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The Impact of Social Comparison, Scarcity, and Need for Belonging on Purchase Intention on the TikTok e-Commerce Platform among Students: The Mediating Role of FOMO and the Moderating Role of Risk-Taking

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Abstract

In the context of the rapid development of e-commerce, especially on social media platforms like TikTok, consumer purchasing behavior is increasingly influenced by various psychological factors, among which Fear of Missing Out (FOMO) emerges as a significant driver. FOMO refers to a psychological state in which an individual experiences anxiety over potentially missing out on attractive opportunities, particularly limited-time promotions, popular shopping trends, or positive reviews from the online community. This study aims to explore the impacts of social comparison, scarcity, and the need to belong on purchase intention, as well as the mediating role of FOMO among university students in Ho Chi Minh City on the TikTok e-commerce platform. Specifically, the research analyzes the factors influencing FOMO—including social comparison,

perceived scarcity, and the need to belong - and assesses the extent to which FOMO affects students' purchase intentions. The study was conducted through a survey of a sample comprising 248 observations collected via questionnaires. Data were analyzed using methods such as Outer Loading analysis, Cronbach's Alpha reliability testing, and Structural Equation Modeling (SEM). The findings reveal that FOMO mediates the relationship between psychological factors and purchase intention, with the following order of influence: (1) Scarcity, (2) Social Comparison, and (3) Need to Belong. These results offer valuable insights for businesses, marketers, and brands operating on TikTok, enabling them to design more effective customer engagement strategies by leveraging the psychological effect of FOMO.

Keywords: Fear of Missing Out (FOMO), Risk-Taking, Purchase Intention

1. Introduction

In recent years, e-commerce in Vietnam has grown rapidly and has increasingly become a popular consumption habit, especially among young people. According to the Vietnam E-commerce Association (2024), the total value of domestic e-commerce transactions reached approximately USD 13.82 billion, an increase of nearly 40% compared to 2023. In addition to traditional e-commerce platforms such as Shopee, Lazada, or Tiki, TikTok – a social media platform specializing in short videos – has emerged as an attractive sales channel through TikTok Shop. As of early 2024, TikTok Shop accounted for about 26.9% of Vietnam's e-commerce market share, equivalent to USD 3.8 billion in revenue.

One of the prominent factors contributing to purchase intention is FOMO (Fear of Missing Out). FOMO arises when consumers feel anxious that if they do not act immediately, they will miss out on a product that many others own or a limited-time offer. TikTok has leveraged this psychology through strategies such as countdown timers, displaying remaining product quantities, showing the number of purchases, and hosting highly interactive livestreams, making users feel pressured to decide instantly. According to (Hodkinson, 2019) ^[21], FOMO can increase impulsive buying behaviors, making it harder for users to control their desire to shop, especially when they compare themselves to others or want to quickly join an ongoing trend.

Although FOMO has been widely studied in psychology and marketing, research remains limited in the specific context of TikTok and Vietnamese students. Some recent domestic studies have mentioned FOMO and young people's consumer behavior in general (Ngoc Bich *et al.*, 2025) ^[34], but they have not delved deeply into the relationship between FOMO and social-psychological factors such as social comparison, scarcity, or the need to belong – factors that easily emerge on the TikTok platform. In particular, few studies have clarified the mediating role of FOMO in the relationship between these factors

and purchase intention, nor have they examined the moderating effect of perceived risk, thus leaving a research gap that needs to be addressed in the current context. Perceived risk is one of the factors that can hinder and cause hesitation when purchasing products on e-commerce platforms. While many people tend to fear missing out, and previous studies have shown that risk can positively influence purchase behavior (Habib & Almamy, 2025) [14], the question remains whether customers are truly willing to accept the risks associated with buying a product or service. This study is grounded in the Theory of Planned Behavior – TPB (Ajzen, 1991) [1], the Technology Acceptance Model – TAM (Kengue Mayamou & Michel, 2020) [24] and Perceived Risk Theory – PRT (Bauer, 1960) [5]. In this framework, TPB explains behavioral intention, specifically purchase intention, as influenced by attitudinal factors (FOMO) and subjective factors (SOC, SC, NB). TAM focuses on psychological factors (FOMO) affecting technology acceptance behaviors in digital environments. Meanwhile, PRT highlights the moderating role of perceived risk, which can weaken the impact of FOMO on purchase intention.

Based on this rationale, the study aims to explore the influence of social comparison, scarcity, and the need to belong on students' purchase intention on TikTok, with FOMO serving as a mediating variable. It also examines the moderating effect of perceived risk on this relationship. The goal is to clarify the psychological mechanisms shaping purchase intention in a distinctive e-commerce environment like TikTok, helping students better understand their own consumption behavior and providing businesses with practical insights to optimize marketing strategies. In the increasingly competitive Vietnamese e-commerce market, understanding the psychology and behavior of young consumers will be one of the key factors enabling businesses to develop effective strategies and achieve sustainable growth.

