

# TikTok USERS IMPULSE BUYING BEHAVIOR: THE ROLE OF EMPATHY, PERCEIVED USEFULNESS AND PERCEIVED ENJOYMENT

Ngo Thi Khue Thu<sup>1\*</sup>, Hoang Thi Quynh Anh<sup>1</sup>, Bui Le Quynh Anh<sup>1</sup>, Nguyen Thi Thuy Duong<sup>1</sup>,  
Nguyen Thi Phuong<sup>1</sup>, Tran Le Uyen Nhi<sup>1</sup>, and Nguyen Thu Hang<sup>2</sup>

<sup>1</sup> Faculty of Marketing, Danang University of Economics, The University of Danang, Danang, 50000, Vietnam

<sup>2</sup> Faculty of English for Specific Purposes, Danang University of Foreign Language Studies, The University of Danang, Danang, 50000, Vietnam; PhD candidate at Flinders University, Australia

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## ABSTRACT

**Introduction/Main Objectives:** This research explores the factors influencing impulsive buying behavior of TikTok users. **Background Problems** While the social commerce landscape of TikTok and consumer behaviors are getting more and more complex, few studies have looked at the effects of multiple factors on Impulsive buying, especially with empathy, perceived enjoyment and perceived usefulness as mediators in social media marketing campaigns. **Novelty:** This study adopts a comprehensive approach to examining the factors affecting of TikTok users' impulse buying behavior. Based on the Stimulus-Organism-Response (SOR) theory, this study proposes a comprehensive model to explore the combined effect of empathy, perceived usefulness and perceived enjoyment. Specifically, it combines social media marketing activities (SMMA), self-reference, and product attributes (variety, visual appeal, price, and information quality) as key stimuli and psychological factors (empathy, perceived usefulness, and perceived enjoyment) as organism mechanisms. This holistic integration provides a comprehensive understanding of how these factors collectively influence impulsive buying behavior, offering a more nuanced and realistic view of the complex decision-making process among TikTok users. **Research Methods:** A survey among a sample of 500 TikTok users in Vietnam was conducted to test the research hypotheses. **Finding/Results:** The study suggests the collective influence of SMMA, Self-Reference and Product Attributes on the Urge to Buy and Impulsive Buying Behavior through Empathy, Perceived Enjoyment and Perceived Usefulness among TikTok users in Vietnam. Noticeably, two elements (i.e., Perceived Usefulness, Perceived Enjoyment) result in stronger Urge to Buy, which subsequently influences Impulsive Buying Behavior. **Conclusion:** Based on the notable findings, we recommend that businesses should utilize a marketing strategy aimed at for-profit ventures and how to manage businesses on TikTok ethically for governmental oversight.

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\* Corresponding Author at Faculty of Marketing, Danang University of Economics, The University of Danang, 71 NguHan Son, Danang, 50000, Vietnam

E-mail address: khuethu@due.edu.vn (author#1), anh.htq.dimar.due@gmail.com (author#2), builequynhanh3@gmail.com (author#3), tduong12112004@gmail.com (author#4), phuongnguyenthi924@gmail.com (author#5), uyennhi@due.edu.vn (author#6), nhang@ufl.udn.vn (author#7)

## INTRODUCTION

In the ever-changing digital landscape, the boundaries between marketing and entertainment have increasingly converged, giving rise to a new consumer phenomenon: the TikTok shopping frenzy. TikTok has reached over 80% of TikTok users (about 74.65 million TikTok users) in Vietnam in 2023 (Statista, 2023), with a growing number of users engaging in impulsive buying behaviors on the platform (Nguyen Viet et al., 2024; Phan et al., 2024). This behavioral shift has restructured the way Vietnamese consumers make online purchasing decisions and underscores the urgent need to explore the underlying factors driving impulsive buying on TikTok.

While previous studies have highlighted the effect of empathy on consumer decision-making (Bagozzi & Moore, 1994; Escalas & Stern, 2003), its specific role in Social Media Marketing Activities (SMMAs) and impulse buying behavior, particularly on TikTok platform, still requires further investigation for several reasons. First, social media platforms are generally designed to evoke strong emotional responses (Barsade, 2002; Hatfield, 1993; Weimann, 2023), especially TikTok, which has highly engaging short-form content (Basch, 2022; Djafarova, 2017). Therefore, TikTok becomes an attractive platform to explore the empathy-impulse buying correlation among TikTok consumers. Second, TikTok users frequently have strong parasocial ties with TikTok influencers (Chung, 2017; Leung, 2021). Hence, empathy can possibly act as a catalyst for fortifying these relationships, affecting the tendency of TikTok users to impulse purchases based on their influencers' recommendations.

Additionally, in spite of previous research on consumer behaviors in general (Babin, 1994; Childers, 2001), there remains a lack of research on the relationship between Empathy, Perceived

Enjoyment, and Perceived Usefulness in predicting impulsive buying decisions within social media platforms like TikTok (Parboteeah et al., 2009; Verhagen & Van Dolen, 2011). While recent studies have increasingly examined impulsive buying behavior on social media platforms such as TikTok, there remains a lack of research that simultaneously explores the relationship between empathy, perceived enjoyment, and perceived usefulness in predicting impulsive buying decisions. Although perceived enjoyment and usefulness have been identified as key predictors of impulsive purchases in livestreaming business contexts (Feng et al., 2024; Obadă & Țugulea, 2024), and constructs related to empathy, such as ad credibility and social presence, have also been revealed to be influential (Obadă & Țugulea, 2024), an integrative model capturing how these organism-level responses interact remains underexplored in the current literature. This highlights a significant research gap that needs to be addressed to better understand the model revealing TikTok's impact on Vietnamese TikTok users' shopping behaviors in the current digital age.

The research gap mentioned above can justify for the importance of comprehending the psychological factors that influence impulsive buying because of the engaging characteristics of platforms such as TikTok. This highlights how essential it is to look into what actually motivates impulsive buying in these digital settings: is it primarily emotional or cognitive? According to the Customer Inspiration Model - an interdisciplinary concept extended from psychology to marketing (Böttger et al., 2017) - impulsive buying is not solely the outcome of rational cognitive evaluations (e.g., perceived usefulness), but is also strongly influenced by short-term, emotionally charged states. These include the "inspired-by" state (triggered by

external stimuli) and the “inspired-to” state (motivating goal-directed action) (Cao et al., 2022). Therefore, it is reasonable to argue that affective mechanisms (such as empathy, excitement, or aesthetic pleasure) may exert a stronger influence than cognitive factors. Emotional responses tend to operate faster and require less mental processing, making them particularly relevant in contexts where consumers are exposed to high volumes of engaging content (Sheng et al., 2020; Zhou et al., 2023). As a result, comparing the relative contributions of emotional and cognitive mechanisms can strengthen the theoretical novelty of this study and offer a more complete comprehension of the psychological processes underlying impulsive buying.

To fill the research gap, this study aims to investigate the factors influencing impulsive buying behaviors among TikTok users with the use of the Stimulus-Organism-Response (SOR) model. Adopting a comprehensive approach to determine how multiple factors, including various aspects of user experience and marketing strategies, influence users’ impulse buying behavior on TikTok, the study combines SMMAs, Self-Reference, Product Attributes (product variety, visual appeal, price attributes, and information quality) as key stimuli, and psychological factors (empathy, perceived usefulness, and perceived enjoyment) as organism mechanisms. This combination offers additional insight into how these factors influence impulsive buying behaviors and then provides a more holistic perspective on the complex decision-making process among TikTok users. Thus, based on research outcomes, businesses and marketers can obtain valuable insights to effectively leverage TikTok as a significant marketing tactic.

## LITERATURE REVIEW

### 1. Stimulus-Organism-Response (S-O-R) model

Based on the Stimulus-Organism-Response (S-O-R) framework by Mehrabian and Russell (1974), a research model was developed to study consumers’ impulsive buying behaviors on TikTok. The Stimulus-Organism-Response (S-O-R) model is a classic psychological model that describes how people respond to stimuli. The S-O-R model encompasses three components: stimuli, organism, and response, in which (1) Stimulus is understood as the input to the process, with (2) Organism as the reaction process, and (3) Response as the outcome of the process. It highlights that environmental signals serve as stimulants (Stimulus) by affecting consumers’ internal states (Organism), which in turn affects their subsequent behaviors (Response).

