs: autonomy, competence, and relatedness. FoMO can be conceptualized as a state that disrupts these needs – particularly autonomy and relatedness – creating motivational tension that often resolves through compliance with suggested behaviors such as pursuing promoted deals [5], [8].

Moreover, scarcity theory, as articulated by Cialdini [9], explains why limited availability enhances perceived value and motivational urgency. E-commerce platforms systematically leverage this principle through inventory limitations, countdown timers, and exclusive access mechanisms. Zhang, et al. [3] demonstrated that scarcity cues in online flash sales significantly increased purchase intention through heightened urgency and perceived value, establishing a direct link between scarcity signals and consumer response in digital environments [10].

Social influence theory identifies three processes through which social factors shape individual behavior: compliance, identification, and internalization [11]. In e-commerce contexts, these processes operate through various mechanisms including social proof indicators (“500+ bought this”), influencer endorsements, and platform-generated social norms (“popular choice”). These social influence mechanisms can significantly amplify FoMO effects, particularly when consumers observe others successfully acquiring limited deals [2], [12].

Finally, perceived value theory posits that consumers evaluate offerings based on their perception of what is received versus what is given up [13], [14]. Under FoMO conditions, this evaluation becomes distorted as consumers place more importance on immediate benefits than future costs, leading to Altered value perceptions that favor immediate action. This temporal discounting is particularly evident during flash sales events, where consumers often prioritize the immediate value of securing a deal over longer-term considerations.

Collectively, these theoretical frameworks provide a robust foundation for investigating how psychological, social, and contextual factors interact to shape consumer behavior in promotion-intensive e-commerce environments such as Shopee and Lazada.

2.2 Related Studies and Research Gaps

FoMO has been extensively studied in domains such as social media engagement, mobile phone addiction, and digital wellbeing [15]. In recent years, research has shifted toward the intersection of FoMO and online shopping behavior. For instance, Hosny and Sollaci [1] found that FoMO can drive impulse buying during flash sales. Similarly, Li, et al. [2] showed that FoMO increases participation

in time-limited group-buying promotions. Despite the growing body of literature examining FoMO and consumer behavior, several significant research gaps remain unaddressed.

1. First, there exists an integration gap in theoretical frameworks. While various theories including FoMO, self-determination theory, scarcity theory, social influence theory, and perceived value theory have individually provided insights into aspects of consumer urgency and impulsivity, few studies have systematically integrated these perspectives into a unified explanatory model. This theoretical fragmentation has limited our understanding of how these psychological mechanisms interact in promotional e-commerce contexts [4].
2. Second, a significant mediation gap persists in our understanding of the cognitive and emotional pathways connecting FoMO to behavioral outcomes. Most existing studies examine FoMO as a direct driver of purchase decisions without adequately exploring the mediating mechanisms that explain its effects [1]. The specific roles of perceived scarcity, benefit perception, and emotional responses in transmitting FoMO's influence remain insufficiently explored, particularly in commercial contexts.
3. Third, previous research demonstrates a moderation gap by inadequately addressing the conditional nature of FoMO effects. While social factors have received some attention, the moderating roles of contextual variables such as social influence and consumer experience have not been systematically investigated [2]. These boundary conditions are essential for understanding when and how FoMO most strongly influences consumer behavior in digital environments.
4. Finally, a contextual gap exists in the literature's geographic and cultural scope. The majority of FoMO research has been conducted in Western or developed East Asian markets, with limited attention to emerging economies in Southeast Asia despite their rapidly growing e-commerce sectors [5]. This geographic limitation confines understanding of how cultural factors might shape FoMO-driven behaviors in collectivist contexts such as Vietnam.

The current study addresses these gaps by proposing and empirically testing a comprehensive model that captures both the mediating mechanisms (perceived scarcity, benefits, consumer sentiment) and moderating factors (social influence, online shopping experience) that link FoMO to preferential hunting behavior in the context of Vietnamese e-commerce platforms.

2.3 Research Model

The literature review reveals that FoMO represents a powerful psychological driver of consumer behavior in digital environments, operating through multiple pathways to influence deal-seeking intentions and actions. The integration of FoMO theory with self-determination theory, scarcity theory, social influence theory, and perceived value theory provides a robust conceptual foundation for understanding the complex psychological mechanisms underlying preferential hunting behavior on e-commerce platforms [16].

Based on this theoretical foundation, the current study proposes a comprehensive structural model in which FoMO influences perceived scarcity, perceived benefits, and consumer sentiment, which in turn shape deal-seeking intention and ultimately preferential hunting behavior. Furthermore, social influence and online shopping experience are incorporated as moderating variables that regulate the strength of these relationships under different conditions.

This integrated approach not only addresses existing gaps in the literature but also advances theoretical understanding of how psychological, social, and contextual factors interact to shape consumer behavior in contemporary digital commerce environments. The subsequent empirical

investigation will test this model using data from Vietnamese consumers, contributing both theoretical insights and practical implications for e-commerce strategy in emerging markets [17].

