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年輕人線上衝動購買行為影響因素之探討：網路口碑及性別的
調節作用

Exploring the Influential Factors of Online Impulsive Buying
Behavior for Young Adults: The Moderating Roles of eWOM and
Gender

李萬成

Le Quang Trang

指導教授：吳萬益 博士

廖英凱 博士

Advisor: Wann-Yih Wu, Ph.D.

Ying-Kai Liao, Ph.D.

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博 士 生：李萬成

經考試合格特此證明

口試委員：陳正忠
盧龍泉
吳萬益
蔡英凱
蔡國忠
紀信光

指導教授：吳萬益, 蔡英凱

系主任(所長)：蔡國忠

口試日期：中華民國 111 年 12 月 28 日

準博士推薦函

本校企業管理學系管理科學博士班研究生李萬成君在本系修業5年，已經完成本系博士班規定之修業課程及論文研究之訓練。

1、在修業課程方面：李萬成君已修滿44學分，其中必修科目：研究方法、最佳化理論、書報討論、企業倫理專題研討等科目，成績及格(請查閱博士班歷年成績)。

2、在論文研究方面：李萬成君在學期間已完成下列論文：

(1)博士論文：Exploring the Influential Factors of Online Impulsive Buying Behavior for Young Adults: The Moderating Roles of eWOM and Gender.

(2)學術期刊：Sustainability, Journal of Distribution Science

本人認為李萬成君已完成南華大學企業管理學系管理科學博士班之博士養成教育，符合訓練水準，並具備本校博士學位考試之申請資格，特向博士資格審查小組推薦其初稿，名稱：Exploring the Influential Factors of Online Impulsive Buying Behavior for Young Adults: The Moderating Roles of eWOM and Gender，以參加博士論文口試。

指導教授：吳萬益 蔡英凱

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To my P.TTT and L.PLA, my reasons for being. Thank you for being the wind beneath my wings. It might have appeared to go unnoticed, but I've got it all here in my heart. I want you to know that I would be nothing without you.

摘要

衝動購買行為可以為企業組織帶來諸多好處的一個因素，並能吸引行銷人員的注意，特別是在網路購物環境中。最近，在 **COVID-19** 大流行期間，很多消費者在恐慌中消費，使衝動購買行為變的更加頻繁。為了更深入的理解這種行為，本研究提出了刺激-有機體-反應 (**SOR**) 的擴展模型，以探索線上衝動購買行為的前因 (衝動購買特徵、動機與行銷刺激) 對中介 (自我控制程度和情緒喚起程度) 及購買行為的影響。此外，本研究並探討網路口碑與性別對於自我控制及情感激起與線上衝動購買行為關係的調節作用。本研究以越南孫德勝大學 **18** 至 **22** 歲的學生做為問卷發放對象，本研究共收集 **436** 份樣本並以 **SmartPLS 3.0** 進行資料分析。研究結果顯示，衝動購買之特質前因 (如感知易用型、感知享受及線上沉浸投入) 均對取得享樂購物價值產生顯著影響。自我控制和情感激起對於衝動購買行為有顯著影響。此外，在針對線上購物特定市場制定衝動購買行為策略時，應仔細考慮使用適當的行銷刺激，包括產品品質、溝通有效性及價格折扣等行銷刺激因素。本研究顯示，網路口碑在降低消費者衝動購買行為的自我控制方面發揮了重要作用。除此之外，研究結果也顯示，女性的自我控制能力比男性差，女性更容易因情感激起而引發衝動購買行為。最後，本研究之結果為線上衝動購買行為的研究提供學術及管理意涵，

特別是考慮到以自我控制做為中介變數之購買行為，目前研究仍不多見。

關鍵詞：衝動購買行為、自我控制、情感激起、行銷刺激、個人衝動特徵



Title of Thesis: Exploring the Influential Factors of Online Impulsive Buying Behavior for Young Adults: The Moderating Roles of eWOM and Gender

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Name of Student: Le Quang Trang

Advisor: Wann-Yih Wu, Ph.D.

Ying-Kai Liao, Ph.D.