In the context of social commerce, stimuli refer to a range of social media marketing activities (SMMAs) designed to capture users’ attention and encourage engagement. These include influencer endorsements, promotional videos, product demonstrations, and algorithmically personalized advertisements (Xiang et al., 2022; Liu et al., 2023). Platforms that use short-form video and personalized content often improve these stimuli by using engaging formats and emotional storytelling that keep users interested and encourage them to interact. For example, recommendation algorithms can show users content that is very relevant to their interests, which makes it more likely that they will find the content personally meaningful.

A key psychological mechanism in this process is self-reference, which occurs when users relate the content they consume to their

own experiences, goals, or identities (Zhou et al., 2022). When content includes humor, trends, or everyday situations, it feels more real and relatable, which makes people more likely to feel empathy for the message or source.

In addition to marketing-specific stimuli, environmental stimuli also play an important role in shaping user behaviors. These include a variety of products, visual appeal of the content, pricing attributes such as flash sales or limited-time discounts, and the quality of information provided - often through product reviews, detailed descriptions, or livestream presentations (Chen & Yao, 2022; Lin & Lo, 2020; Xiang et al., 2022). In live commerce settings, real-time interactions with influencers or sellers can enhance perceptions of transparency and trust, further increasing the persuasive power of these stimuli (Liu et al., 2023).

According to the Stimulus - Organism - Response (S-O-R) model, these external stimuli influence users' internal psychological states - referred to as the organism stage (Mehrabian & Russell, 1974; Eroglu et al., 2001). This stage includes both affective reactions (such as empathy and perceived enjoyment) and cognitive evaluations (such as perceived usefulness). Empathy emerges when users emotionally resonate with content or the communicator, often due to perceived authenticity, shared values, or effective storytelling (Zhou et al., 2022). This emotional engagement enhances perceived enjoyment, making the browsing experience more pleasurable and less transactional.

Meanwhile, perceived usefulness arises from users' assessment of whether a product is relevant to their needs or offers practical value. This cognitive judgment is often supported by elements such as clear product demonstrations, user testimonials, and the perceived expertise of influencers (Xiang et al., 2022; Liu et al., 2023).

These factors help reduce uncertainty and increase users' confidence in their decision-making.

The organismic responses described above can lead to the urge to buy impulsively, defined as a sudden and compelling desire to make a purchase without prior planning (Chen & Yao, 2022). Features typical of social commerce platforms - such as seamless content-to-checkout transitions, limited-time offers, and one-click purchasing - intensify this urge by reducing decision-making friction and creating a sense of urgency. The combination of emotionally engaging content and persuasive design contributes to a shopping environment in which users are especially vulnerable to spontaneous consumption. In this model, the urge to buy impulsively functions as a mediating variable, linking internal emotional and cognitive responses to the final impulsive buying behavior - the response stage of the S-O-R framework (Lin & Lo, 2020; Chen & Yao, 2022).

## 2. Definitions

### 2.1. Social Media Marketing Activities (SMMAs)

Social media marketing activities (SMMAs) have evolved as essential modern marketing strategies in today's business landscapes. As Andzulis et al. (2012) pinpointed, SMMAs are activities that make use of social media technologies, channels, and software to generate, socialize, deliver, and exchange valuable services for an organization's stakeholders. These activities consist of a variety of tactics and strategies for the purposes of engaging customers, building brand awareness, and driving business productivity. Five key aspects that make up SMMAs, as identified by a seminal study by Kim and Ko (2012), include entertainment, interaction, trendiness, customization, and word-of-mouth.

With the increasing popularity of social media, it is clear that social media platforms facilitate the creation and enhancement of social capital by enabling companies to build relationships, trust, and shared norms with their customers (Ellison et al., 2007). This context results in the increasing impact of SMMA on consumer behaviors and decision-making.

## **2.2. Self-reference**

In online shopping platforms, self-reference refers to the effective exhibition of a consumer's personal needs and the harmony between product recommendation information with shopping strategy (Tam & Ho, 2006). Develops this concept further, Mills (2017) regards it as individuals' unconscious employment of cultural values when making purchase decisions. The importance of self-reference has grown as online platforms attempt to offer consumers customized, appropriate, and appealing shopping experiences. In short, self-reference is a significant influencing factor in the consumer purchase behavior process (Aquino & Reed II, 2002).

## **2.3. Product Attributes: Product Variety, Visual Appeal, Price Attributes and Information Quality**

Product attributes, or features or characteristics, are the intrinsic qualities that differentiate a product from its competitors (Kotler et al., 2017). As various product attributes, namely product variety, visual appeal, price attributes, and information quality, substantially impact consumer perceptions and purchasing decisions, this study aims to analyze the relationships. Previous studies have proved the impact of these product attributes on consumer purchasing decisions. To be more specific, an abundance of options for products contributes to increased levels of satisfaction among shoppers (Kahn

&Lehmann, 1991). Regarding visual appeal, an aesthetically pleasing design can effectively capture consumer attention (Bloch et al., 2003). Price is not merely a cost factor; it also conveys quality to consumers (Zeithaml, 1988) , and clear, detailed product information fosters trust and encourages purchases, particularly in an online context (Kim & Niehm, 2009). In short, these findings illustrate the profound influence of product attributes on consumer purchasing decisions.

## **2.4. Empathy**

Empathy is a pivotal element of emotional intelligence and effective interpersonal relationships (Goleman, 2020). Modern advertising strategies of the digital era have increasingly highlighted the value of empathy in fortifying genuine connections with consumers (Gonzalez-Padron, 2017). To be more specific, a wide variety of effective marketing strategies currently give rise to storytelling, authentic experience showcasing, and the fostering of a sense of community and shared values, all of which help cultivate empathy (Escalas & Bettman, 2005). In its turn, empathy significantly influences consumer behavior, as empathetic campaigns that are in harmony with consumers' emotions and experiences can ultimately enhance more powerful brand loyalty (Morhart et al., 2009).

## **2.5. Perceived Usefulness**

Since empathy is associated with emotional reactions and perceived usefulness is linked to logical reasoning, both factors could possibly influence impulse buying behaviors. This study aims to investigate the role of perceived usefulness and empathy as factors that impact impulse buying on social media. By examining these two elements simultaneously, we aim to gain deeper insights into the causes of impulse

buying and ascertain the relative importance of each factor.

Perceived usefulness, which is a key concept in consumer behavior, is influenced by many factors, including age, gender, and brand name (Mitchell & Vassos, 1998). The perceived ease of use and associated risk of a product or service can influence this perception, notably influencing consumers' attitudes and intentions, particularly in online shopping. Perceived usefulness can influence consumers' behavioral intentions, potentially influencing their purchasing decisions and encouraging impulsive buying (Venkatesh & Davis, 2000).

## 2.6. Perceived Enjoyment

Whereas perceived usefulness determines how helpful the product is from consumers' perspectives, perceived enjoyment focuses on how much fun it offers. The addition of perceived enjoyment to this study helps understand the ways browsing and shopping on social media affect impulse buying. This triangulation of variables - empathy (feelings), perceived usefulness (reasoning), and perceived enjoyment (fun) - creates a more holistic model of the elements that drive impulse buying on social media platforms. This approach facilitates the comprehension of the different underlying reasons that might prompt someone to impulse purchase while using social platforms.

Perceived enjoyment can be influenced by a range of stimuli, such as convenience, visual appeal, and social influence (Lee et al., 2021) and can act as mediators within the relationship between perceived usefulness, the ease of use, and social value (Hasan et al., 2021). Perceived enjoyment also advantageously influences online shopping intentions (Ulaan et al., 2016). Perceived enjoyment stems from consumers'

reflection of the emotional or experiential aspects of a product, service, or shopping experience. Perceived enjoyment linked with a product, service, or shopping experience can trigger pleasant emotions in consumers, potentially influencing others through sentimental transmission and leading to impulsive buying behavior.

## 2.7. Urge to Buy Impulsively

The urge to buy impulsively has been a topic of great concern among scholars in market research. The term "urge to buy impulsively" is defined by Beatty and Ferrell (1998) as an intense and sudden desire or motivation to acquire a particular product or service. It is underscored by haste, strong desire, and a temporary neglect of rational considerations such as financial limits or long-term consequences (Beatty & Ferrell, 1998).

## 2.8. Impulse Buying Behavior

Impulse buying behavior is characterized by the unpredictability and spontaneity in purchasing a product or service, which is often influenced by emotional factors rather than rational decision-making processes (Beatty & Ferrell, 1998). This behavior is denoted by a strong urge to obtain a product instantaneously, without prior consideration or intention to buy.