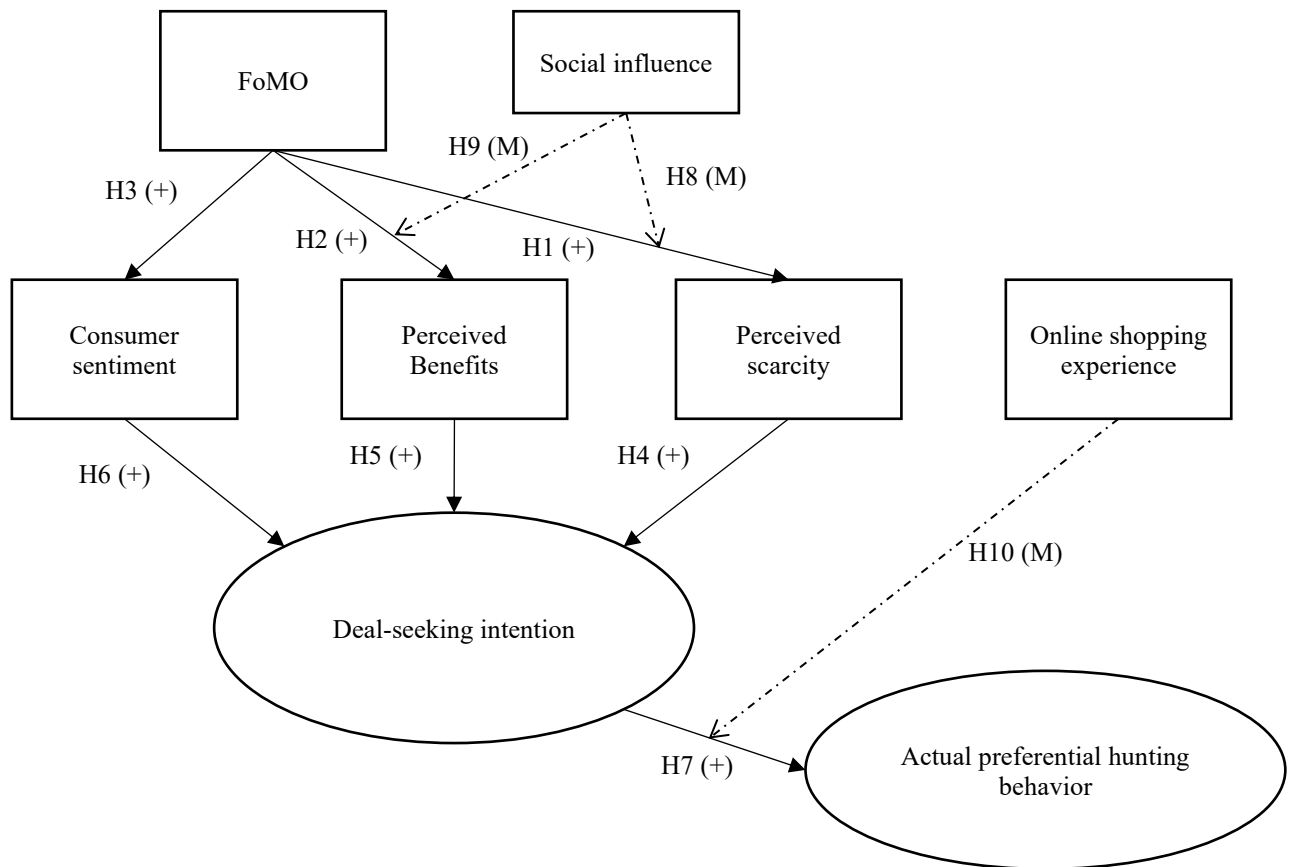
The definitions of Key Constructs are as follows:

- *Preferential Hunting Behavior*. The consumer's actual effort to pursue time-limited or exclusive online offers.
- *Deal-Seeking Intention*. The motivational state that precedes preferential hunting behavior.
- *Consumer Sentiment*. Affective responses such as excitement, urgency, or anxiety triggered by exposure to promotional stimuli.
- *Social Influence*. The impact of peer opinion, online reviews, or influencer content on a consumer's perception.
- *Online Shopping Experience*. The consumer's familiarity, frequency, and comfort with e-commerce platforms, affecting their behavioral execution.

Moreover, the model incorporates two moderating variables:

- Social influence, which is measured by the number of review comments in website/e-marketplace (low level: less than 10; high level: equal to or more than 10).
- Online shopping experience, which is measured by the frequency of purchase per month (low level: less than 5 times; high level: equal to or more than 5 times).

These moderating effects aim to explain under which conditions FoMO exerts the strongest influence on consumer decision-making and action.



Note: (+): positive effect, (M): moderating effect

Figure 1. Research Model

2.4 Hypotheses Development

In this section, the hypotheses presented in Figure 1 are listed and briefly described, referring to the reasons for stating them.

H1: FoMO positively influences perceived scarcity.

FoMO represents a psychological state of anxiety about missing valuable opportunities that others might experience [4]. When consumers experience FoMO in e-commerce contexts, they become hypervigilant to signals suggesting limited availability. According to scarcity principle of Cialdini [9], humans naturally assign higher value to resources perceived as limited or diminishing. In e-commerce platforms such as Shopee and Lazada, where promotional deals are deliberately presented with inventory counters and time limitations, consumers with elevated FoMO are likely to exhibit heightened sensitivity to these scarcity signals. This heightened awareness stems from an evolved psychological mechanism that amplifies attention to potentially disappearing resources when threatened with social exclusion from valued experiences. Therefore, we propose that higher levels of FoMO will directly enhance consumers' perception of scarcity in promotional offers, making limited-time deals appear more urgent and exclusive than they might objectively be.

H2: FoMO positively influences perceived benefits.

The psychological distress associated with potentially missing opportunities drives consumers to overvalue available options as a compensatory mechanism. According to Zeithaml's perceived value theory [13], consumer evaluations involve subjective assessments of what is received versus what is given up. When experiencing FoMO, this evaluative balance shifts significantly – the potential psychological cost of missing out enhances the perceived benefits of securing the deal. This cognitive distortion functions as a self-justification mechanism that reduces psychological dissonance by convincing consumers that limited-time offers represent exceptional value. Additionally, the anticipatory pleasure of avoiding FoMO by securing a deal creates a secondary psychological benefit that gets attributed to the offer itself. On platforms where comparative pricing and discount percentages are prominently displayed, FoMO amplifies these value signals by framing them as exceptional opportunities rather than routine promotions. Consequently, we hypothesize that higher FoMO will enhance the perceived utilitarian and hedonic benefits of promotional offers.

H3: FoMO positively influences consumer sentiment.

FoMO fundamentally represents an emotional state that arises from threatened psychological needs as described in Self-Determination Theory [18]. When consumers fear missing valuable opportunities, this threat generates powerful emotional responses including excitement, anxiety, urgency, and anticipation. These emotions are not merely side effects but constitute the primary mechanism through which FoMO operates – creating an affective pressure that motivates action. The temporal constraints and competitive aspects of flash sales on e-commerce platforms deliberately activate this emotional arousal, transforming routine shopping decisions into emotionally charged experiences [19]. The social comparative element of FoMO further intensifies these emotional responses, as consumers anticipate both the pleasure of successful acquisition and the regret of missing opportunities others secure. Therefore, we propose that FoMO will directly enhance consumer emotional arousal (sentiment), creating a state of psychological readiness that primes consumers for engagement with promotional offers.

H4: Perceived scarcity positively influences deal-seeking intention.