ABSTRACT

Impulsive buying behavior is a factor that brings many benefits to business organizations and attracts the attention of marketers, especially in the online shopping environment. Recently, amid the COVID-19 pandemic, impulsive shopping behavior has become more frequent, with consumers spending in panic. To better understand this behavior, this study proposes an extension of the Stimulus-Organism-Response (S-O-R) model to explore the influence of antecedents (impulse buying traits, motivation, and marketing stimuli) on mediators (lack of self-control and emotional arousal) and impulsive buying behavior in the context of online shopping. In addition, this study also examines the moderating role of eWOM and gender for the influence self-control, and emotional arousal on online impulsive buying behavior. An online survey was conducted to collect the research data from students aged 18 to 22 years old at Ton Duc Thang University, Vietnam. A total of 436 samples were collected and analyzed using Smart PLS version 3.0 software. Research results indicate that the impulse buying trait antecedents (such as sensation-seeking, impulse buying tendency, and self-identity) and motivation antecedents (such as perceived ease of use, perceived enjoyment, and online flow experience) all have significant influence on acquiring hedonic shopping value, self-control and emotional

arousal have a strong impact on impulsive buying behavior. In addition, the marketing stimuli antecedents such as product quality, communication effectiveness, and price discounts should be carefully considered when building a targeted strategy towards impulsive buying behavior in a shopping context online. This study also revealed that eWOM played an important role in reducing the level of consumers' self-control in impulsive buying behavior. Besides that, the study results also indicate that females will have more lack of self-control and are more likely to arouse emotions on impulse buying behavior than males. Moreover, this study also provides some academic and managerial implications in research on online shopping impulsive behavior, which is currently very limited in recent studies, especially considering the role of self-control as a mediator.

Keywords: impulsive buying behavior, self-control, emotional arousal, marketing stimuli, personal impulsive traits

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CHAPTER ONE

INTRODUCTION

1.1 Research background and research motivation

Over the past three decades, studies on impulsive buying behavior have been of particular interest to researchers, showing that this behavior brings many benefits to business organizations and manufacturing companies. Impulsive buying behavior was defined as a sudden, compelling, hedonic purchasing behavior in which the haste with which the purchase is made without careful thinking, assessment of alternatives, or consideration of future consequences (Rook, 1987). According to Statista (2020), around half of all purchases made by 18 to 24-year-olds in the United States were impulse purchases. The older age groups were less likely to make spontaneous purchases. In 2018, men in the U.S spent approximately \$90 on clothes, while women spent significantly more. The total spending when shopping for apparel varies between men and women and between generations. Besides that, Baby Boomers in the U.S spent an average of slightly over \$170 per transaction on clothes, making them the most significant spending demographic in 2018. One of the younger generations, Millennials, spent around \$100 per transaction. As a result, many researchers and marketers have concentrated their efforts on determining how to drive online impulsive buying behavior most successfully. Consumers spend more on products they don't really need, especially in the setting of COVID-19, since they are afraid of the condition generating an imbalance in their control (Chiu, Oh, & Cho, 2021; Thakur, Diwekar, Reddy, & Gajjala, 2020).

Besides that, as e-commerce has expanded exponentially over the past decade, more and more shoppers are comfortable making purchases via the

internet (Rosário & Raimundo, 2021). Traditional consumers were slow to embrace online shopping. However, in recent years, as a result of increased competition among retailers, customers have gained more value from online shopping, both in terms of the quality of the products and the quality of the services provided to them after the sale. Today's online buying experiences are increasingly like those of a traditional store. The benefits of online shopping become apparent to consumers, who begin making more frequent use of commercial websites and mobile applications (Chiu, Wang, Fang, & Huang, 2014). People are more dependent on the convenience of shopping online. Consumers in the COVID-19 pandemic are engaging in impulsive, stockpiling purchases, with little consideration given to the long-term effects of their actions. (Chiu, Oh, & Cho, 2022). In addition, people are growing more accustomed to and conversant with internet buying as a result of COVID-19. As an outcome, internet retailers anticipate an increase in profit-generating impulse purchases. More academics are beginning to focus on impulsive purchasing behavior online rather than offline settings. According to Brici, Hodkinson, and Sullivan (2013), young individuals are more likely than adults to engage in impulsive purchasing. The abundance of information available online, in particular, has made impulsive buying behavior among young adults increasingly prevalent. Retailers in the modern era frequently use extraneous factors to influence customers' feelings about making a purchase. Marketers spend a lot of time and energy creating retail settings and the interactions that take place there to increase customers' propensity to make a purchase (Park, Kim, Funches, & Foxx, 2012). To encourage more spontaneous purchases, marketers have experimented with a wide range of items, messaging, shop environments, and promotions (Mohan, Sivakumaran, & Sharma, 2013).