2. Theoretical framework and research hypothesis

2.1 The Relationship Between Social Comparison and FOMO

According to (Festinger, 1954) [13] social comparison theory, people often evaluate themselves by comparing with others, especially in situations where they are uncertain about their own worth or abilities. On social media platforms like TikTok, this comparison process is more continuous and intense, causing users to feel inferior or fear missing out on enjoyable experiences that others are having. Recent studies have shown that such social comparison is one of the main causes of a form of anxiety known as fear of missing out (FOMO) (Przybylski *et al.*, 2013) [35]. Specifically, social media fosters constant comparison and exerts psychological pressure on users, thereby increasing the level of FOMO. This feeling becomes stronger when users are frequently exposed to images or content showing the success and happiness of others on social media (Lee, 2022; Vogel *et al.*, 2014) [27, 41]. Therefore, there is a clear reciprocal relationship between social comparison and FOMO on e-commerce platforms such as TikTok, which directly influences young people's consumer behavior.

Hypothesis 1 (H1): Social comparison positively affects fear of missing out (FOMO) on the TikTok e-commerce platform.

2.2 The Relationship Between Scarcity and FOMO

Scarcity is considered an important marketing strategy, involving the limitation of a product's supply or the duration of a promotion to motivate consumers to act quickly and avoid missing out on an opportunity (Brock, 1968; Lynn, 1991) [8, 29]. On modern e-commerce platforms such as TikTok Shop, labels like "almost sold out" or "limited time offer" create a sense of urgency, prompting users to make quick purchasing decisions, sometimes without careful consideration (Kengue Mayamou & Michel, 2020) [24]. According to Cialdini's social influence theory scarcity not only increases the perceived value of a product but also triggers fear of missing out, directly contributing to the formation and intensification of FOMO—the fear of missing out on important experiences or opportunities (Hodkinson, 2019) [21]. Furthermore, (Jones, 1984) [23] social conformity theory emphasizes that when a behavior such as hoarding scarce products becomes a popular trend, consumers tend to imitate it to avoid feeling excluded or left behind. This phenomenon is even more evident on digital platforms like TikTok, where scarcity often occurs in real-time and strongly influences the impulsive purchasing behavior of young college students (Vãn Tân *et al.*, 2022; Wang & Lin, 2017) [40, 42].

Hypothesis 2 (H2): Scarcity positively affects fear of missing out (FOMO) on the TikTok e-commerce platform.

2.3 The Relationship Between Belongingness and FOMO

Belongingness is an essential human need for connection and recognition within a social community, identified by (Maslow, 1943) [32] as the third level in the hierarchy of human needs. (Baumeister & Leary, 2017) [6] also emphasized that being accepted and feeling part of a group has a significant impact on an individual's psychological health and sense of well-being. In the context of modern social networks, this need becomes even more pronounced when people frequently compare themselves with others, which can easily lead to feelings of social deprivation and fear of being left behind—a phenomenon known as FOMO (Przybylski *et al.*, 2013) [35]. The relationship between FOMO and the need to belong is particularly strong, as individuals with a high need for social connection are more likely to experience FOMO when they witness others participating in activities, trends, or events that they cannot join. This, in turn, can make them feel isolated and prompt them to take actions to maintain social cohesion, including engaging in online shopping behavior (Beyens *et al.*, 2016; Reer *et al.*, 2019) [7, 37]. Notably, on e-commerce platforms such as TikTok, FOMO is amplified when consumers observe friends or influencers purchasing trending products, leading them to make immediate purchase decisions to avoid missing out on a spreading opportunity or trend (Hetz *et al.*, 2015) [19].

Hypothesis 3 (H3): The need to belong positively affects Fear of Missing Out (FOMO) on the TikTok e-commerce platform.

2.4 The Relationship Between FOMO and Purchase Intention

Purchase Intention is defined as the extent to which consumers are willing and intend to take action to purchase a product or service, reflecting the motivation that drives purchasing behavior (Ajzen, 1991) [1]. FOMO (Fear of

Missing Out) is not only the feeling of anxiety about missing an important social opportunity or experience, but it also directly influences purchase intention, especially in the modern e-commerce environment. When consumers experience FOMO, it becomes a strong motivation for them to make quick purchasing decisions, even when the purchase is not truly necessary or is made without carefully considering their needs (Aydin *et al.*, 2021) [3]. Recent studies have shown that FOMO increases purchase intention when consumers are faced with promotions or offers limited by time or quantity. For example, studies by (Vãn Tân *et al.*, 2022) [40] and (Habib & Almamy, 2025) [14] revealed that FOMO is an important factor driving the online shopping intentions of students in Hanoi, particularly when they feel pressured not to be left behind by their friends or social groups. Similarly, (Kha, 2023) [25] confirmed that FOMO significantly affects the shopping behavior of students in Ho Chi Minh City, especially during limited-time promotional campaigns, prompting consumers to make rapid purchasing decisions without thoroughly considering necessity. These findings indicate that FOMO not only increases the likelihood of making impulsive purchase decisions but also plays a crucial role in stimulating purchase intention from the very beginning, particularly on e-commerce platforms such as TikTok.

Hypothesis 4 (H4): Fear of Missing Out (FOMO) positively affects Purchase Intention on the TikTok e-commerce platform.