The table below helps illustrate the research gaps from previous studies on empathy, perceived usefulness, perceived enjoyment, and SMMAs in impulse buying. Despite various investigations, many studies lack a comprehensive view of how these factors interact on emerging platforms like TikTok. This study aims to bridge these gaps by integrating emotional and cognitive influences on impulse buying behavior in social media contexts.

**Table 1.** Summary of studies on behavior outcomes in different e-commerce contexts

No.	Authors	Behavior Outcomes	Variables Studied	Context	Limitations
1	Reinikainen et al. (2020)	Consumer decision-making	Influencer Trust, Engagement	Social Media Marketing	Excludes cognitive aspects such as usefulness
2	Koay et al. (2021)	Online impulse buying	Attractiveness, Expertise, Trustworthiness	Social Media Marketing- Instagram	This study did not examine the impact of influencers on platforms like Facebook, YouTube, and Snapchat on online impulse buying.
3	Pang et al. (2022)	Impulse Buying	Empathy, Emotional Contagion	Social Media Marketing	Limited inclusion of cognitive factors like Perceived Usefulness
4	Singh et al. (2023)	Impulse Buying Behavior (IBB)	Impulse Buying Intention (IBI)	Social Media Marketing	The study does not examine how different types of products, services, or other variables—such as the marketing mix, firm factors, customer mood, demographics, time, or money—may influence the relationship between social media advertising and behavioral intention.
5	Shao et al. (2024)	Impulse buying behavior	Relationship commitment to social media celebrity	Social Media Marketing	Lack of platform comparison: Consumer behavior may differ across various social commerce platforms. Future research should compare behaviors on different platforms.
6	Jadav (2024)	Impulse buying behavior	visually engaging and appealing content, immediate emotional reactions	Social Media Marketing - Instagram	It lacks long-term analysis of impulse buying's financial and psychological effects
7	Koay and Lim (2025)	Online Impulsive intentions	wishful identification	Social Media Marketing	The study focused only on Instagram influencers. Future research should include other platforms (e.g., Facebook, OnlyFans, Snapchat, TikTok) to better understand the role of congruence and wishful identification in online impulse buying.
8	Shamim and Azam (2024)	Urge to buy Impulsively	Trust on the branded posts, Product Affection	Social Media Marketing	This study focused on consumers' UBI rather than impulse buying behavior
9	Banjongprasert (2024)	Online impulsive buying behavior	Online impulse tendency, altruism	Social media, Social Ecommerce	use of only Shopee, Lazada, Facebook, and Line, and consideration of just three shopping motivation factors

No.	Authors	Behavior Outcomes	Variables Studied	Context	Limitations
10	Pham et al. (2025)	Impulse buying behavior	Perceived enjoyment, Trust, Price and Discount, Impulsiveness	Social Media Marketing – TikTok	Future research could examine sustainable consumption, negative experiences, community engagement, and compare TikTok Shop with platforms like Shopee or Lazada for broader insights.
11	This study	Impulse buying behavior	Empathy, SMMA, Self-reference, Product Attributes, Perceived Enjoyment, Perceived Usefulness, Urge to Buy	TikTok	Integrates both emotional and cognitive factors, addressing gaps in previous studies

**PROPOSED RESEARCH MODEL AND HYPOTHESES**

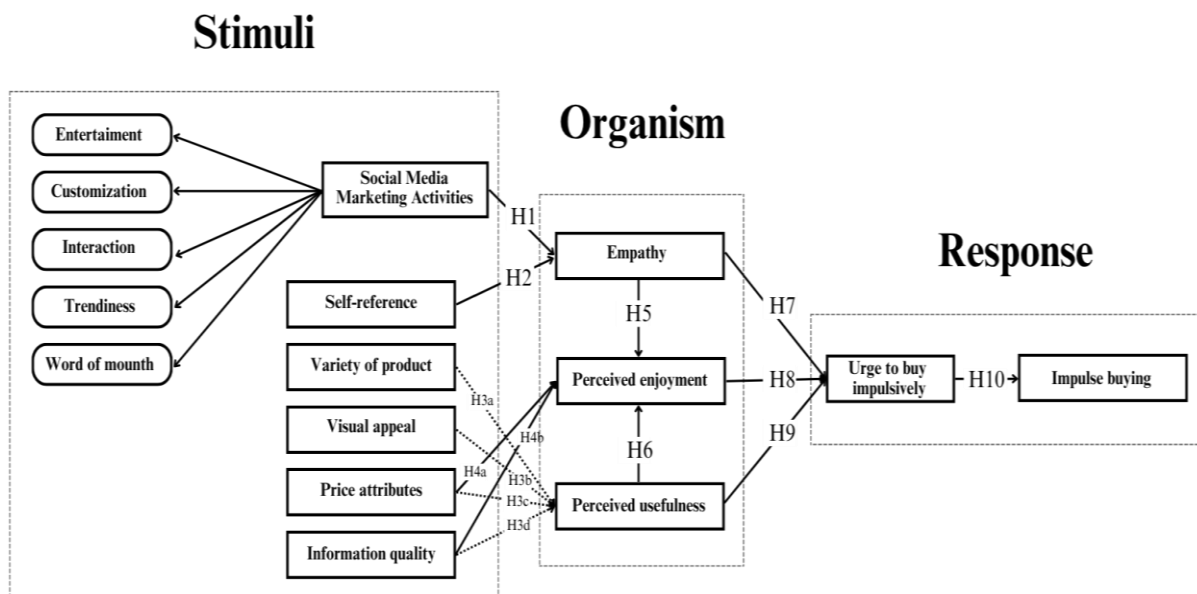
**1. Research Model**

**1.1. The Stimulus-Organism-Response (S-O-R) model**

We aim to build a research model to examine the factors that influence consumers' impulsive

buying behavior on TikTok. Our study revolves around social media marketing activities and self-reference, Product Attributes (product variety, visual appeal, price attributes and information quality) as Stimuli elements. Impulse Buying is built outcome; Empathy, Perceived usefulness, Perceived enjoyment and Urge to Buy Impulsively as Organism mechanisms.

**Figure 1.** The Stimulus-Organism-Response (S-O-R) model and Research model



Within the context of online shopping, components, such as visual appeal and the information displayed, are considered as stimuli of a webstore (Parboteeah et al., 2009). Also, SMMAAs are termed a stimulus (Shang et al., 2022). Meanwhile, Peng and Kim (2014) demonstrated that the architecture and the information displayed may affect the store's image and emotional state of consumers. While Ryu and Ryu (2021) claimed that when customers find desired products, the availability of the products can make them feel excited. Also, Xu et al. (2020) proved that self-reference is a significant stimulus.

Organism is S-O-R models' second component. Organism refers to the process when an individual interacts with a specific stimulus and generates either cognitive or affective evaluation. While perceived usefulness is often associated with cognitive evaluation, perceived enjoyment and empathy can represent the affective evaluative process (Parboteeah et al., 2009).

The third component of the model is the response. The response is a final result following the cognitive and affective evaluative process. Impulse buying has two components: urge buy impulsively and actual impulse buying behavior (Rook, 1987). In this study, we focus on both as responses to be observed.

## **2. Hypotheses**

### **2.1. Social Media Marketing Activities and Empathy**

The correlation between SMMAAs and empathy, with multiple variables influencing consumer attitudes and behaviors, has been investigated by previous studies. First, several studies have agreed on the importance of social media in increasing customer engagement (Arora et al., 2023), hence advising companies and brands to

prioritize establishing meaningful long-term relationships with customers (Siriwardana & Ismail, 2020). Keskin et al. (2017) found that persuasive messages in social media marketing can elicit emotional responses, including empathy. In addition, Lee and Hong (2016) explained that social media advertising tends to demonstrate perceived herd behaviors, which can indirectly lead to the intention to express empathy. Second, regarding SMMAAs featuring third-party sources, such as influencers, research has revealed the mediating roles of various factors, including empathy, attitude homophily, and parasocial interaction (Jung & Im, 2021; Lee & Watkins, 2016), on the effectiveness of product attitudes and brand perception. Specifically, Arora et al. (2023) discovered social media advertising antecedents that influence consumer views on empathy expression, while Siriwardana (2020) also underlined the importance of social media in increasing awareness, engagement, and communication. Furthermore, Khajavi et al. (2020) emphasized the role of mental norms and advertising effectiveness in predicting customers' intentions to express empathy, thus leading to their intention to buy. Despite the complex interplay among multiple variables, previous research suggests a pivotal role of social media in evoking users' empathy, therefore, we propose the hypothesis:

H1: Perceived SMMAAs have a significant positive effect on empathy.