Furthermore, hedonic shopping value is generally responsible for triggering impulsive purchasing behavior (Hosseini, Zadeh, Shafiee & Hajipour, 2020). Hedonic purchasing value, such as promotions like flash sales activities on e-commerce distribution channels that offer consumers a sense of urgency, have a large role in the online environment, as stated by Tyrväinen, Karjaluoto, and Saarijärvi (2018). Customers are more likely to make a buy because of this, since they will not want to pass up a good deal (Zhang, Cheng, & Du, 2018). Consumers were distracted from their own wants and spending limits by streamers, as well as by live-streaming sales activity. The cost of the streamers will force them to go above and beyond their financial goals (Wongkitrungrueng & Assarut, 2020). As a result, to encourage consumers to make a hasty purchase, many stores appeal to their customers' sense of hedonic worth when shopping through the use of mostly extrinsically motivated marketing stimuli. In addition, the consumer's intention was heavily influenced by the consumer's engagement with the commercial website. Shopping becomes more of a leisure activity that encourages impulse buys when users view it as convenient to do so on a mobile app or website. When consumers are engaged in a shopping activity, especially one that is combined with stimulating marketing activities, they are more likely to experience online flow, the psychological state of being fully immersed in an activity, as described by Zanjani, Milne, and Miller (2016). They are more absorbed in the activity at hand, less likely to be distracted, and more likely to overlook any potential dangers. As a result, the online flow experience is crucial in guiding consumers' perceptions of value and encouraging them to make a purchase (Gao & Bai, 2014). Consumers' flow experiences in the digital realm can be set in motion by means of interactive activities, including site navigation, communication efficiency, and general ambiance (Barta, Flavian, & Gurra, 2021).

Additionally, young adults' buying decisions are becoming increasingly easy and spontaneous as a result of the influence of social media, which is rich in information and enables them to discover new things to satisfy their urge to express themselves and their personalities. Moreover, marketing strategies that target and attract young people with higher-quality goods, and entertainment shopping experiences, are becoming increasingly popular. Finally, the external variables affecting online purchasing, such as the online shopping system, are designed to be simple to engage with and smooth, enhancing the pleasure of online shopping. Moreover, young adults' self-control is deteriorating; they seek refreshment and pleasure in life and desire the finest and most luxury, regardless of the consequences; and they can afford to pay for such pleasures (Davey et al, 2020). Thus, this study was conducted in the context of online shopping to determine the factors that contribute to young people's impulsive online shopping behavior, including impulse buying traits, internal and external motivational factors, and the influence of marketing stimuli, and the individual's psychological characteristics.

Besides that, this study aims to examine the moderating effects of gender and eWOM on the relationship between individual self-control and emotional arousal on impulsive buying behavior. In addition, examining consumer reactions to external stimuli, this study proposed an extended S-O-R model. Frequently, the organism factor accepts stimuli based on emotional state, such as pleasure, arousal, and dominance. These emotions are regularly derived from the perceived value of the consumer (Wu et al, 2016), which includes both hedonic and utilitarian shopping value. In the meta-analysis model, a model was proposed to confirm the effect of hedonic value shopping on impulsive purchasing behavior based on previous research evidence, which provides a suitability and literature foundation for

argument in the primary research model. Examining an individual's level of resistance and eliciting their emotions by delving into the organism factor through the perceived value side: hedonic shopping value.

The systematic literature review research of Redine et al. (2022) on impulsive buying behavior, based on a synthesis of 186 articles, has pointed out research directions on impulsive buying behavior in the period from the 1950s to the present. This research has shown the attractiveness of this topic in the current period, based on the development of e-commerce and social networks as well as the diverse features of smart handheld devices. In addition, the COVID-19 pandemic makes consumers focus on online shopping channels. Besides that, some antecedents of impulsive buying that are often studied are also shown, such as consumer-related factors, marketing mix factors, store factors, and mediator variables commonly studied: arousal, enjoyment, pleasure, and flow experience (Parmar et al, 2020; Bahrah & Fachira, 2021). Therefore, this study has inherited and proposed a research model based on the suggestions of Redine et al. (2022).

Firstly, this study focused on the context of online impulsive shopping and, at the same time, targets young people as a future-oriented customer segment. Second, this study applied the Stimulus – Organism - Response (S-O-R) framework to explore lack of self-control and emotional arousal elements as the mediating variables. Furthermore, intrinsic factor suggestions such as online flow experience, perceived ease of use, and perceived enjoyment are frequently built as antecedents to determining how stimuli affect the organism through interaction with the shopping app or website. Previous studies often focused on marketing tactics but ignored the influence of media and advertising to trigger impulsive buying behavior online (Karim et al, 2021; Xu & Huang, 2014). In this study, two factors—

communication effectiveness and price discounts—were considered to be examined.