2.5 The Moderating Effect of Perceived Risk

Perceived risk is one of the factors influencing human decision-making trust (Im *et al.*, 2008) [22], and it is particularly strong in online transactions (Bauer, 1960) [5]. In the context of services, perceived risk refers to a sense of uncertainty or anxiety about potential negative consequences arising from user behavior (Aydin *et al.*, 2021; Xie *et al.*, 2021) [3, 44]. In the process of forming purchase intentions, perceived risk encompasses various levels, including those related to the Internet (Habib *et al.*, 2021) [15], social media marketing (Habib & Almamy, 2025) [14], and online transactions (Muhammad *et al.*, 2012) [33]. In addition, perceived risk is also associated with the personal fear of missing out, particularly in relation to privacy concerns (Habib *et al.*, 2021; Wang & Lin, 2017) [15, 42]. Several previous studies have found that perceived risk has significant effects on intentions such as investment (Rahmani *et al.*, 2023) [36], usage (Majerčáková & Greguš, 2021; Zhao & Khaliq, 2024) [30, 46], behavior (Im *et al.*, 2008) [22], and purchase (Habib & Almamy, 2025; Martin *et al.*, 2015) [14, 31]. In practice, individuals with a high fear of missing out tend to hesitate when faced with risky participation in shopping, especially when it comes to information on Instagram (van & Flowerday, 2023) [39]. Furthermore, the positive relationship between fear of missing out and the intention to continue using social networking sites is moderated by privacy risk (Yin *et al.*, 2015) [45]. However, perceived risks from multiple sources—such as fear of being deceived, perceived price, and skepticism about products—can limit shopping behavior, even among those with a strong fear of missing out. Therefore, the relationship between fear of missing out and purchase intention is significantly influenced by perceived risk.

Hypothesis 5 (H5): Perceived risk negatively moderates the relationship between Fear of Missing Out (FOMO) and purchase intention.

Research model

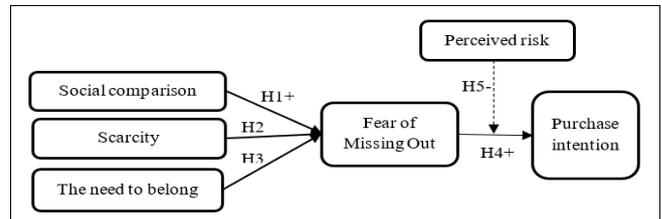


Fig 1: Research model

3 Research Methods

3.1 Research Process

This study employs two methods: qualitative and quantitative.

Qualitative research: Various domestic and international documents were reviewed, and discussions with the academic advisor were conducted to assess the feasibility of the topic. Based on previous studies, the author identified key factors and developed an appropriate questionnaire.

Quantitative research: In this study, SMARTPLS software is used to evaluate both the measurement model and the structural model. According to (Hair, 2014) [17], PLS-SEM has demonstrated its flexibility in analyzing models across various research contexts. First, reliability is assessed using Composite Reliability (CR) - an index proposed by (Chin, 1998) [9] to address the limitations of Cronbach's Alpha. According to (Bagozzi & Yi, 1988) [4], $CR \geq 0.7$ indicates good reliability. Next, Outer Loading reflects the extent to which an observed variable represents its latent construct; according to (Hair, 2009) [16], it should be ≥ 0.7 . To evaluate convergent validity, the Average Variance Extracted (AVE) should be ≥ 0.5 , as suggested by (Hock & Ringle, 2010) [20]. Discriminant validity is determined using the HTMT index; $HTMT < 0.85$ is considered acceptable, based on the recommendation of (Henseler *et al.*, 2015) [18] and the threshold of (Clark & Watson, 2016) [11]. In the structural model, F^2 measures the effect size between variables; according to (Cohen, 2013) [12], an F^2 of 0.15 represents a medium effect. Additionally, to check for multicollinearity, the VIF value should be < 5 according to (Hair, 2009) [16]. Finally, the Bootstrap method is applied to enhance the robustness of the results, following the recommendation of (Lomax, 2004) [28].

3.2 Scale Design

The author adapted and reused measurement scales from previous studies. Specifically, the Social Comparison scale was based on (Schneider & Schupp, 2011) [38], while the Scarcity scale was adopted from (Wu *et al.*, 2012) [43]. The Need for Belonging scale was adapted from (Leary *et al.*, 2013) [26], the Fear of Missing Out scale was inherited from (Przybylski *et al.*, 2013) [35], and the Perceived Risk scale was adapted from (Im *et al.*, 2008) [22]. Finally, the Purchase Intention scale was referenced from (Habib & Almamy, 2025) [14]. A five-point Likert scale was used to measure the research constructs across 20 observed variables, corresponding to: (1) Completely disagree, (2) Disagree, (3) Neutral, (4) Agree, and (5) Completely agree.

Table 1: Scale Synthesis

Scale	Symbol	Number of observed variables	Source
Social comparison	SOC	5	(Schneider & Schupp, 2011) [38]
Scarcity	SC	4	(Wu <i>et al.</i> , 2012) [43]
The need to belong	NB	4	(Leary <i>et al.</i> , 2013) [26]
Fear of Missing Out	FOMO	4	(Przybylski <i>et al.</i> , 2013) [35]
Perceived risk	PR	4	(Im <i>et al.</i> , 2008) [22]
Purchase intention	PI	3	(Habib & Almamy, 2025) [14]

3.3 Research sample and data analysis method

The study was conducted by collecting survey responses from students in Vietnam who have purchased or are currently purchasing on the TikTok e-commerce platform, via Google Forms. The author applied the convenience sampling method, a type of non-probability sampling. Secondary data were collected and selected from various relevant research sources, including scientific articles, specialized journals, and doctoral theses. The author also discussed with the academic supervisor regarding the feasibility of the topic, identified key factors, and developed an appropriate questionnaire. An online survey was then carried out via Google Forms and distributed on social networking platforms such as Facebook, Zalo, and TikTok to optimize accessibility to the target respondents. The preliminary survey was conducted with 30 students, leading to the decision to include 20 observation variables in the official survey. The survey period lasted from January 2025 to March 2025. Out of 255 official questionnaires distributed, 248 valid responses were collected. The author used SMART PLS4 software to validate the data.