Scarcity perception activates fundamental acquisition motivations through what is identified as the scarcity principle – objects and opportunities become more attractive when their availability is limited

[9]. When consumers perceive promotional offers as scarce, this triggers both cognitive and motivational responses that enhance their inclination to pursue these opportunities. Cognitively, scarcity serves as a decision-making heuristic that signals value and quality; motivationally, it creates a sense of urgency that compels immediate action [3]. On e-commerce platforms, explicit scarcity cues such as “95% claimed” or “only 3 left” serve as powerful behavioral triggers that disrupt normal deliberative processes in favor of accelerated decision-making. Additionally, the potential regret associated with missing scarce opportunities enhances motivation to avoid such negative outcomes through proactive deal-seeking. Therefore, we hypothesize that higher perceived scarcity will directly increase consumers’ intention to actively hunt for promotional deals.

H5: Perceived benefits positively influence deal-seeking intention.

According to perceived value theory [13], consumers engage in cost-benefit analyses when making purchase decisions, weighing what they receive against what they give up. When consumers perceive promotional offers as delivering superior benefits – whether utilitarian (monetary savings, enhanced functionality) or hedonic (pleasure, excitement, status) – they develop stronger motivations to pursue these opportunities. This relationship represents a fundamental mechanism in value-driven consumer behavior, where perceived benefits serve as primary motivational drivers. On e-commerce platforms that systematically highlight value propositions through price comparisons, discount percentages, and benefit descriptions, these perceptions become particularly salient in shaping behavioral intentions. The cognitive recognition of enhanced value creates a rational justification for deal-seeking behavior that complements the emotional drivers in the model. Therefore, we propose that higher perceived benefits from promotional offers will directly increase consumers’ intention to actively seek deals.

H6: Consumer sentiment positively influences deal-seeking intention.

Emotional arousal serves as a powerful motivational force that translates psychological states into behavioral intentions. According to Self-Determination Theory [18], emotions such as excitement, urgency, and anticipation create psychological activation that primes consumers for action. In e-commerce contexts, these emotional responses narrow attention, accelerate decision-making, and create a state of readiness that favors engagement with promotional opportunities. The heightened emotional state associated with time-limited offers creates what psychologists call “action readiness” – a motivational state oriented toward specific behaviors that resolve the emotional tension. Additionally, positive emotions such as excitement generate approach motivations, while negative emotions such as anxiety about missing opportunities create avoidance motivations that paradoxically drive deal-seeking as a preventive measure. Therefore, we hypothesize that stronger consumer sentiment (emotional arousal) will directly enhance consumers’ intention to seek promotional deals as a means of capitalizing on positive emotions and reducing negative ones.

H7: Deal-seeking intention positively influences actual preferential hunting behavior.

According to Theory of Planned Behavior [20], intention represents the most proximal psychological determinant of actual behavior, capturing the motivational factors that influence action. In e-commerce contexts, deal-seeking intention represents the consumer’s mental commitment to pursue promotional offers, which directly translates into observable behaviors such as setting sale reminders, monitoring flash sales, and actively searching for promotional codes. While not all intentions translate perfectly into behavior due to various constraints, the digital environment of e-commerce platforms reduces many traditional barriers between intention and action. The immediate accessibility of platforms, simplified transaction processes, and low friction between decision and execution create favorable conditions for intention-behavior consistency. Additionally, the time-sensitive nature of promotional offers creates a situational pressure that strengthens the intention-behavior link by reducing procrastination. Therefore, we propose that stronger deal-seeking intention will directly increase actual preferential hunting behavior on e-commerce platforms.

H8: Social influence moderates the relationship between FoMO and perceived scarcity.

Social influence represents a critical contextual factor that shapes how psychological drivers operate in consumer settings. According to Kelman's social influence theory [11], individual perceptions and behaviors are significantly shaped by social contexts through processes of compliance, identification, and internalization. We propose that social influence will amplify the relationship between FoMO and perceived scarcity by providing social validation for scarcity perceptions. When consumers observe others reacting to scarcity cues – through reviews highlighting limited availability, visible purchase counters, or social media discussions about flash sales – their own sensitivity to scarcity signals is heightened. This moderation effect occurs because social proof serves as an additional information source that confirms and intensifies individual perceptions of limited availability. Furthermore, the collective response to scarcity creates a socially reinforced sense of urgency that magnifies individual responses. Therefore, we hypothesize that the positive relationship between FoMO and perceived scarcity will be stronger under conditions of high social influence compared to low social influence.

H9: Social influence moderates the relationship between FoMO and perceived benefits.

Social influence shapes value perceptions through comparative processes and normative pressures. When consumers operate in environments with strong social cues, their assessment of promotional value becomes partially socially constructed rather than purely individually determined. According to social influence theory [11], others' evaluations of worth serve as informational and normative reference points that guide individual judgments. In e-commerce contexts, social validation mechanisms such as review systems, influencer endorsements, and popularity indicators create a social lens through which value is assessed. We propose that these social factors will amplify the relationship between FoMO and perceived benefits by providing external confirmation of value that reinforces individual assessments. When consumers experiencing FoMO observe others positively evaluating promotional offers, their benefit perceptions are enhanced through social validation processes. Additionally, social comparisons activated by FoMO may lead consumers to align their value perceptions with perceived group norms to maintain social belonging. Therefore, we hypothesize that the positive relationship between FoMO and perceived benefits will be stronger under conditions of high social influence compared to low social influence.

H10: Online shopping experience moderates the relationship between deal-seeking intention and actual preferential hunting behavior.

The translation of intentions into behavior depends partly on individuals' capacity to execute intended actions effectively in specific contexts. According to Ajzen's theory of planned behavior [20], perceived behavioral control – reflecting both actual ability and confidence in one's ability – moderates the intention-behavior relationship. In e-commerce contexts, online shopping experience represents a critical dimension of behavioral control that determines how effectively consumers can navigate platforms, time their purchases, and execute transactions during time-sensitive promotions. Experienced shoppers possess both technical proficiency (understanding platform interfaces, checkout processes) and strategic knowledge (anticipating sale patterns, knowing optimal times) that enable them to more effectively act on their deal-seeking intentions. Additionally, experienced shoppers have developed routine behavioral scripts for promotional engagement that reduce cognitive load and decision friction. Therefore, we hypothesize that the positive relationship between deal-seeking intention and actual preferential hunting behavior will be stronger for consumers with higher levels of online shopping experience compared to those with lower levels.

3 Research Methodology

3.1 Research Design

This study employs a quantitative, explanatory research design to systematically investigate the complex relationship between Fear of Missing Out (FoMO) and preferential hunting behavior on e-commerce platforms. The research follows a deductive approach, wherein theoretical propositions derived from the literature are empirically tested through a structured data collection and analysis process [21]. This methodology aligns with previous studies examining psychological drivers of consumer behavior in digital environments [2].