Finally, two other variables, eWOM and gender, were also proposed to explore the moderating relationship between Organism and Respond. The influence of eWOM on buying behavior has been carried out in many studies before. Wang et al. (2018) have shown that when making purchasing decisions, consumers often seek support from social relationships. Especially in the online context, consumers often search for information through social networks and forums. They easily trust product reviews. According to Sardar et al. (2021), young people are increasingly influenced by eWOM by the extent to which they access and seek information from the internet. Therefore, this study proposed to examine the influence of eWOM as a moderator of impulsive online shopping behavior. Besides, in studying impulsive buying behavior online, gender is also an important factor to consider. Coley & Burgess (2003) discovered that men and women have different cognitive levels and different influences on impulsive buying behavior, especially hedonic shopping. Therefore, testing the moderating role of gender will provide managers with more accurate information on how to approach as well as more appropriate marketing strategies aimed at men and women.

1.2 Research objective

The purpose of this study is to elucidate the role of antecedents, mediators, and moderators in determining the outcome of impulsive buying behavior. The following objectives were established for this study:

1. Determining the elements influencing online impulsive buying behavior using three antecedent dimensions: impulse buying traits, internal and external motivation, and marketing stimuli.

2. To investigate the role of hedonic shopping value as a mediator in the relationship between impulse buying traits, motivation, and marketing stimuli and online impulsive purchasing behavior.
3. To explore the moderating role of e-word of mouth and gender effects on impulsive buying behavior.
4. To extend the Stimulus - Organism – Response model by adding the psychology and perception dimensions.

1.3 Research contribution

The contribution of this study to the online impulsive buying behavior literature can be described as follows: First, this study is the first one proposes the extension of the Stimulus - Organism – Response model by deeply investigating consumers' psychology and perception to accept or resist impulsive buying behavior based on the lack of self-control and the elicitation of positive emotional arousal. In previous studies, the researchers frequently focus on hedonic shopping value as the main mediating variable but in this study, author divided hedonic shopping value into two sub-factors to provide a better understanding toward online impulsive buying behavior. Second, this research emphasizes the marketing stimuli aspect, which was usually ignored by previous research. Third, in this research author sketches e-WOM and gender as moderating role to find out the importance of rating, reviewing, comment in social media on the young adults' impulsive buying behavior, as well as young adults' gender. Finally, this study provides impulsive buying behavior literature and research evidence for further search by combining two research methods: meta-analysis and questionnaire survey.

1.4 Research project and scope of the study

This study is divided into two stages. First, the meta-analysis method was applied to synthesize the results from previous studies related to the

topic and context of this dissertation. From there, the evidence was collected to build hypotheses and form the initial research model, then the research direction is determined based on the results of the meta-analysis method. In the next stage, survey research has been conducted with a more detailed and effective research model that compensates for the shortcomings and limitations of the first stage.

Based on what author have discussed in research objective, research contribution this study proposes the research project and scopes, which are shown in Table 1-1.

Table 1-1 Scope of the study

Items	Scope of The Study
Type of the research	The literature review was adopted to build the research hypotheses and framework. Meta-analysis was adopted to confirm the framework. Questionnaires and construct measurements were used to collect empirical data and to test the hypotheses and draw the conclusions
Key issue	This study aims to explore the antecedents, mediators, moderators, control variable of online impulsive buying behavior.
Dependent variables	Lack of self-control, emotional arousal, impulsive buying behavior
Independent variables	Sensation seeking, impulse buying tendency, self-identity, perceived ease of use, perceived enjoyment, online flow experience, product quality, communication effectiveness, web atmospherics, price discounts.
Moderator variable	e-word of mouth, gender

Items	Scope of The Study
Main variable	Impulsive buying behavior
Underlying theory	Stimulus - Organism – Response model
Testing location and sample	Consumers who used to purchase in online shopping
Analyzed unit	Individual-level
Time frame	Cross-sectional study
Research instruments	1. Meta-analysis: secondary data, statistical analysis instruments by using Comprehensive Meta-Analysis (CMA) software. 2. Survey: theory inference, primary data, and statistical analysis instruments by using SPSS 23 and Smart PLS 3.0

Source: The study

1.5 Research procedure

This study is divided into six chapters, with the following summaries for each of the chapters:

Chapter 1 discusses the research background and motivation, research objectives and scope of the study, research procedure, and structure of the dissertation.