### **2.2. Self-reference and Empathy**

Self-reference refers to the 'processing of self-relevant information and self-knowledge' and is related to self-structure and internal stimuli, such as a word or phrase in a user's memory (Burnkrant & Unnava, 1995). Research has consistently shown that self-referencing, particularly self-reflection, improves empathy.

Self-reflection is associated with more compassionate and empathetic perspectives (Gerace et al., 2017; Joireman, 2004). This is further supported by Ames et al. (2008), who found that self-referential brain processing was enhanced after looking from another perspective. However, the relationship between self-reflection and empathy is complex, with Joireman (2004) claiming that it can lead to maladaptive empathic responses. Overall, these researchers emphasize the importance of self-reference, particularly self-reflection, in the relationship with empathy. Moreover, the effect of storytelling marketing on purchase intention shows that self-reference and empathy have a positive impact on consumer behavior (Hapsari et al., 2022). This suggests that individuals are more likely to connect with and respond positively to marketing messages through self-reference and empathy. This connection between self-referencing and empathy highlights the importance of considering self-referential processes in promoting empathy. Therefore, the hypothesis is:

H2: Self-reference has a positive effect on empathy.

### **2.3. Relationship between Product Attributes (product variety, visual appeal, price attributes, and information quality) and Perceived Usefulness**

Different aspects of product attributes, namely product variety, visual appeal, price attributes, and information quality, are believed to significantly impact the decision-making process among consumers.

First, product variety may be an influential factor on online shopping platforms as online shoppers are inclined to prioritize variety, and varied selection may attract impulse buyers. Product variety can have advantageous impacts on TikTok users' perceived usefulness as it

enhances the extent of attractiveness, persuasiveness, and attitudes towards the product (Chung & Wei, 2020) and varied products may appeal to impulsive buyers (Chen & Seock, 2002). A variety of products positively affects the perceived usefulness of TikTok users because they enhance perceived attractiveness, argument quality, and attitudes towards products (Ahmadi, 2022). Moreover, this is further confirmed by the positive influence of product reviews, trust, and marketing content on TikTok 's purchasing decisions (Tegar, 2023).

Second, according to Ryu and Ryu (2021)'s research, visual appeals can boost sales and customer loyalty, bringing about a more effective marketing strategy. The positive influence of products' visual appeal on perceived usefulness among TikTok users is highly evident in the literature. This is especially clear in the context of impulsive purchasing behavior (Teo et al., 2023), adoption intention (Ye et al., 2019), and travel intention (Li, 2021; Roostika & Yumna, 2023). Therefore, product visual appeal is closely associated with consumers' perception of content usefulness on TikTok. Xiang et al. (2016) also found that the more visual elements are received by users, the more user behaviors are influenced by the variety of visual elements.

Third, price attributes are pivotal elements in the market, with price and quantity being the most identifiable characteristics of commodities (Brody, 1987). Customers' perspectives on product prices also vary, resulting in either positive or negative purchasing behaviors (Lichtenstein et al., 1993). While a higher price can be perceived as an indicator of a high-quality product, it can also be regarded as a factor that implies losing more resources. Previous research also confirmed the key role of price attributes in online purchases, especially within a short time span (Jiang & Rosenbloom, 2005; Sarkar & Khare, 2017). Research on

TikTok users has consistently shown that price attributes positively affect perceived usefulness. Ahmadi and Hudrasyah (2022) and Harahap et al. (2022) discovered that price awareness and perceived credibility, as well as ease of use, social media, and consumer trust, have a positive impact on perceived attractiveness and purchase intention. Ye (2021) supports these findings, highlighting that perceived usefulness is a key factor in the adoption of TikTok. Teo et al. (2023) further underscores the influence of TikTok on consumer behavior, with product-related visual appeal and feasibility positively affecting perceived enjoyment and usefulness, leading to impulsive buying behavior.

Last, information quality is a multi-dimensional concept that captures not only information management and ethics but also aesthetic and social elements (Mai, 2013) and extends this concept by situating information quality within a philosophy of information, emphasizing its contextual and meaning-based nature. The information quality of TikTok is variable, with a large proportion of videos containing questionable material (Hill et al., 2023). The information quality of TikTok is generally poor to mediocre, with a significant amount of disinformation. Research shows that information quality has a positive influence on users' perceived usefulness of TikTok (Chung & Wei, 2020; Roostika & Yumna, 2023). This is evidenced by its impact on user satisfaction, intention to stay, and intention to visit, as well as its role in product purchase intention. Specifically, information quality is found to be positively associated with user satisfaction and continuance intention (Chung & Wei, 2020), as well as visitation intention and brand engagement (Roostika & Yumna, 2023). Furthermore, information quality a key factor in product purchase intention (Ahmadi & Hudrasyah, 2022). These findings emphasize the significance of

providing high-quality information to TikTok users in order to increase their perceived usefulness.

These previous findings highlight the correlations of four aspects of Product Attributes with users' perceived usefulness. Therefore, we propose that:

H3a: Variety of products positively affects the perceived usefulness of TikTok users.

H3b: Products' visual appeal positively affects the perceived usefulness of TikTok users.

H3c: Price attributes positively affect the perceived usefulness of TikTok users.

H3d: Information quality positively affects TikTok users' perceived usefulness.

#### **2.4. Relationship between Price Attributes and Information Quality and Perceived Enjoyment**

Several studies suggested that price attributes can have a significant effect on perceived enjoyment. Haws et al. (2017) found that the inclusion of prices accelerates satiation, resulting in a decrease in enjoyment over time. However, Lee and Tsai (2014) advised that price promotions can increase the enjoyment of consumption, especially when consumption occurs quickly after payment. This is supported by Cahaya et al. (2023), who found that product quality, advertising and price all have an impact on consumer satisfaction. Furthermore, Stevens (1992) emphasized the role of price in travel decision-making, indicating that perceptions of price and quality can be utilized to gain a competitive advantage.

All dimensions of information quality are positively correlated with user satisfaction which influences the intention to use a service again. Pe-Than et al. (2014) found that perceived information relevance positively influenced the enjoyment of a mobile information-sharing

game. Babakus et al. (2009) further supported this, showing that experiential attributes of information quality led to higher enjoyment and purchase intention. The importance of pleasure in online experiences, with website quality factors influencing both pleasure and surprise (Bartl, 2011). Finally, Van Schaik and Ling (2011) highlighted the importance of usability in influencing interaction experience and acceptance, with product attributes and technology acceptance being the key determinants.

Therefore, the following hypotheses were proposed regarding the relationship between price attributes, information quality, and perceived usefulness:

H4a: Price attributes positively influence perceived enjoyment.

H4b: Information quality positively influences perceived enjoyment.

## 2.5. Empathy and Perceived Enjoyment

Several studies found the significant association between empathy with the enjoyment of conversation, particularly among older adults. Morelli et al. (2015) further substantiated this by demonstrating that empathy is positively associated with increased prosocial behavior, social connectedness, and overall well-being. Feng et al. (2023) demonstrated that empathy influences satisfaction, enjoyment, and attractiveness, all of which have a positive impact on TikTok user preferences. Fabri (2005) highlighted the relevance of empathy in producing a more joyful experience in instant messaging. Considering previous research, it can be concluded that empathy plays an important role in increasing users' perceived enjoyment of TikTok.

H5: Empathy positively affects perceived enjoyment.

## 2.6. Perceived Usefulness and Perceived Enjoyment

Perceived usefulness, a form of cognitive reaction (Parboteeah et al., 2009), is related to assessing the received stimulus and information to determine consequent responses. Cognitive reactions, including perceived usefulness, can have beneficial influence on affective reactions in general and perceived enjoyment in particular, as supported by Holbrook and Batra (1987). The positive correlation between cognitive reactions, affective reactions and perceived enjoyment is also underpinned by studies by Moon (2015) and Parboteeah et al. (2009), who showed that perceived usefulness can cause feelings of pleasure for users. These findings collectively pointed out that perceived usefulness can trigger feelings of pleasure among users. Al-Khasawneh (2022) added to this, stating that perceived enjoyment has a strong positive influence on the propensity to utilize TikTok. Rahimullah et al. (2022) also discovered that perceived usefulness influences users' intentions to consume higher educational content on online platforms. In short, these studies collectively echoed that perceived usefulness can advantageously affect perceived enjoyment, leading to numerous actions and intentions.

H6: Perceived usefulness affects perceived enjoyment positively.