4 Research results

4.1 Preliminary statistics

Table 2: Preliminary Statistical Results Synthesis

Scale	Symbol	Number of observed variables	Overall Cronbach's Alpha
Social comparison	SOC	5	0.817
Scarcity	SC	4	0.831
The need to belong	NB	4	0.840
Fear of Missing Out	FOMO	4	0.882
Perceived risk	PR	4	0.789
Purchase intention	PI	5	0.864

The reliability analysis results indicated that all measurement scales in the study met the required standards, with the overall Cronbach's Alpha coefficient exceeding the threshold of 0.6 and the item-total correlation coefficients of all observed variables being greater than 0.3. Specifically, the Social Comparison scale achieved a Cronbach's Alpha coefficient of 0.817, Scarcity was 0.831, Need for Belonging was 0.840, Fear of Missing Out was 0.882,

Perceived Risk was 0.789, and Purchase Intention was 0.864.

These results confirm that the scales measuring FOMO and related factors - including Social Comparison, Scarcity, Need for Belonging, the moderating effect of Perceived Risk, and Purchase Intention—all satisfy the necessary reliability standards for use in subsequent analyses. The preliminary evaluation using Cronbach's Alpha and item-total correlation coefficients ensured the appropriateness and accuracy of the scales, providing a solid foundation for the main study, with all 30 observed variables included in the detailed analysis.

4.2 Descriptive statistics

Table 3: Thống kê mô tả

Characteristics		Frequency	%
Gender	Female	105	42.3%
	Male	143	57.7%
Age	18 to 25 years old	218	87.9%
	25 to 30 years old	30	12.1%
University	Ho Chi Minh City University of Industry	160	64.5%
	University of Finance and Marketing	8	3.2%
	Van Lang University	13	5.2%
	Ho Chi Minh City University of Economics	9	3.6%
	Ho Chi Minh City Open University	8	3.2%
	Foreign Trade University	10	4.0%
	Nguyen Tat Thanh University	6	2.4%
	College of Foreign Economic Relations	16	6.5%
	University of Economics and Finance	9	3.6%
	Other	9	3.6%
College year	Year 1	28	11.3%
	Year 2	32	12.9%
	Year 3	59	23.8%
	Year 4	116	46.8%
	Postgraduate	13	5.2%
	Purchase frequency	Very rarely	55
Sometimes		79	31.9%
Often		100	40.3%
Always		14	5.6%
Feeling anxious/fear of missing out on a product	Yes	248	100.0

Through descriptive statistics, it can be seen that the survey respondents are mainly male students aged 18–25, currently studying at universities in Ho Chi Minh City, with a notable concentration at Ho Chi Minh City University of Industry. Most of them are third- and fourth-year students—those with a high level of exposure to and habits of online consumption. Notably, 100% of the students admitted to feeling anxious or afraid of missing out on products due to the influence of trends and reviews on TikTok, indicating that this platform has a strong impact on students' shopping behavior.

4.3 Measurement model

Table 4: Results of Cronbach's Alpha reliability coefficient and convergent validity (AVE)

	Cronbach's alpha	Composite Reliability (rho a)	Composite Reliability (rho c)	Average variance extracted (AVE)
FOMO	0.882	0.883	0.919	0.739
NB	0.840	0.846	0.893	0.675
PI	0.864	0.867	0.917	0.786
PR	0.789	0.821	0.860	0.607
SC	0.831	0.837	0.888	0.664
SOC	0.817	0.822	0.879	0.646

After conducting a quality assessment of the observed variables and analyzing the outer loadings, a total of 30 observed variables were confirmed. The author then proceeded to check the Cronbach's Alpha reliability coefficient (CA) and the composite reliability of the scales (CR), as the CA coefficient may underestimate the actual reliability of the scale (Hair và cộng sự, 2019), while the CR coefficient may overestimate it. The results showed that all factors had CA and CR values greater than 0.7, ensuring reliability. Specifically, the Social Comparison (SOC) factor had a CA of 0.817 and a CR of 0.879; the Fear of Missing Out (FOMO) factor had a CA of 0.882 and a CR of 0.919; the Scarcity (SC) factor had a CA of 0.831 and a CR of 0.888; the Purchase Intention (PI) factor had a CA of 0.864 and a CR of 0.867; and the Need for Belonging (NB) factor had a CA of 0.840 and a CR of 0.893. All observed variables had reliability coefficients ranging from 0.7 to 0.9 (Nunnally & Bernstein, 1994), demonstrating that the reliability of the scales is sufficient for subsequent analyses. Next, the author examined the convergent validity of the scales through the Average Variance Extracted (AVE). All scales had AVE values greater than 0.5, with SOC at 0.646, FOMO at 0.739, SC at 0.664, PI at 0.773, and NB at 0.675. According to Hock & Ringle (2010) [20], a scale is considered to have convergent validity when its AVE is above 0.5. Therefore, all of the author's scales demonstrate convergent validity and high structural reliability.