Chapter 2 reviews the research literature, including an appraisal of the theoretical formation as well as the determination of research variables.

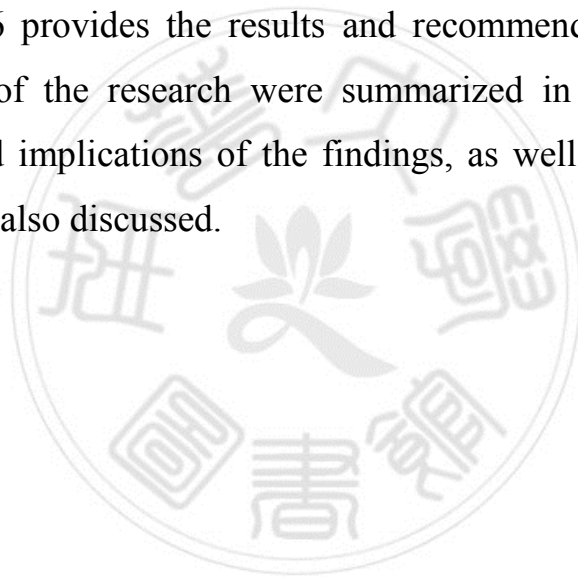
Chapter 3 covers all the development of research hypotheses, the design of the study, and the methods. In addition, the research model was given. The author discussed the research design, which consisted of (1) a meta-analysis and (2) an online survey. In particular, the measurement

scales, sampling plan, data collection technique, and data analysis procedure for each study were all described in this chapter for the consideration.

Chapter 4 presents the findings of a qualitative investigation conducted using meta-analysis. The goal of this study was to make sure that the research model was complete and that all the questions on the survey were answered correctly and fully.

Chapter 5 indicates the empirical results of the questionnaire survey for hypothesis testing are presented. Also covered in this chapter were the descriptive analysis, the reliability and validity of the measuring scales, as well as the hypothesis testing procedures and results.

Chapter 6 provides the results and recommendations of this study. The outcomes of the research were summarized in the conclusion. The significance and implications of the findings, as well as the limitations of this study, were also discussed.