## 2.7. Empathy and Urge to Buy Impulsively

Empathy can have an advantageous influence on the urge to buy impulsively (Ye et al., 2019), since the personality traits associated with empathy, such as openness, sociability, and extraversion, also significantly affect impulsive responses (Nadeem et al., 2018). Empathy as a form of emotional intelligence can have a positive effect on the urge to buy impulsively (Xu, 2020; Zafar et al., 2020; Pappas et al., 2017; Zhang, 2014). This is particularly evident

in the context of online shopping, where personalized services and social interactions can trigger positive emotions and influence purchase intentions (Pappas, 2014; Zhang, 2014). The role of empathy in this process is further supported by the finding that self-control weakens the positive effects on the urge to buy impulsively (Xu, 2020). Therefore, it can be inferred that empathy, as a component of emotional intelligence, is a strong influential factor that affects the urge to buy impulsively.

H7: Empathy positively affects the urge to buy impulsively.

### **2.8. Perceived Enjoyment and Urge To Buy Impulsively**

Many studies have investigated the correlation between perceived enjoyment and the urge to buy. Marques (2016) found that a sensorially rich online platform can significantly increase the urge to buy, with positive arousal playing a key role. Lee (2021) regarded convenience and social influence as the strongest predictors of perceived enjoyment, which in turn influences the urge to buy. Ulaan (2016) also found a positive influence of perceived enjoyment on the intention to shop online. Kalla (2012) extended this research by establishing a link between happiness and impulse buying, with happiness serving as a strong catalyst. In short, these studies collectively echoed that perceived enjoyment, particularly when influenced by convenience, social influence, and happiness, can substantially impact the urge to buy.

H8: Perceived enjoyment has a positive effect on urge to buy impulsively.

### **2.9. Perceived Usefulness and Urge to Buy Impulsively**

The positive effect of perceived usefulness on the urge to buy impulsively is evident in previous research, with the impacts of such

elements as convenience, visual appeal, social influence, and seller innovation (Lee et al., 2021). Furthermore, the application of sensory-rich platforms can boost the desire to urge to buy impulsively, with the arousal of pleasant feelings as a powerful motivator (Marques, 2016). Keni (2020) further supported this, showing that perceived usefulness affects repurchase intention through trust and customer satisfaction in both direct and indirect manners. These findings suggest that perceived usefulness can be a fundamental determinant of consumer behavior and purchase decisions. So, we propose that:

H9: Perceived usefulness positively affects the urge to buy impulsively.

### **2.10. Urge to Buy Impulsively and Impulse Buying**

The urge to buy impulsively can mediate the relationship between sales promotion, impulse buying tendency, social influence, and online impulse buying behavior (Iftikhar et al., 2021). Dasare et al. (2021) aimed to elucidate the phenomenon of impulsive behavior by emphasizing urge-driven behavior, enabling companies to predict impulsive buyers' behaviors and adjust marketing strategies. Shamim (2022) also highlighted the moderating role of social commerce experience on the relationship between urge-to-buy and impulse buying. Therefore, we propose the following hypothesis:

H10: The urge to buy impulsively positively affects impulse buying.

## **METHOD, DATA, AND ANALYSIS**

### **1. Sample and Procedure**

In this study, TikTok users in Vietnam were purposefully selected as the target sample, and data collection began in March 2024. This sample was chosen for four key reasons: (1)

TikTok has rapidly emerged as a prominent social commerce platform that seamlessly integrates entertainment and shopping, enabling researchers to examine how this hybrid environment shapes consumer behavior; (2) Users on TikTok tend to exhibit higher levels of engagement with branded content, including product reviews, influencer recommendations, and livestream shopping events. This makes them an ideal group for studying the effectiveness of user-generated content and social media marketing strategies; (3) TikTok's algorithm offers highly personalized content experiences, which allows for in-depth investigation into the impact of algorithm-driven exposure on consumer trust, attitudes, and purchasing decisions. These characteristics make TikTok users a particularly relevant and insightful segment for exploring evolving trends in online consumer behaviors; (4) To enhance the validity of the study, the researchers of this study deliberately focused on a relatively homogeneous group in terms of digital engagement (namely TikTok users in Vietnam). This aligns with the logic of purposive sampling, which emphasizes selecting participants best suited to address the research questions.

Based on the research of Hair et al. (1998) for exploratory factor analysis (EFA), the minimum sample size is 50, but it is better to have more than 100 samples. Besides, Bollen's (1989) research showed that the sample size needs to be five times the number of observed variables. In this study, the research team used a total of 68 observed variables. Applying this formula, we calculated  $n = 68 \times 5 = 340$  and decided to recruit a minimum of 340 participants. Data collection employed multi-mode survey administration, combining offline and online surveys via Google form link. The survey process was carried out in 2 stages: (1) The first stage was a preliminary survey with the purpose

of checking whether the questionnaire is clear, easy to understand, easy to answer and whether it is easy for respondents to absorb the questions. (2) The next stage involved conducting an official survey. To collect a data set that was large enough and suitable for the expected method used in data analysis, the authors planned and administered the preliminary survey on a scale of 80 respondents. Information obtained from respondents in this step was mainly used for the purpose of editing the form, words, and items in the questionnaire. After receiving their feedbacks, the authors made revision for the final questionnaire for the official survey.

The official data collection targeted TikTok users, who were selected due to their technological fluency and familiarity with online shopping environments. Through convenience and snowball sampling methods, a survey was conducted with a total number of 545 forms, and 500 responses were valid. Among the surveyed online shoppers, 60% of them are female, 55% are from 25-29 years old, and most are single. In terms of occupation, 55% of customers are office workers, and 50% of the sample earn 3-5 million per month.

## 2. Measurement

To ensure an effective measurement and contextual relevance, a rigorous translation of questionnaire and a back-translation process were implemented. Initially, all measurement scales were identified from established literature. For the perceived impact of SMMAs, the scale developed by Kim and Ko (2012) was employed, which comprised 13 items across five dimensions: interactivity, entertainment, interaction, trendiness, customization, and word-of-mouth. The scale of empathy was adapted from Koller and Camino (2001). The benchmark for measuring the urge to buy impulsively was

**Table 2.** Description of the Sample

		Quantity	Percent (%)
Gender	Male	107	21,4
	Female	391	78,2
	Other	2	0,4
Age	From 16 to 29 years old	478	95,6
	From 30 to under 44 years old	19	3,8
	From 45 to 59 years old	3	0,6
Academic level	High school	10	2
	Vocational school	1	0,2
	College	8	1,6
	Graduate	467	93,4
	Post- graduate	14	2,8
Area	North	44	8,8
	Central region	373	74,6
	Southern	83	16,6
Living area	City	422	84,4
	Countryside	78	15,6
	Other	0	0
Monthly income	Under 4.5 million VND	341	68,2
	From 4.5 to under 7 million VND	103	20,6
	From 7 to under 15 million VND	39	7,8
	From 15 million VND or more	17	3,4
Marital status	Married	15	3
	Single	480	96
	Other	5	1
Total		500	100

Source: surveys by authors

adapted from the scale recommended by Chen et al. (2016). Impulse buying behavior was measured with a four-item scale adapted from a scale constructed by (Hasanpoor et al., 2019). Next, the questionnaire underwent a systematic back-translation procedure, as suggested by Brislin (1970, 1986) and Guillemín (1993), to maintain conceptual equivalence between the original English scales and their Vietnamese counterparts. During back-translation, the original English survey was translated into Vietnamese and two experts (two PhD holders in applied linguistics) were consulted to review and

validate the translated items, confirming content validity and cultural appropriateness for the Vietnamese context. The research team, together with two experts, compared the differences and discussed the best solutions to come up with the Vietnamese version. In addition, a marketing lecturer who had some Scopus publications in consumer behaviors was invited to review and revise the language expressing in both English and Vietnamese before the final Vietnamese version was created. Subsequently, a preliminary survey was administered among 80 respondents, after which the scales were modified to align

with the research context.

In this study, we employed a five-point Likert scale to measure respondents' level of agreement with statements (observed variables) related to the research constructs. The five-point Likert scale was chosen for the following reasons: (1) A five-point scale provides sufficient differentiation without overwhelming respondents, particularly TikTok users, who are accustomed to quick, intuitive interactions on platforms such as TikTok. (2) The scale's clear and intuitive structure minimizes confusion during the response process. (3) Data collected using the five-point Likert scale are compatible with a wide range of quantitative analysis techniques, including Cronbach's Alpha reliability testing, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modeling (SEM), which enhances the reliability and rigor of statistical analysis.