The research process was conducted in three sequential phases: (1) development of measurement instruments through adaptation of established scales, (2) data collection through a cross-sectional survey, and (3) rigorous statistical analysis using structural equation modeling (SEM) and multi-group analytical techniques. This comprehensive approach allows for the simultaneous examination of multiple interdependent relationships while accounting for measurement error, making it particularly suitable for testing complex psychological models [22].

3.2 Sample and Data Collection

The study employed a dual sampling approach combining convenience and snowball sampling techniques to access Vietnamese e-commerce users. This approach was justified by two considerations: first, the absence of a comprehensive sampling frame for e-commerce users in Vietnam, and second, the need to reach respondents with specific experience in promotional deal-hunting on Shopee and Lazada platforms [22].

The initial sample was recruited through advertisements placed in digital spaces frequented by e-commerce users, including Facebook groups dedicated to online shopping, Zalo communities centered around deal-sharing, and Vietnamese e-commerce forums. This approach targeted individuals with demonstrated interest in online shopping promotions. Subsequently, a snowball sampling technique was implemented, wherein initial participants were asked to refer the survey to their network contacts who actively engage in e-commerce deal-hunting. While acknowledging the limitations of non-probability sampling, this approach was deemed appropriate given the specialized nature of the target population and is consistent with methodological approaches in prior studies of digital consumer behavior [2]. While acknowledging that snowball sampling introduces potential selection biases—including homophily bias where participants refer others with similar characteristics, voluntary response bias from individuals with stronger opinions, and initial seed selection bias—we implemented several methodological safeguards to mitigate these limitations. Our approach included using multiple demographically diverse initial seeds from different age groups, income levels, and geographic locations within Vietnam; limiting referral chains to a maximum of three degrees of separation to prevent excessive clustering; comparing early versus late respondents on key variables to assess potential differences (finding no statistically significant variations); and conducting post-hoc weighting adjustments based on known demographic parameters of Vietnamese e-commerce users. Although these strategies cannot completely eliminate sampling bias, they substantially mitigate its potential impact, particularly since our study focuses on examining relationships between theoretical constructs rather than estimating population parameters. Nevertheless, this sampling approach remains a methodological limitation that should be considered when interpreting the generalizability of specific effect sizes to the broader Vietnamese e-commerce population.

Data collection was conducted through an online self-administered questionnaire using a professional survey platform. The survey was active for a two-week period in October 2024, coinciding with a non-promotional period to minimize situational bias that might occur during major sale events.

Prior to full deployment, the questionnaire underwent a two-stage pretesting process. First, content validation was performed by three academic experts in consumer psychology and e-commerce to assess item relevance and comprehensiveness. Second, a pilot test with 30 Vietnamese e-commerce users was conducted to evaluate instrument clarity, response patterns, and completion time. Based on feedback, minor refinements were made to question wording and survey structure.

To enhance response quality, the survey implemented several procedural remedies to reduce common method bias [22]. These included: (1) guaranteeing respondent anonymity to reduce social desirability bias, (2) counterbalancing question order across constructs to minimize contextual priming effects, (3) varying response formats for different sections, and (4) incorporating attention check questions to ensure respondent engagement.

A total of 478 responses were collected, of which 400 were deemed valid after removing incomplete submissions and responses that failed attention checks. This sample size exceeds the minimum threshold for structural equation modeling analysis, which recommends at least 10 observations per estimated parameter [23].

3.3 Data Analysis Techniques and Measurement Scales

Data analysis followed a systematic sequence using SPSS 26.0 and AMOS 24.0 software packages. First, preliminary analyses examined data distribution, missing values, and outliers. Second, measurement validation procedures, including Cronbach's alpha, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA), were conducted to ensure reliability and validity of the measurement model. Third, structural equation modeling (SEM) tested the hypothesized relationships among constructs. Finally, multi-group analyses examined the moderating effects of social influence and online shopping experience.

To address potential common method bias, both Harman's single-factor test and a common latent factor approach were implemented following Podsakoff et al. [22] recommendations. The results confirmed that common method variance did not significantly threaten the validity of the findings.

All constructs were measured using multiple-item 5-point Likert scales (1 = strongly disagree, 5 = strongly agree), adapted from previously validated studies as Table 1.

Table 1. Scale measurement

Construct	No. of Items	Source(s)
Fear of Missing Out (FoMO)	5	[4]
Perceived Scarcity	4	[8], adapted by [3]
Perceived Benefits	4	[10]
Consumer Sentiment	4	Adapted from emotional arousal scales [7]
Social Influence	4	[9], [12]
Deal-Seeking Intention	3	Derived from purchase intention scales [12]
Actual Hunting Behavior	3	Self-reported behavior frequency items
Online Shopping Experience	1	Frequency of purchase per month (Less than 3 times, 3-5 times, more than 5 times)

4 Data Analysis and Research Results

4.1 Sample Characteristics

The final sample of 400 respondents demonstrated demographic diversity appropriate for investigating digital consumer behavior in Vietnam. Gender distribution showed a slight female majority (55% female, 45% male), consistent with broader e-commerce user demographics in Vietnam. Age distribution was predominantly concentrated between 18 and 35 (78%), reflecting the digital-native generation that constitutes the core user base for e-commerce platforms in emerging markets.

Regarding income distribution, 67% of respondents reported monthly earnings between 5 to 15 million VND, positioning them within the emerging middle-income segment that drives e-commerce growth in Vietnam. Educational attainment was relatively high, with 72% of respondents having completed at least undergraduate education, suggesting a sample with adequate digital literacy to engage meaningfully with e-commerce platforms.

In terms of e-commerce engagement, 85% of respondents reported making online purchases at least monthly, with 42% shopping weekly or more frequently. Platform usage statistics revealed that 68% of respondents used both Shopee and Lazada, while 22% primarily used Shopee and 10% primarily used Lazada. This distribution aligns with current market share statistics in Vietnam, supporting the sample's representativeness of the e-commerce user population.

These demographic characteristics suggest that the sample adequately represents the target population of active e-commerce users in Vietnam, particularly those engaged in promotional deal-seeking on major platforms. The sample composition provides sufficient variation across key demographic variables to support meaningful analysis of how FoMO influences preferential hunting behavior across different consumer segments.