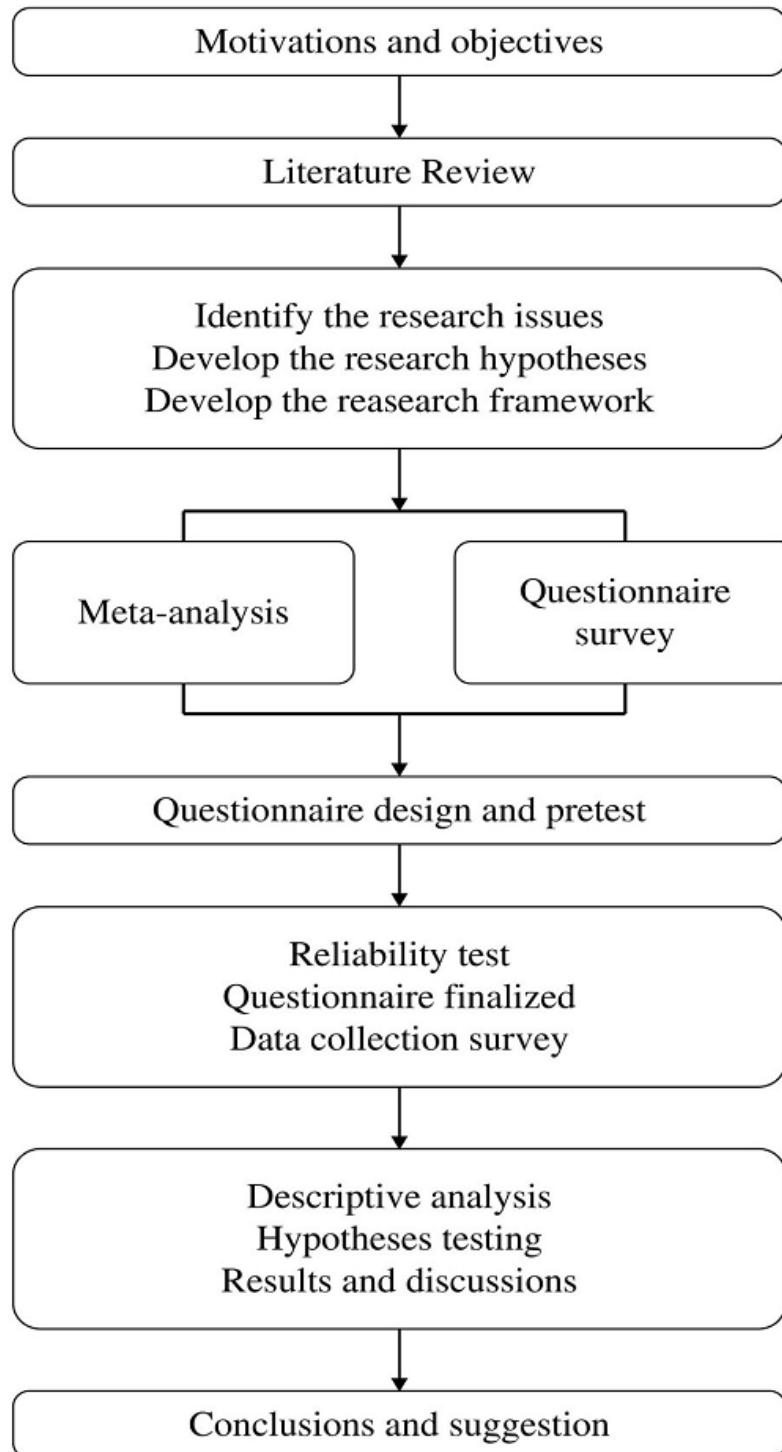


Figure 1-1 The flow chart of the research

CHAPTER TWO

LITERATURE REVIEW

This chapter presented a review of the literature with respect to detailed research constructs definitions. The antecedents, moderators, and consequences of online impulsive buying behavior were also presented.

2.1 Theoretical backgrounds

2.1.1 Stimulus - Organism – Response (S-O-R) model

Mehrabian and Russell (1974) proposed the Stimulus - Organism – Response (S-O-R) model. This model was offered to investigate the environment's effects to ascertain the individual's response to the environment's stimulus by agreeing to or avoiding it. According to the S-O-R theory, the term "stimulus" referred to a number of factors that have an impact on the customers' perceptions as well as their internal states (Jeon & Kim, 2012; Kim, Lee & Jung, 2020). These features functioned as cues, entering the minds of consumers and motivating them to act in response to what they have received (Zhang & Lyu, 2021).

Within the context of this research, the term "stimulus" referred to the elements of a website that clients interact with in order to form their opinions (Eroglu, Machleit & Davis, 2003). The term "organism" was used to refer to the internal processes that took place between the inputs and the final replies offered by the customer, which were based on the customer's own views and judgments (Zhu et al, 2020). Customers, once activated, turn the stimulus into knowledge that was both valuable and relevant to them in the context of making some judgments regarding to call to action (Loureiro et al, 2019). The response related to the results, as shown by the activities and behaviors of the customers (Lee, Kim & Jung, 2017).

The S-O-R model was frequently used to analyze purchasing behavior, particularly impulsive purchasing behavior. It illustrates the

internal and external stimuli that each consumer encounters, as well as their behavior and attitude toward those stimuli. Researchers frequently extend the S-O-R model when studying internet commerce. Research of Kawaf & Tagg (2012) on fashion shopping of online retailing suggested research appears to be falling short of catching up with the technical wave of the fashion e-tail sector, despite the fact that environmental stimuli are a primary topic of concern for web designers and online shopping strategists, particularly in the fashion industry. McKinney (2004) used the S-O-R model to demonstrate that consumers' internal motivations for Internet buying vary and have a substantial impact on shopping satisfaction. Richard (2005) introduced a new element, information-seeking, into the S-O-R framework and concluded from the study's findings that customers' engagement with a site and subsequent shopping behavior are positively influenced by high task-relevant information. Koo and Ju (2010) established that online environmental cues influence customers' emotions and intents, and Wang et al (2010) established a substantial association between web aesthetics, online shoppers, perceived service quality, and satisfaction using the S-O-R framework. O'Brien (2010) demonstrated that online consumers are driven to interact with e-commerce websites and established that hedonic and utilitarian buying values are the most influential variables in the online environment. Wang, Minor & Wei (2011) discovered that aesthetic cues from the web can elicit cognitive, emotional, and conative responses in online shoppers during purchasing tasks (e.g., arousal, satisfaction, purchase, and revisit).