### 3. Analysis and Result

Partial least square (PLS) structural equation modeling (SEM) was applied for the purpose of testing the research model and hypotheses. This study followed a research procedure with two stages, including measurement model validation and structural model analysis, and parameters were estimated by the PLS algorithm, with their significance (p-value) being calculated by the

PLS bootstrapping method with 5000 resampling.

#### 3.1. Measurement Model

A reliability check was conducted using Cronbach's Alpha and Exploratory Factor Analysis (EFA) to ensure the quality of the dataset. The measurement model was further assessed to confirm its reliability, convergent validity and discriminant validity of the scales, following recommendations by Hair Jr et al. (2021) and Janadari et al. (2016). First, all constructs achieved high reliability, with CR and Cronbach's alpha values exceeding the recommended threshold of 0.6 (Nunnally, 1975). Second, convergent validity is confirmed when all factor loadings of the items were higher than 0.7 and statistically significant ( $p < 0.05$ ), and the Average Variance Extracted (AVE) of each variable was significantly more than 0.5 (Hair et al., 2019). Third, discriminant validity was evaluated using the heterotrait-monotrait ratio (HTMT). HTMT values below 0.85 indicate strong discriminant validity, while values between 0.85 and 0.90 are considered acceptable. Our analysis reveals that all HTMT values remained below the critical threshold of 0.90, confirming that the measurement model does not violate discriminant validity according to the HTMT criterion.

**Table 3.** Summary of Measurement Model Assessment

Construct	Outer Loadings	Cronbach's Alpha	rho_A	CR	AVE
E1 (Empathy)	E1_1 = 0.788 E1_2 = 0.740 E1_3 = 0.811 E1_4 = 0.856	0.811	0.819	0.876	0.64
IB1 (Impulse Buying)	IB1_1 = 0.788 IB1_2 = 0.867 IB1_3 = 0.854 IB1_4 = 0.857	0.863	0.864	0.907	0.709

Construct	Outer Loadings	Cronbach's Alpha	rho_A	CR	AVE
IQ1 (Information Quality)	IQ1_1 = 0.819	0.802	0.803	0.871	0.627
	IQ1_2 = 0.778				
	IQ1_3 = 0.794				
	IQ1_6 = 0.776				
PA1 (Price Attributes)	PA1_1 = 0.783	0.672	0.675	0.82	0.604
	PA1_2 = 0.794				
	PA1_3 = 0.753				
PE1 (Perceived Enjoyment)	PE1_1 = 0.779	0.779	0.78	0.858	0.601
	PE1_2 = 0.778				
	PE1_3 = 0.802				
	PE1_4 = 0.742				
PU1 (Perceived Usefulness)	PU1_1 = 0.760	0.821	0.822	0.875	0.583
	PU1_2 = 0.784				
	PU1_3 = 0.744				
	PU1_4 = 0.723				
	PU1_5 = 0.805				
SMMAAs (Social Media Marketing Activities)	S1_10 = 0.728	0.833	0.835	0.875	0.501
	S1_11 = 0.689				
	S1_12 = 0.651				
	S1_13 = 0.672				
	S1_2 = 0.644				
	S1_5 = 0.659				
	S1_6 = 0.617				
	S1_7 = 0.709				
	S1_8 = 0.719				
S1_9 = 0.641					
SR (Self-reference)	SR1_2 = 0.750	0.711	0.719	0.838	0.634
	SR1_3 = 0.798				
	SR1_4 = 0.839				
UB1 (Urge to buy impulsively)	UG1_1 = 0.790	0.855	0.859	0.893	0.583
	UG1_2 = 0.763				
	UG1_3 = 0.826				
	UG1_4 = 0.770				
	UG1_5 = 0.637				
	UG1_6 = 0.783				
VA1 (Visual Appeal)	VA1_1 = 0.843	0.76	0.761	0.862	0.677
	VA1_2 = 0.850				
	VA1_3 = 0.773				
VP1 (Variety of Product)	VP1_1 = 0.824	0.815	0.818	0.89	0.73
	VP1_2 = 0.878				
	VP1_3 = 0.860				

Note: Social Media Marketing Activities: S; Self-reference: SR; Empathy: E; Perceived Usefulness: PU; Perceived Enjoyment: PE; Variety of Product: VP; Visual Appeal: VA; Price Attributes: PA; Information Quality: IQ; Urge to buy impulsively: UB; Impulse Buying: IB

**Table 4.** Summary of Discriminant validity

	E1_	IB1_	IQ1_	PA1_	PE1_	PU1_	SMMA	SR1_	UB1_	VA1_
E1_										
IB1_	0.497									
IQ1_	0.637	0.591								
PA1_	0.649	0.588	0.835							
PE1_	0.765	0.692	0.899	0.824						
PU1_	0.587	0.606	0.786	0.758	0.848					
SMMA	0.664	0.606	0.785	0.782	0.856	0.791				
SR1_	0.700	0.596	0.641	0.822	0.764	0.675	0.772			
UG1_	0.574	0.849	0.697	0.621	0.766	0.693	0.684	0.655		
VA1_	0.642	0.442	0.712	0.656	0.689	0.621	0.591	0.513	0.513	
VP1_	0.507	0.483	0.711	0.670	0.649	0.776	0.692	0.610	0.630	0.577

### 3.2. Structural Model: Emotional and Cognitive Effects of Impulsive Buying

The structural model was assessed through several criteria, including collinearity diagnostics (VIF), explanatory power ( $R^2$ ), predictive relevance ( $Q^2$ ), and the significance and effect size of path relationships.

The  $R^2$  values for the endogenous variables were calculated to assess the explanatory power of the structural model. According to Hair et al. (2017),  $R^2$  values of 0.75, 0.50, and 0.25 are considered substantial, moderate, and weak, respectively. In this study, the  $R^2$  values for the endogenous constructs ranged from 0.378 to 0.649, indicating that the model has moderate explanatory power overall. In terms of predictive relevance, the Stone-Geisser's  $Q^2$  values, calculated using the blindfolding procedure, were all greater than zero for the key endogenous constructs, confirming that the model possesses adequate predictive relevance (Hair et al., 2021). Results are presented in Table 5:

**Table 5.** Results of  $R^2$  and  $Q^2$ 

	$R^2$	$Q^2$
E1_	0.378	0.366
IB1_	0.531	0.274
PE1_	0.649	0.598
PU1_	0.543	0.529
UB1_	0.437	0.399

### Significance of the Structural Relationships

The significance of the relationships between constructs was evaluated based on standardized path coefficients ( $\beta$ ), t-statistics, and p-values, obtained through using bootstrapping with 5,000 subsamples. According to conventional thresholds, a path is considered statistically significant when the p-value is less than 0.05. The results of the path analysis are presented as follows Table 6.

### CONCLUSION AND SUGGESTIONS

This study provides a comprehensive understanding of how multiple factors, both emotional and cognitive, collectively influence impulsive buying behaviors, offering significant insights into the complex decision-making process among TikTok users. Few studies have examined the influence of impulsive purchase behaviors by considering both emotional and cognitive mechanisms in the online environment. Thus, the findings of this study are significant as they provide evidence of the applicability of SO-R theory to explain the influence of multiple factors on impulse buying through empathy, perceived usefulness, and perceived enjoyment as organism mechanisms.

**Table 6.** Structural equation modeling results

H	Path	Coefficients	T values	P values	VIF	Conclude
H1	SMMA → E	0.354	7.032	0.000	1.570	Accept
H2	SR → E	0.321	5.780	0.000	1.570	Accept
H3a	VP → PU	0.343	7.788	0.000	1.617	Accept
H3b	VA → PU	0.097	2.152	0.031	1.542	Accept
H3c	PA → PU	0.179	3.791	0.000	1.735	Accept
H3d	IQ → PU	0.277	5.097	0.000	2,096	Accept
H4a	PA → PE	0.117	2.926	0.003	1.819	Accept
H4b	IQ → PE	0.330	7.372	0.000	2.207	Accept
H5	E → PE	0.247	6.556	0.000	1.493	Accept
H6	PU → PE	0.284	6.363	0.000	1.889	Accept
H7	PU → UB	0.273	4.878	0.000	1.880	Accept
H8	PE → UB	0.360	6.190	0.000	2.309	Accept
H9	E → UB	0.131	2.683	0.007	1.613	Accept
H10	UB → IB	0.729	27.887	0.000	1.000	Accept