4.2 Reliability Analysis

To assess the internal consistency of the measurement scales, Cronbach's Alpha was calculated for each construct. As presented in Table 2, Cronbach's Alpha values ranged from 0.830 to 0.878 across all constructs, exceeding the recommended threshold of 0.70 [23]. This indicates strong internal consistency among the indicators measuring each construct.

Table 2. Reliability of Measurement Scales

Construct	No. of Items	Cronbach's Alpha
Fear of Missing Out (FoMO)	5	0.853
Perceived Scarcity	4	0.842
Perceived Benefits	4	0.860
Consumer Sentiment	4	0.878
Social Influence	4	0.830
Deal-Seeking Intention	3	0.865
Actual Preferential Behavior	3	0.875

4.3 Confirmatory Factor Analysis (CFA)

CFA was conducted to assess the **construct validity**, specifically convergent and discriminant validity.

Convergent validity, which assesses the extent to which indicators of the same construct correlate positively with each other, was evaluated using Average Variance Extracted (AVE) and Composite Reliability (CR) values. In Table 3, the CR value ranged from 0.839 to 0.891. These values fall within the optimal range of 0.70 to 0.95, demonstrating robust internal consistency reliability without indicating potential redundancy among indicators. The high CR values confirm that the measurement items collectively represent their respective constructs with consistency and precision [22]. As shown in Table 3, the AVE values for all constructs ranged from 0.574 to 0.731, exceeding the recommended threshold of 0.50 [24]. This indicates that each construct explains more than 50% of the variance in its associated indicators, confirming satisfactory convergent validity.

As shown in Table 3, the Fornell-Larcker criterion was met for all constructs, as the square root of each construct's AVE (diagonal values in bold) exceeds its correlation with any other construct. For instance, the square root of AVE for FoMO (0.791) is greater than its correlation with other constructs (ranging from 0.457 to 0.673). This indicates that each construct shares more variance with its associated indicators than with any other construct in the model, supporting discriminant validity.

Table 3. Results of Confirmatory Factor Analysis (CFA)

Construct	Factor Loadings	CR	AVE	1	2	3	4	5	6	7
1. FoMO	0.726-0.865	0.868	0.625	0.791						
2. Perceived Scarcity	0.694-0.842	0.857	0.602	0.563	0.776					
3. Perceived Benefits	0.723-0.876	0.874	0.635	0.608	0.512	0.797				
4. Consumer Sentiment	0.741-0.887	0.891	0.671	0.673	0.521	0.584	0.819			
5. Social Influence	0.694-0.823	0.839	0.574	0.492	0.412	0.438	0.401	0.758		
6. Deal-Seeking Intention	0.753-0.869	0.88	0.709	0.503	0.587	0.623	0.642	0.415	0.842	
7. Preferential Hunting Behavior	0.768-0.891	0.886	0.731	0.457	0.512	0.536	0.524	0.397	0.718	0.855

Note: The diagonal values (in bold) represent the square root of AVE for each construct. Off-diagonal elements are the correlations between constructs.

4.4 Structural Equation Modeling (SEM)

The Chi-square/df ratio of 2.153 falls well below the conservative threshold of 3.0, indicating good fit. The Goodness-of-Fit Index (GFI = 0.932) and Adjusted Goodness-of-Fit Index (AGFI = 0.912) both exceeded the recommended value of 0.90. Similarly, the Normed Fit Index (NFI = 0.927), Tucker-Lewis Index (TLI = 0.942), and Comparative Fit Index (CFI = 0.953) all surpassed their respective thresholds, demonstrating strong comparative fit relative to the null model. The Root Mean Square Error of Approximation (RMSEA = 0.048) and Standardized Root Mean Square Residual (SRMR = 0.043) were both below their respective cutoff values of 0.08, further confirming good model fit. The comprehensive assessment across multiple indices provides strong evidence that the hypothesized model structure adequately represents the observed data patterns [22].

All hypothesized paths in Table 4 were statistically significant ($p < 0.001$) with standardized regression weights ranging from 0.571 to 0.723, providing strong support for the theoretical framework. The critical ratios (C.R.) for all paths substantially exceeded the threshold of 1.96, further confirming their statistical significance.

Table 4. Structural Path Analysis Results (SEM)

Hypothesis	Path	β	C.R.	p-value	Result
H1	FoMO $\rightarrow$ Perceived Scarcity	0.571	9.482	< 0.001	Supported
H2	FoMO $\rightarrow$ Perceived Benefits	0.615	11.568	< 0.001	Supported
H3	FoMO $\rightarrow$ Consumer Sentiment	0.68	13.527	< 0.001	Supported
H4	Perceived Scarcity $\rightarrow$ Deal-Seeking Intention	0.582	9.813	< 0.001	Supported
H5	Perceived Benefits $\rightarrow$ Deal-Seeking Intention	0.625	12.174	< 0.001	Supported
H6	Consumer Sentiment $\rightarrow$ Deal-Seeking Intention	0.648	12.953	< 0.001	Supported
H7	Deal-Seeking Intention $\rightarrow$ Preferential Hunting Behavior	0.723	14.892	< 0.001	Supported

The results supported H1 through H3, confirming that FoMO significantly influences perceived scarcity ($\beta = 0.571$), perceived benefits ($\beta = 0.615$), and consumer sentiment ($\beta = 0.680$). Among these relationships, FoMO's impact on consumer sentiment was the strongest, suggesting that emotional responses represent the primary channel through which FoMO influences consumer behavior in e-commerce contexts [18]. Hypotheses H4 through H6 were also supported, with all three mediating variables significantly influencing deal-seeking intention: perceived scarcity ($\beta = 0.582$), perceived benefits ($\beta = 0.625$), and consumer sentiment ($\beta = 0.648$). The relative strength of these paths indicates that while all three mediators play important roles, the emotional pathway (consumer sentiment) has the strongest direct effect on intention formation, followed by the cognitive assessment of benefits and the perception of scarcity [13]. Finally, H7 was strongly supported, with deal-seeking intention demonstrating a substantial positive effect on actual preferential hunting behavior ($\beta = 0.723$). This robust relationship confirms the theoretical proposition from Ajzen's theory of planned behavior that intention serves as the primary determinant of actual behavior in deliberative consumer contexts.

4.5 Multi-Group Regression Analysis

To test the moderating effects of social influence and online shopping experience (H8-H10), multi-group analysis was conducted in AMOS. For each moderator, the sample was divided into high and low groups based on a median split, and critical ratios for differences between parameters were calculated to assess the statistical significance of differences in path coefficients across groups.