The purpose of this study was to create a research model based on the S-O-R model (Figure 2-1). Consistent with previous research, this study utilizes the S-O-R framework, which has been thoroughly evaluated in previous studies on the impact of stimuli on the cognitive and emotional

states of consumers, and therefore changes consumer intention or behavior (Mehrabian & Russell, 1974). The first input impacts stimulation (Stimulus) and hedonic shopping value, which includes two sub-factors: lack of self-control and emotional arousal as (Organism). Finally, impulsive buying behavior as the outcome (Response), are hypothesized to be shopping incentive factors and marketing activities, respectively.

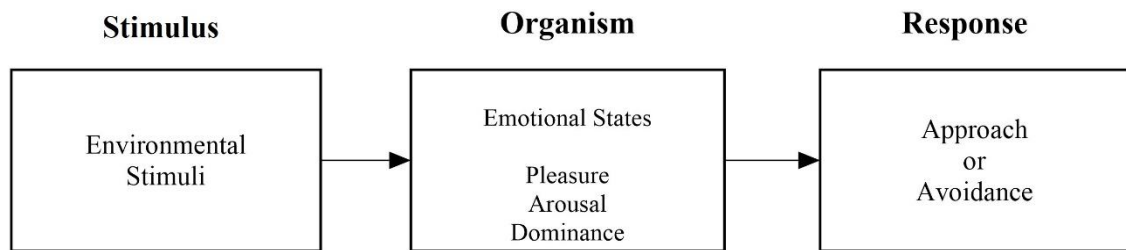


Figure 2-1 S-O-R framework. Source: Mehrabian and Russell (1974).

2.1.2 Impulsive buying behavior

Research of Rook & Fisher (1995) showed impulsive buying behavior in the early. This study focuses primarily on gaining an understanding of how the phenomenon happened as well as its scope. An unplanned purchase is initially conceived of as an impulse buy in this study. An unplanned purchase is defined as "the difference between a consumer's total purchases at the finish of a shopping trip, and those that were listed as anticipated purchases before entering a store" (Rook, 1987). However, several authors have argued that defining impulse buying solely based on unplanned purchases is rather simplistic (Stern, 1962; Kollat & Willett, 1969; Rook, 1987). These authors go one step further and argues that while all impulsive purchases can be considered to be unplanned, not all unplanned purchases can be considered to be impulsive purchases (Koski, 2004). It's possible that a buyer will make an unanticipated purchase for no other reason than the fact that they need to buy a product that is not included on their shopping list in advance. Unplanned purchases do not necessarily

come with an immediate desire or strong positive sensations, which are typically linked with the act of making an impulse purchase (Amos et al, 2014).

Beatty & Ferrell (1998) defined impulsive buying as "a sudden and immediate purchase with no pre-shopping intentions, either to purchase the specific product category or to complete a specific purchasing task." Whereas Rook (1987) defined impulsive buying as "a sudden, often powerful, and persistent urge to buy something immediately," implying that it is more emotional than rational. This behavior is often unplanned and occurs as a direct result of an impulsive decision to make a purchase. These researchers' conception of impulsive purchasing is compatible with our understanding of the term. It is possible for someone to make an impulsive purchase as a result of experiencing a desire to buy something without engaging in a process of conscious deliberation or carefully considering the many choices (Dholakia et al, 2005). Whether one considers impulsive buying to be an impulse or a behavior, it has been abundantly obvious that a number of elements contribute to the phenomenon of impulsive buying. Therefore, the purpose of this study is to identify the antecedent elements that influence impulsive purchasing behavior.

2.2 Operational Definition of Research Constructs.

2.2.1 Sensation seeking

The Sensation Seeking Scale, developed by Zuckerman et al (1964), is among the most widely used psychological instruments for measuring sensation-seeking. One definition of sensation seeker is a person who actively seeks out new and unusual experiences, and who is ready to put himself at risk in a variety of ways, including physically, socially, legally, and monetarily, in order to do so (Zuckerman, 1994). Common sense is attracted to the premise of sensory seeking. It's simple to believe that people

have different levels of enthusiasm, risk tolerance, and a need for novelty and adventure. Consumers who seek out sensations could appear to be solely interested in intense ones. Also, consumers are more prone to do out-of-the-ordinary activities like yoga and meditation. This form of activity is typically given up on when the first excitement wears off. These findings, which involve a reduction in stimulation, may appear counterintuitive at first, but consumers prove that the pursuit of novel and unusual experiences not just stimulation is at the heart of sensation seeking. However, most instances of sensation seeking involve actively seeking out external stimuli (Carton et al, 1992). On the other side, risky actions are associated with curiosity for new experiences. As shown by López-Bonilla & López-Bonilla (2010), those who score highly on this measure are more likely to engage in potentially harmful behaviors. Therefore, consumers' need for novel experiences would explain their propensity for making spontaneous purchases.