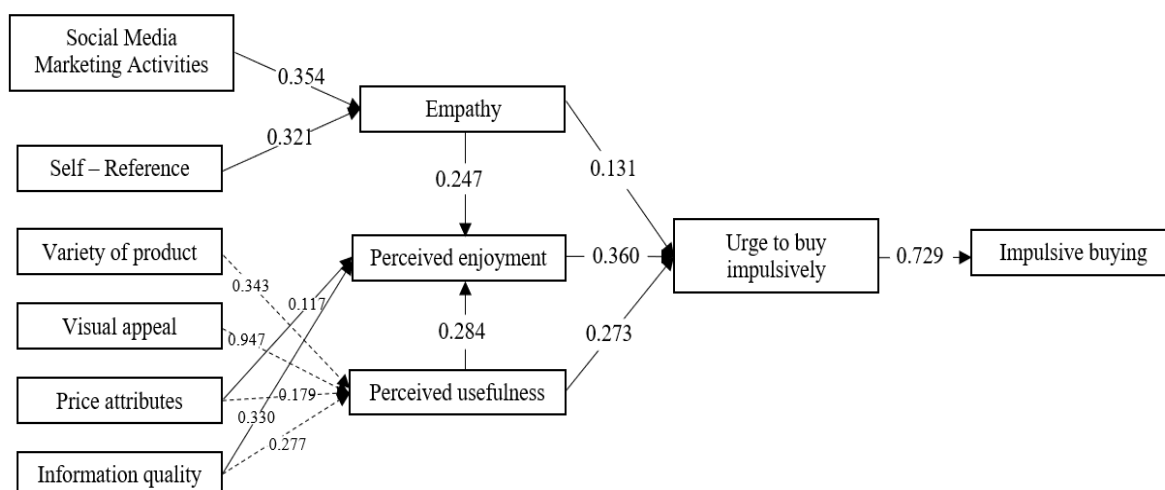
Note: Social Media Marketing Activities: S; Self- reference: SR; Empathy: E; Perceived Usefulness: PU; Perceived Enjoyment: PE; Variety of Product: VP; Visual Appeal: VA; Price Attributes: PA; Information Quality: IQ; Urge to buy impulsively: UB; Impulse Buying: IB

The structural model demonstrates strong empirical support for the hypothesized relationships, with all paths showing statistical significance. This reinforces the role of SMMA and psychological responses in shaping impulse buying intentions and provides a robust foundation for future research and practical application.

First, this study confirms that social media marketing activities (SMMA) and self-reference have a significant positive impact on

consumers' impulse buying behaviors through empathy on the Tiktok platform. This study deepens the research on the relationship between SMMA, self-reference, empathy and impulse buying, and will enrich theoretical research on online shopping services. This also implies that videos and images can effectively evoke empathy in social media marketing activities, highlighting their strategic values in driving consumers' purchasing decisions.

**Figure 3:** Result model.



Second, this research found that information quality and price attributes had a significant positive influence on urge to buy impulsively and then on impulse buying through perceived usefulness. Such findings imply that people with impulse buying are influenced by information quality and price attributes. In other words, impulse buying will be motivated when offering affordable prices and reliable information. Besides, visual appeal factor of videos and images on Tiktok platform is also an important element in promoting impulse buying. This is supported by Lee and Watkins (2016), who found that consumers tend to buy products advertised by social media with visually appealing videos.

Thirdly, this research highlights the roles of social media marketing activities (SMMAs), self-reference, and product attributes (variety, visual appeal, price, and information quality) as key stimuli, and the significance of empathy, perceived usefulness, and perceived enjoyment mediating the relationship between key organism mechanisms and impulsive buying behaviors as key response. This implies that videos and images, as well as product attributes, serve as important stimuli that affect consumers' emotional and cognitive mechanisms, which led to online impulse buying, thus supporting SOR theory.

### 1. Theoretical Contributions

This study offers several theoretical contributions to the understanding of impulsive buying behavior within the short-video social commerce environment.

This study offers several theoretical contributions to the understanding of impulsive buying behavior within the short-video social commerce environment. First, by incorporating the Stimulus-Organism-Response (S-O-R) model, this research suggests the influence of

various factors on impulsive buying, with the central mediating roles of empathy, perceived enjoyment, and perceived usefulness. Previous studies (e.g., Bagozzi and Moore, 1994; Escalas and Stern, 2003) have explored the role of these factors in consumer decision-making, but their specific interaction with SMMAs and impulsive buying has yet to be thoroughly investigated. This study also demonstrates that emotional factors—particularly perceived enjoyment and empathy—significantly impact impulsive buying through emotional bonds between consumers and influencers, especially in the high-engagement environment of TikTok. While the statistical results confirm these mediating effects, the discussion also advances theoretical understanding by proposing that empathy fosters emotional attachment, which can rapidly translate into impulsive urges in emotionally charged contexts like TikTok.

Second, the uniqueness of TikTok's short-video format is a key contextual contribution. Unlike traditional social media, TikTok delivers fast-paced, highly personalized, and entertaining content, which minimizes cognitive deliberation and enhances emotional stimulation. This study extends the understanding of impulse buying by showing that TikTok's algorithm-driven content flow and parasocial interactions with influencers create a fertile ground for impulsive behaviors. For example, a 15-second product review or unboxing video by a relatable content creator can quickly trigger viewers' emotional resonance and urge to buy—often before any rational evaluation occurs. Hence, the research model provides a more ecologically valid representation of consumer behavior in fast-consumption digital environments. Existing studies (e.g., Parboteeah et al., 2009; Xiang et al., 2016) have primarily focused on traditional e-commerce or social commerce platforms, where interactions are more static and less immersive. By contrast,

this study emphasizes the distinctive affordances of TikTok's short-video format and the influential role of content creators in shaping consumers' impulse buying behavior.

Third, this study contributes to the literature by focusing on Vietnamese consumers—a group underrepresented in global impulse buying studies. Vietnam, as a fast-growing digital economy with a collectivist culture and high smart phone penetration, presents a unique blend of Western-style digital engagement and traditional communal values. Exploring this demographic helps contextualize findings for Southeast Asian markets and provides opportunities for theoretical generalization or contrast in future comparative studies. Further discussion could examine cultural drivers such as social conformity, emotional contagion, and peer influence, which may amplify empathy and impulsive tendencies in Vietnamese users.

In conclusion, findings reveal a complex interplay between Social Media Marketing Activities (SMMAs), Self-Reference, Product Attributes, Empathy, Perceived Enjoyment, and Perceived Usefulness in shaping the Urge to Buy Impulsively among TikTok users in Vietnam. This comprehensive model demonstrates how these factors collectively influence Impulsive Buying Behavior, offering valuable insights for contributing to the research of social commerce dynamics. It opens new avenues for future research on the emotional and cognitive drivers of consumer behavior in the age of social media marketing.

## **2. Managerial Implications**

Besides the theoretical contributions, this study provides significant managerial implications for businesses that aim to leverage TikTok as a social commerce platform targeted at TikTok users. First and foremost, as perceived usefulness and perceived enjoyment were found to

impact the urge to buy more significantly, it is recommended that businesses develop engaging and enjoyable formats, including live streams, stories, polls, interactive posts, and especially content collaboration with influencers and content creators. Such initiatives foster a more intimate connection with users, effective marketing communications, and ensure that products stay top-of-mind or first choices for target consumers. Furthermore, as empathy also significantly influences TikTok users' impulsive buying behavior, businesses should develop campaigns that resonate emotionally with this audience. From a product perspective, since these factors, Product Attributes, including variety, visual appeal, price, and information quality, collectively shape impulse buying behavior, companies should ensure that their product offerings and promotional content are visually appealing and provide sufficient and precise information. The importance of product variety and quality reinforces the need for brands to expand and optimize their product listings and highlight these aspects within TikTok's highly visual and fast-paced environment.

In specific, the findings of this study hold significant implications for businesses operating in Vietnam and similar cultures such as Indonesia or Thailand. Within collectivist cultures in Southeast Asia, marketers and businesses should adapt their campaigns and content to local values and social norms to enhance the emotional engagement and trigger better empathy among potential buyers. For example, campaigns that highlight themes of friendship, family, or community solidarity tend to generate stronger emotional connections, enhancing consumer engagement and purchase likelihood.

Lastly, while the study emphasizes the importance of maximizing marketing and business effectiveness, it also underscores the

ethical responsibilities of both businesses and platform developers. As impulsive buying can lead to negative consumer experiences due to its prompt decision-making period, responsible and transparent marketing strategies must be ensured. For-profit ventures should balance their goals with ethical considerations to avoid any exploitation of vulnerable consumers. At the same time, impulsive buying could lead to financial strain among people in developing economies, who are also under pressure of financial stability and building a secure life. Therefore, social media platforms and policy-makers should play an essential role in protecting consumers, fostering a balance between growing buying force and consumers' rights.