Table 5: Quality control of observed variables (Outer loading)

	FOMO	NB	PI	PR	SC	SOC	PR x FOMO
FOMO1	0.872						
FOMO2	0.852						
FOMO3	0.846						
FOMO4	0.867						
NB1		0.821					
NB2		0.803					
NB3		0.813					
NB4		0.849					
PI1			0.902				
PI2			0.886				
PI3			0.871				
PR1				0.797			
PR2				0.817			
PR3				0.809			
PR4				0.685			
SC1					0.839		
SC2					0.806		
SC3					0.776		
SC4					0.836		
SOC1						0.811	
SOC2						0.825	
SOC3						0.766	

SOC4						0.812	
PR x FOMO							1.000

In the second quality check, after removing the observed variable SOC5 due to an outer loading of 0.316, the results (Table 5) showed that the outer loadings of all remaining observed variables exceeded the required threshold of 0.7. The FOMO construct had the strongest effect on the variation of FOMO1, explaining up to 87.20% of its variance. The NB construct explained more than 84.90% of the variance in NB4. The PI construct explained 90.20% of the variance in PI1. The moderating variable PR explained 81.70% of the variance in PR2. For SC, this construct explained 83.90% of the variance in SC1. Finally, the SOC construct had the strongest explanatory power for SOC2, accounting for 82.50% of its variance.

To test and evaluate the discriminant validity of the scale, the author employed the HTMT index (Heterotrait-Monotrait Ratio) following the method of Henseler và cộng sự (2015). Accordingly, if the HTMT values are below 0.9, the discriminant validity of the factors is well ensured, and values in the range of 0.85 to 0.9 are considered acceptable thresholds. The test results (Table 6) indicate that all HTMT coefficients are below 0.9, with the lowest coefficient observed between SOC and PRxFOMO (0.059) and the highest between NB and FOMO (0.449). Based on these results, the author concludes that all latent variables in the study exhibit good discriminant validity.

Table 6: Discriminant validity (HTMT)

	FOMO	NB	PI	PR	SC	SOC
NB	0.449					
PI	0.661	0.332				
PR	0.081	0.087	0.140			
SC	0.857	0.338	0.574	0.097		
SOC	0.624	0.322	0.338	0.077	0.423	
PR x FOMO	0.045	0.059	0.270	0.099	0.039	0.059

The results of the author's VIF analysis (Table 7) show that the VIF values of the variables range from 1.005 to 1.197, all within the threshold of less than 3. This indicates that the author's model does not exhibit multicollinearity, thereby ensuring the accuracy of the regression coefficients and analytical conclusions.

Table 7: VIF coefficient evaluation results – Multicollinearity

Relation	VIF
FOMO -> PI	1.005
NB -> FOMO	1.125
PR -> PI	1.014
PR x FOMO -> PI	1.010
SC -> FOMO	1.197
SOC -> FOMO	1.186

The adjusted R-squared coefficient of the Fear of Missing Out (FOMO) variable is 0.640, which means that influencing factors such as Social Comparison (SOC), Scarcity (SC), and Need for Belonging (NB) explain 64.4% of the variation in the FOMO variable. This is a strong indicator of the level of influence and the relationship between these factors and the feeling of Fear of Missing Out in the context of online shopping.

In addition, the adjusted R-squared coefficient of the Purchase Intention (PI) variable is 0.537, meaning that the

FOMO variable explains 53.7% of the variation in students' purchase intentions in Ho Chi Minh City when using the TikTok platform. This shows the importance of the Fear of Missing Out factor in influencing consumers' purchasing decisions, especially in the online shopping environment.

Table 8: Results of model explanation assessment (R-square)

	R-square	R-square adjusted
FMO	0.648	0.644
YDM	0.539	0.537

From Table 9, it can be seen that the Scarcity (SC) factor has a strong impact on Fear of Missing Out (FOMO) with a coefficient of $f^2 = 0.851$, indicating a significant influence of scarcity on the feeling of anxiety about missing out on a shopping opportunity. The Social Comparison (SOC) factor has a medium impact on FOMO with a coefficient of $f^2 = 0.190$, showing that comparison with others plays an important role but is not as strong as scarcity. The Need for Belonging (NB) factor has a weak impact on FOMO with a coefficient of $f^2 = 0.052$, indicating that the influence of belonging needs on the feeling of missing out is relatively low. In addition, the results also show that the effect of Perceived Risk (PR) on Purchase Intention (PI) is at a medium level with a coefficient of $f^2 = 0.082$. Finally, the FOMO factor has a strong impact on Purchase Intention (PI) with a coefficient of $f^2 = 0.568$, confirming that fear of missing out is the main factor driving students' purchase intentions on the TikTok platform.

Table 9: Results of impact assessment (F-square)

	FOMO	NB	PI	PR	SC	SOC	PR x FOMO
FOMO							
NB	0.052						
PI							
PR			0.032				
SC	0.851						
SOC	0.190						
PR x FOMO			0.082				

These results help to better understand the strong influence of psychological factors such as scarcity and fear of missing out on consumer behavior, especially in the current e-commerce environment. At the same time, they show the effect of the moderating variable Perceived Risk on Fear of Missing Out and Purchase Intention in purchase decisions, although the effect is not too large.