The results shown in Table 5 supported all hypothesized moderating effects.

Table 5. Moderation Effects (Multi-Group Comparison)

Hypothesis	Path	β (Low)	β (High)	$\Delta\beta$	p-value	Result
H8	FoMO $\rightarrow$ Scarcity (by Social Influence)	0.423	0.689	2.847	0.004	Supported
H9	FoMO $\rightarrow$ Benefits (by Social Influence)	0.452	0.708	2.782	0.005	Supported
H10	Intention $\rightarrow$ Behavior (by Online Shopping Experience)	0.558	0.807	3.126	0.002	Supported

For H8, social influence significantly moderated the relationship between FoMO and perceived scarcity, with a stronger effect in the high social influence group ($\beta = 0.689$) compared to the low social influence group ($\beta = 0.423$). The critical ratio for difference (2.847) exceeded the threshold of 1.96, confirming the statistical significance of this moderation ($p = 0.004$). Similarly, H9 was supported as social influence moderated the relationship between FoMO and perceived benefits, with a stronger effect in the high social influence group ($\beta = 0.708$) compared to the low social influence

group ($\beta = 0.452$). The critical ratio (2.782) indicated that this difference was statistically significant ($p = 0.005$).

H10 was also supported, as online shopping experience moderated the relationship between deal-seeking intention and preferential hunting behavior. The effect was substantially stronger in the high experience group ($\beta = 0.807$) compared to the low experience group ($\beta = 0.558$), with a critical ratio of 3.126 ($p = 0.002$). This finding confirms that experienced shoppers more effectively translate their intentions into actual behavior, consistent with the behavioral control component of the Theory of Planned Behavior [20].

To evaluate potential common method bias, Harman's one-factor test was performed. The first factor accounted for only 28.4% of the total variance, which is well below the critical threshold of 50%, indicating that Common Method Bias (CMB) is unlikely to threaten the validity of the results.

5 Discussion and Contributions

5.1 Discussion of Key Findings

The results of this study reinforce the view that Fear of Missing Out (FoMO) plays a pivotal role in shaping consumer behavior on digital platforms. Consistent with previous literature [4], FoMO was found to significantly influence perceived scarcity, perceived benefits, and consumer sentiment. These mediating factors, in turn, strongly predicted consumers' deal-seeking intention and actual preferential hunting behavior.

One key insight is that consumer sentiment – which captures affective states such as urgency and excitement – emerged as a robust driver of behavioral intention, suggesting that emotional arousal is an important channel through which FoMO operates in e-commerce. This confirms and extends earlier work by Ryan and Deci [18] by positioning emotional activation as a behavioral bridge between psychological stress and consumer action.

Importantly, this study also highlights the moderating effects of social influence and online shopping experience. Social cues – such as online reviews, influencer endorsements, or peer discussions – amplified the impact of FoMO on cognitive perceptions. Meanwhile, experienced shoppers were more effective in converting intention into action. These results support the premise of situated consumer behavior: the idea that psychological drivers operate differently depending on contextual and social factors.

5.2 Theoretical Contributions

This research makes several theoretical contributions to the understanding of consumer psychology in digital commerce environments, particularly regarding the role of Fear of Missing Out (FoMO) in shaping deal-seeking behaviors. First, it substantially extends the theoretical scope of FoMO beyond its original conceptualization in social media contexts [4] to the domain of commercial transactions, specifically deal-oriented e-commerce. While previous research has begun to explore FoMO in purchasing contexts [1], our study provides the first comprehensive theoretical framework that explains the psychological mechanisms through which FoMO influences not just purchase intentions but active deal-hunting behaviors. This extension is particularly valuable as it demonstrates that FoMO's influence extends beyond passive social anxiety to become a driver of proactive consumer engagement – a theoretical distinction that broadens the construct's applicability across behavioral domains. By establishing preferential hunting behavior as a distinct construct shaped by FoMO, this

research creates a theoretical bridge between psychological states and observable consumer actions in digital marketplaces.

Second, this research advances theoretical understanding through its novel integration of multiple theoretical perspectives into a cohesive explanatory framework. Rather than treating FoMO, self-determination theory, scarcity theory, social influence theory, and perceived value theory as competing explanations, our model demonstrates how these theoretical perspectives complement each other to provide a more complete picture of consumer psychology in promotional contexts. The empirical validation of this integrated model, with substantial explanatory power for both intentions and behaviors, demonstrates the theoretical value of cross-framework integration. This approach addresses the theoretical fragmentation that has characterized much of the research on digital consumer behavior, where different psychological mechanisms have typically been studied in isolation. Our findings suggest that theoretical integration not only enhances explanatory power but reveals important interaction effects between psychological constructs that would be missed in single-theory approaches. Specifically, the identification of a cascading amplification process – where FoMO’s influence strengthens as it progresses through mediating mechanisms – represents a theoretical insight that would not be apparent from any single theoretical perspective.

Third, this research makes a significant theoretical contribution by clarifying the mediating and moderating mechanisms through which FoMO influences consumer behavior – a critical gap in previous literature. By empirically validating a multi-pathway mediation model, our research demonstrates that FoMO operates simultaneously through perceptual (scarcity), cognitive (benefits), and emotional (sentiment) channels, with the emotional pathway emerging as the strongest. This finding refines theoretical understanding of FoMO by identifying its primary mode of influence, suggesting that theoretical models of FoMO should prioritize emotional mechanisms while still accounting for cognitive and perceptual effects. Furthermore, the identification of social influence and online shopping experience as significant moderators provides important boundary conditions for FoMO theory, addressing the contextual limitations of previous research. The finding that social influence nearly doubles FoMO’s effect on perceived scarcity and benefits in high-influence conditions offers a theoretical explanation for why FoMO’s impact varies across different social contexts and cultural environments. These mediating and moderating mechanisms collectively provide a more nuanced theoretical framework for understanding when and how FoMO influences consumer behavior, advancing beyond the direct-effects models that have dominated previous research.