### 3. Limitation and Future Research

While this study offers novel insights, several limitations warrant discussion. First, although the study identifies the effects of empathy, perceived enjoyment, and perceived usefulness as mediators, the underlying psychological mechanisms were not deeply explored. Future research should apply qualitative methods or experimental designs to unpack how these affective and cognitive states evolve in real time during social media use from consumers' perspectives.

Second, the focus on TikTok—while contextually valuable—limits generalizability. However, this should be considered a conscious scope decision rather than a methodological flaw. Future studies could adopt comparative designs to assess how different platform features (e.g., TikTok vs. Instagram Reels or YouTube Shorts) affect impulse buying behaviors.

Third, the study targets Vietnamese consumers, which limits cross-cultural applicability. Yet, this also represents a theoretical strength by addressing a specific, digitally active population. Future research can test the model in other

Southeast Asian countries to examine cultural similarities or contrasts.

Lastly, the study does not examine product categories as one of potential influential factors. Impulsive buying may vary depending on product types (e.g., fashion vs. electronics), and future studies should stratify analysis accordingly.

By addressing these points, future research can enrich the understanding of impulse buying dynamics in emerging digital economies and evolving social commerce landscapes.

### 4. Relevance and Implication to Indonesian Context

Beyond the Vietnamese context, this study offers multiple implications for navigating impulsive buying on social e-commerce in Indonesia. First, the proposed model highlighted the mediating role of empathy with regard to the effects of SMMAAs on impulsive buying behaviors, driven by potential parasocial ties with influencers (Flecha-Ortiz et al., 2023; Yang & Ha, 2021). Similarly, Biila & Dhofir (2024) showed that Instagram affiliate marketing significantly increased impulsive online purchases through perceived enjoyment among young Indonesians. Moreover, young Indonesian consumers tend to use TikTok to maintain relationships and social connections, which may signify the role of empathy, compared to influencer marketing.

Following the ban on direct social media e-commerce sales, such as TikTok, in 2023 in Indonesia (Chow, 2024), this change in platform structure may influence impulsive buying behaviors among Indonesian online users. However, this framework, which encompasses both cognitive stimuli (price attributes, information quality) and emotional factors (entertainment, empathy), can act as a transferable framework for examining impulsive buying behavior in the Indonesian context. Thus,

the model offers a foundation for future country-specific validation and informs regulatory consideration for e-commerce in various emerging markets across Southeast Asia.

Third, the findings that Perceived Enjoyment and Visual Appeal are correlated to the urge to buy offer practical implications for Indonesian e-commerce. With TikTok's popularity, many Indonesian consumers are inclined to regard shopping as a leisure activity, rather than merely a routine task. In this context, this study highlights that TikTok commerce works best when it delivers both entertainment and enjoyment, as well as emotional value. To be more specific, one implication for Indonesian SMEs and brands is to invest in content that feels fun and visually engaging. To achieve this, specific measures include eye-catching short videos, relatable storytelling, and entertaining livestream formats that attract attention, spark emotions, and make buying more enjoyable. This is in line with various studies based in Indonesia, emphasizing the role of perceived enjoyment in influencing online impulse purchases among young users (Herlina, 2023; Biila & Dhofir, 2024)

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## APPENDIX

Construct	Measure items	Source
S_1	The content found in X's social media seems interesting.	Kim and Ko (2011)
S_2	Utilizing the social media channels of X is exciting.	
S_3	It is fun to collect information on products through X's social media.	
S_4	It is easy to kill time using X's social media.	
S_5	X's social media content is up-to-date	
S_6	It is a leading fashion to use X's social media	
S_7	It is easy to convey my opinion through X's social media	
S_8	I can easily share my opinions through X's social media.	
S_9	It is easy to convey my opinions or conversation with other users through X's social media	
S_10	It is possible to have two-way interaction through X's social media.	
S_11	It is possible to search customized information on X's social media.	
S_12	X's social media provide customized services	
S_13	X's social media provide lively feed information I am interested in	
S_14	It is easy to use X's social media.	
S_15	X's social media can be used anytime, anywhere.	
S_16	I would like to pass out information on brands, products, or services from X's social media to my friends	
S_17	I would like to upload contents from X's social media on my blog or micro blog	
S_18	I would like to share opinions on brands, items, or services acquired from X's social media with my acquaintances.	
SR1_1	I perceived that the product recommendations on this website matched my preferences very well.	Tam and Ho, (2006); Zhang, Lu, Gao et al., (2014)
SR1_2	I perceived that there were product offers for me from this website.	
SR1_3	I perceived that the product recommendations on this website fit my tastes very well	
SR1_4	I perceived that this website offered a list of my friends who have similar tastes with me.	
E_1	I feel good about clicking "Like" for this ad	Holbrook and Batra (1987)
E_2	I feel positive about clicking "Like" for this ad	
E_3	I feel favorable about clicking "Like" for this sort of ad	
E_4	My overall attitude toward this ad is positive	
VP_1	There are a sufficient variety of products available for me in X.	(Liu et al., 2013)
VP_2	I can easily find products I need from X.	
VP_3	I can easily find the products I am interested in from X	
VA_1	X shows me pictures which are visually pleasing.	(Xiang et al., 2016)
VA_2	X shows me pictures which are visually appealing.	
VA_3	X provides me pictures which are displayed with visually pleasing design.	
PA_1	Products offered through X have reasonable prices.	(Park et al., 2012)
PA_2	Sellers in X offers discounted prices on X.	
PA_3	Products offered through have economical prices.	

Construct	Measure items	Source
IQ_1	Information provided (text, caption) match (is relevant) with the product.	(Chen et al., 2016)
IQ_2	Information provided (text, caption) is easily understood.	
IQ_3	Information provided (text, caption) is accurate.	
IQ_4	Information provided (text, caption) is complete.	
IQ_5	Information provided (text, caption) is unambiguous.	
IQ_6	Information provided (text, caption) is up to date.	
PE_1	My interaction in X leaves good impression on me.	Parboteeah et al., (2009)
PE_2	My interaction in X is exciting	
PE_3	My interaction in X is pleasing.	
PU_1	Using apparel websites can save shopping time in searching and buying products.	D. V. Parboteeah, J. S. Valacich and J. D. Wells,(2009);
PU_2	Apparel websites are helpful in buying what I want online.	L. Xiang, X. Zheng, M. K.Lee and D. Zhao,(2016);
PU_3	Using the apparel website can increase my shopping productivity in searching and buying products.	T. Zhang, D. Tao, X. Qu, X. Zhang, J. Zeng, H. Zhu and H. Zhu,(2020);
PU_4	Using the apparel website can enable me to have a better search and purchase of products than using other websites.	D. V. Parboteeah, D. C. Taylor and N. A. Barber,(2016).
PU_5	Using the apparel website can increase my shopping effectiveness.	
UB_1	When I am browsing X, I have the urge to buy other products other than or in addition to product I plan to buy	(Xiang et al., 2016; Huang, 2015)
UB_2	When I am browsing X, I have the urge to buy other products that are unrelated to my shopping goals.	
UB_3	When I am browsing X, I have the urge to buy other products that are outside of my shopping goals	
UB_4	I have experienced an urge to buy product spontaneously before	
UB_5	I did not plan to buy certain product.	
UB_6	When I am browsing Instagram, I saw products I wanted to buy despite not in my shopping list.	
UB_7	I felt sudden urge to buy certain product.	
IB1_1	During online shopping, I buy apparel products without a lot of thinking.	Floh and Madlberger, (2013); Liu et al., (2013)
IB1_2	I see it, I buy it” describes my shopping behavior	Rook & Fisher, (1995)
IB1_3	I ended up spending more money than I originally set out to spend.	Xiang, L.; Zheng, X.; Lee, M.K.; Zhao, (2016)
IB1_4	When/after using the website, my purchase was unplanned	Verhagen & Van Dolen (2021); Chang et al. (2014)

Note: Social Media Marketing Activities: S; Self- reference: SR; Empathy: E; Perceived Usefulness: PU; Perceived Enjoyment: PE; Variety of Product: VP; Visual Appeal: VA; Price Attributes: PA; Information Quality: IQ; Urge to buy impulsively: UB; Impulse Buying: IB

All items of the above constructs were measured using a five-point Likert scale (e.g., 1 = totally disagree, 5 = totally agree).