4.4 Structural model evaluation

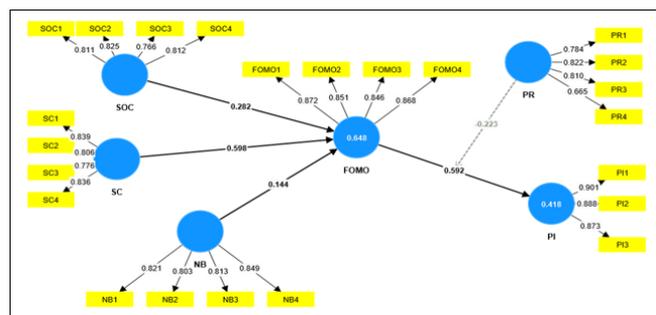


Fig 2: Structural model

The figure 2 illustrates the standardized regression coefficients in the PLS-SEM model. Overall, the model confirms the mediating role of FOMO in linking social/personal factors (SC, SOC, NB) to consumer behavior (PI), and highlights the central importance of PR as a mediator connecting FOMO with behavioral intention.

Table 10: Direct impact assessment (SEM)

Impact	Standardized regression coefficient (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV))	P values
FOMO → PI	0.581	0.584	0.053	10.867	0.000
NB → FOMO	0.144	0.144	0.051	2.805	0.005
SC → FOMO	0.598	0.598	0.046	13.093	0.000
SOC → FOMO	0.282	0.284	0.038	7.376	0.000

The author applied the Bootstrapping method with a sample of 5,000 to test the hypotheses in the study. The results, summarized in Table 10, show that all standardized coefficients are positive and range from 0.144 to 0.598, proving that the variables all have positive effects on each other.

Specifically, the Social Comparison (SOC) factor has a positive effect on the FOMO factor with a standardized regression coefficient of 0.282 and a significance level (P-value) of 0.000, less than 0.05. This shows that hypothesis H1 is accepted.

Next, the Need for Belonging (NB) factor has a positive effect on the FOMO factor with a standardized coefficient of 0.144 and a P-value of 0.005, less than 0.05. Therefore, hypothesis H2 is also accepted.

The Scarcity (SC) factor has a standardized regression coefficient of 0.598 and a P-value of 0.000, less than 0.05, indicating that the Scarcity factor has a positive effect on FOMO; thus, hypothesis H3 is accepted.

Finally, the Fear of Missing Out (FOMO) factor strongly affects Purchase Intention (PI) with a standardized coefficient of 0.581 and a P-value of 0.000, less than 0.05. This shows that hypothesis H4 is accepted.

In summary, the analysis shows that the factors Social Comparison, Scarcity, and Need for Belonging all have an impact on the Fear of Missing Out factor, and the Fear of Missing Out factor has a positive impact on students' purchase intention. Hypotheses H1, H2, H3, and H4 are all statistically significant, creating a solid foundation for the author's research model.

Table 11: Results of the Moderating Impact Assessment

Impact	Standardized regression coefficient (O)	Mean (M)	Standard deviation (STDEV)	T-test value ((O/STDEV))	P values
PR x FOMO → PI	-0.222	-0.201	0.066	3.372	0.001

The analysis results show that the P-value of the moderating relationship is less than 0.05 (P-value = 0.001), indicating that the moderating effect of the Perceived Risk (PR) variable on the relationship between Fear of Missing Out

(FOMO) and Purchase Intention (PI) is statistically significant. Specifically, the standardized regression coefficient of this moderating relationship is - 0.222. This proves that the moderating variable Perceived Risk has a negative effect (negative sign) on the relationship between Fear of Missing Out and Purchase Intention. Therefore, it can be seen that Perceived Risk reduces the effect of consumers' Fear of Missing Out when intending to purchase, especially in online shopping. As such, hypothesis H5 is accepted.

From this, it can be concluded that the factors Social Comparison (H1), Need for Belonging (H3), and Scarcity (H2) all have a positive effect on Fear of Missing Out (FOMO), and this factor also has a positive effect on Purchase Intention (H4). Meanwhile, the effect of Perceived Risk is negative on the relationship between Fear of Missing Out and Purchase Intention (H5). This shows that the author's PLS-SEM model has four successive accepted effects, demonstrating that these factors play an important role in influencing Fear of Missing Out and, ultimately, purchase intention, and are significantly affected by Perceived Risk.

4.5 Discussion

The research results show that three main factors—Scarcity (strong impact), Social Comparison (medium impact), and Need for Belonging (weak impact)—affect students' Fear of Missing Out (FOMO). FOMO plays an important mediating role in influencing Purchase Intention on the TikTok platform. This confirms that social psychological factors strongly promote consumer behavior in the modern social networking environment.

Specifically, Scarcity was identified as a factor with a strong impact on FOMO, consistent with the findings of (Cialdini, 2009) [10], who argued that the perception of limited opportunities or products easily increases the sense of urgency and fear of loss. On TikTok, marketing messages that exploit scarcity—such as “limited products” or “today only”—have been proven effective in stimulating students' consumer behavior.

Social Comparison was confirmed as a contributing factor to FOMO. This finding aligns with (Alfasi, 2019) [2], who found that frequent self-comparisons on social media can lead to feelings of inadequacy and trigger FOMO. In fast-changing environments like TikTok, where trends shift rapidly and user engagement is constant, failing to keep up with trends can make students feel left behind, thereby increasing FOMO and driving consumer behavior.