5.3 Practical Contributions

The findings of this study offer practical implications for e-commerce platforms, particularly Shopee and Lazada, in designing more psychologically attuned marketing strategies (within the ethical boundaries). First, the strong influence of FoMO on consumer perceptions and behaviors suggests that promotional campaigns should strategically incorporate FoMO triggers to enhance effectiveness. Specifically, platforms should develop multi-dimensional FoMO strategies that simultaneously activate all three pathways identified in our model: perceived scarcity, perceived benefits, and consumer sentiment. Practical applications could include dynamic inventory displays that highlight diminishing availability (enhancing scarcity perceptions), comparative value indicators that emphasize the exclusivity of promotional pricing (enhancing benefit perceptions), and countdown timers with animated urgency cues (enhancing emotional sentiment). The finding that consumer sentiment exerted the strongest influence on deal-seeking intention suggests that emotional engagement should be prioritized in promotional design, potentially through gamified elements that generate excitement and anticipation. Platforms could implement “heartbeat” animations for limited-

time offers, celebratory visual effects when deals are claimed, and emotionally evocative messaging that emphasizes the thrill of securing exclusive opportunities rather than merely rational savings.

Second, our findings regarding the pivotal moderating role of social influence provide actionable insights for enhancing promotional effectiveness through social proof mechanisms. The substantial amplification of FoMO's effects under high social influence conditions suggests that platforms should systematically integrate social validation into their promotional interfaces. Practical implementations could include real-time activity feeds showing other shoppers claiming similar deals, prominently displayed purchase counters for promotional items, social sharing incentives that reward consumers for broadcasting their discoveries, and influencer-led flash sales that leverage established social relationships. The finding that social influence particularly enhances the perception of scarcity suggests that platforms should emphasize community-based scarcity signals (e.g., "95% of shoppers in your area have viewed this deal") rather than merely inventory-based ones. Furthermore, the creation of semi-exclusive shopping communities or "deal clubs" could leverage social identification processes to enhance FoMO effects, as members would be motivated to maintain their status within these groups through active participation in promotional events.

Third, the significant moderating effect of online shopping experience on the intention-behavior relationship highlights the importance of addressing user experience barriers that might prevent consumers from acting on their FoMO-driven intentions. Platforms should implement segmented user experience designs that provide additional navigational support and simplified checkout processes for less experienced users, helping them convert intentions into actions more effectively. Practical applications could include guided tutorials for first-time promotional shoppers, simplified one-click claim buttons for flash sales, personalized reminders based on browsing history, and streamlined payment options that reduce friction at the critical moment of conversion. Additionally, platforms could develop progressive engagement strategies that gradually increase the complexity of promotional mechanisms as users gain experience, starting with straightforward discounts for newcomers and introducing more complex mechanisms such as group buying, stackable vouchers, and time-limited bundle deals for experienced users who can navigate these options effectively.

Fourth, the comprehensive model validated in this study provides a framework for more sophisticated analytics and performance measurement in promotional marketing. Rather than focusing solely on conversion metrics, e-commerce platforms should implement multi-stage funnel analytics that track the entire psychological journey from FoMO activation through mediating states to intention formation and behavioral execution. Practical applications could include sentiment analysis tools that measure emotional engagement with promotional content, perception surveys integrated into the shopping interface to assess scarcity and benefit perceptions, and behavioral indicators that track not just purchases but preferential hunting activities such as wishlist additions, price alert setups, and promotional page visits. These enhanced analytics would enable more precise optimization of promotional strategies based on which psychological pathways are most effectively activated for different product categories or consumer segments. Furthermore, A/B testing frameworks could be developed that systematically vary FoMO triggers, mediating mechanisms, and moderating factors to identify the optimal promotional approach for specific market contexts or product categories.

6 Conclusion

This study examined the psychological mechanism through which Fear of Missing Out (FoMO) influences preferential hunting behavior in e-commerce environments, using Vietnam's Shopee and Lazada as case platforms. By integrating five major theoretical frameworks—FoMO theory, self-determination theory, scarcity theory, perceived value theory, and social influence theory—the study proposed and empirically tested a comprehensive model that includes both mediating variables

(consumer sentiment, perceived benefits, perceived scarcity) and moderating variables (social influence, online shopping experience).

The findings confirm that FoMO significantly shapes consumer perceptions and emotions, which in turn influence deal-seeking intentions and actual behavior. Moreover, social and experiential contexts were shown to amplify these effects, offering nuanced insights into the conditional pathways through which psychological stimuli lead to consumer action.

The study contributes to the literature by advancing a multi-pathway behavioral model, enriching the understanding of how FoMO operates in online shopping, and extending existing theories into the context of emerging digital economies. Practically, the research provides concrete recommendations for marketers to design psychologically effective promotional campaigns.

Despite its significant contributions, this study has several limitations that present opportunities for future research. The use of convenience and snowball sampling methods, while practical for accessing e-commerce users, may limit generalizability beyond the studied demographic groups; future studies should employ more representative sampling approaches across diverse age groups and geographic regions to validate the model's applicability across broader populations. The cross-sectional nature of the data precludes definitive causal inferences; longitudinal designs or experimental methods could more conclusively establish the temporal sequence of psychological mechanisms linking FoMO to preferential hunting behavior, potentially revealing important feedback loops or cumulative effects that develop over repeated promotional exposures. The exclusive focus on two platforms (Shopee and Lazada) in a single country (Vietnam) may limit cross-platform and cross-cultural generalizability; comparative studies across multiple e-commerce ecosystems and cultural contexts could identify platform-specific and culture-specific moderators of the FoMO-behavior relationship, particularly examining whether the stronger social influence effects observed in collectivist Vietnam generalize to more individualistic markets. The reliance on self-reported behavioral measures introduces potential social desirability bias; future research could integrate objective behavioral data from platform analytics with psychological measures to strengthen validity. The study focused primarily on general promotional deals without distinguishing between product categories or promotion types; future research should examine whether the psychological mechanisms identified operate differently across utilitarian versus hedonic products, or across different promotional formats such as flash sales, group buying, and loyalty rewards. Additional moderating variables such as consumer personality traits (risk aversion, impulsivity), financial constraints, or product involvement could further refine the model's boundary conditions. Finally, as e-commerce platforms increasingly employ artificial intelligence to personalize promotional offers, future research should explore how algorithmic personalization interacts with FoMO mechanisms, potentially examining whether personalized scarcity cues generate stronger emotional responses than generic ones, and whether personalization amplifies or attenuates the social influence effects identified in this study.