For the Need for Belonging, the study also found a strong correlation with FOMO, reinforcing Baumeister and (Baumeister & Leary, 2017) [6] argument that the need to be connected and accepted within a group is a core driver of the fear of missing out. In the context of students using social media such as TikTok, maintaining a presence in trends or shared activities becomes an important part of satisfying the need to belong, leading to more socialized consumption behavior.

This study emphasizes the central role of FOMO in linking psychological factors with purchase intention, consistent with (Przybylski *et al.*, 2013) [35], who pointed out that FOMO is not only a fleeting emotion but can also drive actual consumption decisions. This suggests that, in the social media environment, the fear of missing out can directly translate into purchasing behavior, especially among

young people.

In particular, when Perceived Risk is introduced into the research model—with a negative effect—it reduces the influence of FOMO on buyers' purchase intention on e-commerce platforms. Unlike the studies of (Majerčáková & Greguš, 2021; Martin *et al.*, 2015; Yin *et al.*, 2015) [30, 31, 45] which showed a positive impact of risk perception, the present study reveals the opposite side: customers' perceptions of financial, environmental, social, and quality risks are factors they always consider and pay attention to when shopping.

In addition, the research results highlight the importance of understanding the psychology and behavior of students in Ho Chi Minh City—a group sensitive to social influences and easily affected by social media trends. Marketing strategies targeting this group should not only focus on creating attractive offers but also leverage emotional factors such as FOMO to optimize communication effectiveness and stimulate shopping behavior. Part of the decline in purchase intention comes from customers' perception of risk, and although this risk is not greater than the fear of missing out, it still leads to reduced purchase intention. Therefore, businesses need to address the risks customers face in their marketing strategies.

In summary, this study shows that in the context of rapid social network development, understanding psychological mechanisms such as social comparison, the need to belong, and scarcity is a key factor in shaping appropriate marketing strategies. Brands should not only provide products but also create environments that stimulate connection and foster community experiences to amplify FOMO, thereby effectively promoting consumer behavior.

5 Conclusion and Implications

5.1 Conclusion

Based on the analysis results, the author found that three psychological factors—scarcity, social comparison, and need to belong—all have an impact on fear of missing out (FOMO) among students. Among them, scarcity shows the strongest influence, followed by social comparison, while the need to belong has a weaker effect. This reflects that, in a social media environment, when a product or experience is perceived as limited or trending, users—especially young people—are more likely to feel the need to quickly participate so as not to be left behind.

A notable point is that FOMO does not only stop at the emotional level but also plays the role of a mediating factor, helping transform psychological influences into specific behaviors—in this case, purchase intention. In addition, Perceived Risk (PR) has been shown to have an inhibitory effect on strategies to increase customer purchases, as customers tend to prioritize their own benefits, and when facing risks, they may fail to overcome the fear of missing out to proceed with a purchase. On the TikTok platform, where content is constantly updated and can spread rapidly, this effect is even easier to form and more likely to grow in influence.

From the research results, the author proposes an extended conceptual model with the potential to be applied to other social media platforms such as Instagram, Facebook Reels, or Shopee Live—where users also frequently encounter content with similar psychological triggers. The common feature of these platforms is that they create a highly interactive environment while employing multiple

marketing strategies that appeal to a sense of urgency, social comparison, and the desire to integrate into the community—factors capable of triggering FOMO and promoting shopping behavior.

Although this study was conducted within the student population and has many limitations, the author expects that clearly identifying the relationship between psychological factors and consumer behavior through the mediating role of FOMO can suggest more appropriate approaches for marketing activities in the digital environment. In addition, the study did not identify any specific risks that moderate and weaken the relationship between fear of missing out and purchase intention. If businesses know how to build content that stimulates social connection, skillfully leverage the scarcity factor, and create a sense of group resonance—while also considering ways to minimize risks—then increasing the effectiveness of communication and sales on digital platforms is entirely feasible, especially when targeting young users.

5.2 Management Implications

Scarcity

In the short term (1–3 months), the main goal is to optimize time-limited promotional campaigns to create a sense of urgency that drives quick purchasing behavior. For businesses and shops on TikTok, leveraging the Flash Deal tool combined with a countdown timer helps stimulate customer psychology, making them unwilling to miss the opportunity to purchase products at preferential prices. TikTok should support sellers by providing detailed guidance on setting up and optimizing Flash Deals, as well as offering campaign performance analysis data so that sellers can flexibly adjust their strategies. In addition, partners such as KOLs and content creators play an important role in promoting Flash Deal programs through creative content, helping to increase the campaign's reach and attractiveness.

In the medium term (4–6 months), the development strategy shifts toward building seasonal promotions and special events such as festivals, the back-to-school season, or the year-end period, to maintain customer interest and encourage repeat purchases. Businesses and shops need to proactively plan and implement these programs in accordance with each period, while TikTok plays the role of providing supportive tools and resources, including trend data and content creation guidelines, to help optimize the effectiveness of seasonal campaigns. Content creation partners should also actively participate by producing relevant content that enhances authenticity and builds deeper connections with consumers.

In the long term (7–12 months), the strategy focuses on developing exclusive products and fostering sustainable partnerships to create competitive differentiation and enhance brand value. Businesses and shops on TikTok can develop exclusive collections available only on the platform, or for special occasions, to attract customers and increase loyalty. TikTok will play the role of connecting sellers with manufacturers to develop exclusive products, while providing an effective platform and promotional tools. KOLs and content creators will be involved from the ideation stage to product promotion, helping to enhance authenticity and engagement with fan communities, while creating in-depth and long-lasting marketing campaigns.

Social Comparison

Short term (1–3 months), the primary goal is to encourage users to create user-generated content (UGC) to generate social effects and stimulate immediate purchasing behavior. Businesses should organize minigames, hashtag challenges, and giveaways to motivate customers to share images and videos of products on TikTok. TikTok should prioritize displaying user-generated content while providing tools for tracking and reporting campaign performance to help businesses and shops easily evaluate results. At the same time, shops on TikTok should actively interact with and respond to customer posts and videos to enhance engagement and encourage organic community spread.

Medium term (4–6 months), the strategy shifts to collaborating with influencers and KOLs who align with the target customer segment to strengthen brand credibility and create positive social pressure that drives purchasing behavior. Businesses are responsible for selecting and working with suitable KOLs to produce compelling and persuasive content. TikTok will develop the Creator Marketplace program, offering effective analytics to help businesses optimize collaboration costs and improve communication efficiency. Shops on the platform should synchronize promotional messages with KOLs' content to ensure consistency, increase appeal, and improve customer retention.

Long term (7–12 months), the goal is to build a loyal consumer community and foster a positive social comparison environment. Businesses can host livestreams, organize offline events, and develop loyalty programs to deepen long-term customer relationships. TikTok will support this by providing group features, memberships, interactive tools, and rewards to help build a sustainable community. Partners and shops should also create “playgrounds” and host engagement-focused events to encourage participation, maintain long-term interactions within the product ecosystem, strengthen loyalty, and promote sustainable purchasing behavior.

The need to belongs

Short term (1–3 months), the main objective is to create a sense of community for consumers. Businesses should launch campaigns encouraging customers to join community groups, fan pages, or special events on social media to enhance engagement and stimulate purchasing behavior. TikTok will support these efforts by enabling group and community features, offering a convenient space for users to connect and join online events. Shops on TikTok should actively invite customers to join groups while organizing direct interaction activities to increase familiarity and retain customers over the long term.

Medium term (4–6 months): the strategy focuses on building group incentive programs to enhance engagement and mutual support during the shopping process. Businesses should implement group buying programs for friends or family with preferential prices or attractive gifts, thereby fostering a sense of connection and community value. TikTok should provide tools to help design, implement, and monitor the effectiveness of group incentive campaigns, enabling businesses to optimize performance. Shops on the platform must coordinate closely in organizing and promoting these programs to maximize reach and attract new customers.

Long term (7–12 months): the goal is to develop a sustainable community brand, deliver long-term value, and strengthen customer loyalty. Businesses should build brand strategies that connect with target customer communities by hosting both offline and online events, creating shared values, and encouraging customers to take part in collective marketing activities. TikTok will continue expanding its ecosystem of support tools—such as in-depth livestreaming, VIP membership groups, reward features, and diverse interaction formats—to drive community engagement. Partners and shops should organize community activities and special events to solidify customer relationships, effectively leverage loyal customer networks, and contribute to enhancing brand value and sustainable growth.

6 Limitations and Future Research Directions

6.1 Limitations of the Study

Despite efforts to complete the research and achieve the proposed objectives, the author recognizes that the study still has certain limitations, largely due to both objective and subjective conditions during the implementation process.

First, due to the limited research timeframe, many steps in the process—particularly the selection of theoretical models and the development of measurement scales—could not be implemented as comprehensively as desired. Balancing study, work, and research execution also created significant pressure.

Second, as a student, the author still lacks experience in data processing and applying analytical tools such as SEM. Although self-study and research efforts were made, some technical operations were not yet fully proficient, which may have affected the accuracy and practical reflection of the research model.

Third, in the process of collecting documents and secondary data, the author encountered several difficulties. Access to international academic sources was limited due to the lack of specialized access accounts, while domestic documents on the topic of FOMO in e-commerce remain relatively scarce and outdated. This partly affected the synthesis of theoretical foundations and related studies.

In addition, although the survey collected 248 valid responses, it still had certain limitations. The respondents were mainly students from a few specific universities, so the level of representation did not fully cover all students in Ho Chi Minh City. Moreover, the online survey format made it difficult for the author to control the quality of responses and the seriousness of participants.

6.2 Future Research Directions

Based on the above limitations, the author hopes that future research can address them by expanding the survey scope to cover more diverse regions, academic backgrounds, and social media usage habits. At the same time, incorporating additional qualitative methods such as in-depth interviews or focus group discussions will help explore more thoroughly the psychological and behavioral aspects of consumers under the influence of FOMO.

If there is an opportunity to directly connect with experts, marketers, or businesses actively operating on the TikTok platform, the research results will certainly be more in-depth and have higher practical application value. In addition, if the scope is expanded, it is necessary to conduct specialized research on the risks associated with shopping on e-commerce platforms among customers who tend to

experience FOMO.

Despite certain limitations, the author believes this study is a necessary first step, contributing additional perspectives on students' shopping intentions in the digital age, where social networks and e-commerce are increasingly intertwined with consumer life.

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