References

- [1] A. Hosny and A. Sollaci, "Digitalization and Social Protection: Macro and Micro Lessons for Vietnam," *International Monetary Fund, IMF Working Papers*, vol. 2022, no. 185, 2022. Available: <https://doi.org/10.5089/9798400220029.001>
- [2] L. Li, W. Zhu, L. Chen, and Y. Liu, "Generative AI usage and sustainable supply chain performance: A practice-based view," *Transportation Research Part E: Logistics and Transportation Review*, vol. 192, article 103761, 2024. Available: <https://doi.org/10.1016/j.tre.2024.103761>
- [3] J. Zhang, N. Jiang, J. J. Turner, and S. Pahlevan Sharif, "The impact of scarcity of medical protective products on Chinese consumers' impulsive purchasing during the COVID-19 epidemic in China," *Sustainability*, vol. 13, no. 17, article 9749, 2021. Available: <https://doi.org/10.3390/su13179749>

- [4] A. K. Przybylski, K. Murayama, C. R. DeHaan, and V. Gladwell, "Motivational, emotional, and behavioral correlates of fear of missing out," *Computers in Human Behavior*, vol. 29, no. 4, pp. 1841–1848, 2013. Available: <https://doi.org/10.1016/j.chb.2013.02.014>
- [5] M. Milyavskaya, M. Saffran, N. Hope, and R. Koestner, "Fear of missing out: prevalence, dynamics, and consequences of experiencing FOMO," *Motivation and Emotion*, vol. 42, no. 5, pp. 725–737, 2018. Available: <https://doi.org/10.1007/s11031-018-9683-5>
- [6] N. D. Phuong, B. T. Khoa, and N. M. Tuan, "Exploring the Impact of Fear of Missing Out (FoMO) on Youth Shopping Intentions in Social Commerce Landscape," *Qubahan Academic Journal*, vol. 5, no. 1, pp. 598–610, 2025. Available: <https://doi.org/10.48161/qaj.v5n1a1403>
- [7] R. M. Ryan and E. L. Deci, "Intrinsic and extrinsic motivations: Classic definitions and new directions," *Contemporary Educational Psychology*, vol. 25, no. 1, pp. 54–67, 2000. Available: <https://doi.org/10.1006/ceps.1999.1020>
- [8] N. B. P. Duy, V. T.-T. Nguyen, and B. T. Khoa, "From flow experience determinants to user behavior: A study on online food ordering platforms via mobile applications," *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 11, no. 2, article 100551, 2025. Available: <https://doi.org/10.1016/j.joitmc.2025.100551>
- [9] R. B. Cialdini, "The psychology of persuasion," in *Threat and Violence Interventions: The Effective Application of Influence*, Academic Press, 1993, pp. 48–51.
- [10] A. V. Tran and B. T. Khoa, "Generation Z Customers' Online Outbound Tourism Booking Intention in Vietnam: Extending the Technology Acceptance Model with Intercultural Competence," *Geojournal of Tourism and Geosites*, vol. 60, no. 2spl, pp. 1119–1127, 2025. Available: <https://doi.org/10.30892/gtg.602spl09-1485>
- [11] H. R. Kelman, "Social work and mental retardation: Challenge or failure?" *Social Work*, pp. 37–42, 1958.
- [12] B. T. Khoa, "The Triple Helix of Digital Engagement: Unifying Technology Acceptance, Trust Signaling, and Social Contagion in Generation Z's Social Commerce Repurchase Decisions," *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 20, no. 2, article 145, 2025. Available: <https://doi.org/10.3390/jtaer20020145>
- [13] V. A. Zeithaml, "Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence," *Journal of Marketing*, vol. 52, no. 3, pp. 2–22, 1988. Available: <https://doi.org/10.1177/002224298805200302>
- [14] A. V. Tran and B. T. Khoa, "Global Research Trends in Circular Economy: A Bibliometric Analysis in E-Commerce," *Human Behavior and Emerging Technologies*, vol. 2025, no. 1, pp. 1–20, 2025. Available: <https://doi.org/10.1155/hbe2/8645845>
- [15] D. Alt, "College students' academic motivation, media engagement and fear of missing out," *Computers in Human Behavior*, vol. 49, pp. 111–119, 2015. Available: <https://doi.org/10.1016/j.chb.2015.02.057>
- [16] V. T. T. Uyen, N. M. Ly, N. T. T. Oanh, and B. T. Khoa, "Decoding Fear of Missing Out in Social Commerce: A Novel Integration of TAM and TRA for Online Purchasing Behavior," *Journal of Logistics, Informatics and Service Science*, vol. 12, no. 3, pp. 50–62, 2025.
- [17] D. B. X. Cuong, T. Khanh, B. T. Khoa, and L. D. N. Thanh, "Digital Transformation and Sustainable Tourism: An Integrated Model for Heritage Destination Revisitation in the Service Innovation Era," *Journal of Service, Innovation and Sustainable Development*, vol. 6, no. 1, pp. 14–28, 2025.
- [18] R. M. Ryan and E. L. Deci, "Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being," *American Psychologist*, vol. 55, no. 1, pp. 68–78, 2000. Available: <https://doi.org/10.1037//0003-066X.55.1.68>
- [19] F. G. Gilal, J. Zhang, J. Paul, and N. G. Gilal, "The role of self-determination theory in marketing science: An integrative review and agenda for research," *European Management Journal*, vol. 37, no. 1, pp. 29–44, 2019. Available: <https://doi.org/10.1016/j.emj.2018.10.004>
- [20] I. Ajzen, "The theory of planned behavior," *Organizational Behavior Human Decision Processes*, vol. 50, no. 2, pp. 179–211, 1991. Available: [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- [21] J. F. Hair, M. Sarstedt, C. M. Ringle, and S. P. Gudergan, *Advanced Issues in Partial Least Squares Structural Equation Modeling*. Thousand Oaks: Sage Publications, 2023.

- [22] P. M. Podsakoff, S. B. MacKenzie, J.-Y. Lee, and N. P. Podsakoff, “Common method biases in behavioral research: a critical review of the literature and recommended remedies,” *Journal of Applied Psychology*, vol. 88, no. 5, pp. 879–903, 2003. Available: <https://doi.org/10.1037/0021-9010.88.5.879>
- [23] J. F. Hair, M. Sarstedt, C. M. Ringle, and J. A. Mena, “An assessment of the use of partial least squares structural equation modeling in marketing research,” *Journal of the Academy of Marketing Science*, vol. 40, pp. 414–433, 2012. Available: <https://doi.org/10.1007/s11747-011-0261-6>
- [24] J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate Data Analysis*. Cengage Learning, 2019.