Consumer behavior researchers have recognized for a long time that individuals make purchasing decisions regarding the things they buy that are congruent with their sense of self identify (Alshurideh & Alnaser, 2020). Moreover, Ahn & Kwon (2022) has examined the impact of sensation seeking in consumer's impulsive buying behavior and indicated that sensation seeking plays a mediator role between impulse buying tendency and behavior. Zuckerman et al (1964) identified four dimensions of Sensation Seeking Scale. In this study the author focuses on the experience seeking dimension as consumers' personal trait to explore its impact on impulse buying behavior.

2.2.2 Impulse buying tendency

An individual's propensity for the result of a change purchases can be defined as an "individual trait of responding rapidly to a given stimuli

without contemplating regarding action outcomes" (Chih, Wu & Li, 2012). According to Rook and Fisher (1995), an individual's propensity for spontaneous, quick, and thoughtless behavior including impulse buying is a unidimensional construct. According to the behavioral theory of consumer behavior, those who are prone to impulse purchases have a certain personality type that, when activated, causes them to make snap decisions (Gsiorowska, 2011; Park & Lennon, 2006). One way in which impulsive buying tendencies are distinct from impulsive buying behavior is that impulse buying inclination is a reasonably stable consumer attribute that serves as a source of impulses or incentives that ultimately lead to purchase (Zhang, Prybutok & Strutton, 2007). While many studies looked at the results of this type of shopping behavior in brick-and-mortar stores, few have addressed the causes and repercussions of impulse purchases made via the internet (Abrar, Naveed & Ramay, 2017). Based on that, this study intends to clarify the impact of impulse buying tendency.

2.2.3 Self-identity

A consistent and reliable impression of oneself was understood to constitute a person's sense of self-identity. Both teenagers and young adults are currently in a unique developmental stage during which they are working to establish their individual identities (Arnett, 2000). Researchers are focusing more and more of their attention on the topic of self-identity in a variety of developmental situations as the Ecological System Theory continues to get more and more attention from developmental psychologists. The Ecological Systems theory (Bronfenbrenner, 1979) is one of the explanations that is most widely acknowledged in reference to the influence that social settings have on human development. This theory contends that the environment in which a person is raised has an effect on every aspect of their lives. The approach of thinking, the emotions individuals feel, as well

as someone's likes and dislikes, are all determined by the circumstances in their social environment. If a person alters the conditions in which they live, they will also alter. If an individual moves to a new nation that has a different culture, there is a decent possibility that their identity will shift. A similar thing might occur in someone's life if their social role within any of the five systems shifts. One of the most essential environments for the growth of teenagers and young adults is now the online environment of the Internet, in addition to the more traditional offline environment. The influence of the internet environment on young people is significant, especially in impulsive buying behavior (Darley, Blankson & Luethge, 2010). According to Dittmar, Beattie, & Friese (1995), the beliefs of the customer about their own identity and the imperfections in that identity affect their impulsive purchasing behavior. This influence will lead to two trends of impulsive buying behavior: high and low identity-expressive potential. Each one would lead to different behaviors in an online shopping context. In this investigation, the author intends to find out the role of personal identity in consumers' psychology toward their self-control and emotional arousal.

2.2.4 Perceived ease of use

This research proposed perceived ease of use as a critical variable as intrinsic motivation to testing customer impulsive behavior in the online shopping context. Perceived ease of use was developed in the Technology Acceptance Model (TAM), by Davis (1989). Perceived ease of use was defined as "the degree to which a person believes that using a particular system would be free of effort." Perceived ease of use can also be determined by the amount of time spent using the system and the amount of interaction that occurs between users and the system. The fact that a system is used more frequently indicates that it is better known that it is easier to

operate, and that it is easier for its users to make use of (Ibrahim & Shiring, 2022). Moreover, perceived ease of use could promote consumers satisfaction (Rafique et al, 2020). In many research contexts, perceived ease of use has been used as an intrinsic motivation to investigate consumer attitudes and behaviors toward new system building or new technology development. Basuki et al. (2021) measured consumers' behavior intention on an online movie watching platform using perceived ease of use. Additionally, perceived ease of use has also been utilized in other contexts such as e-learning (Liao et al, 2022), augmented reality (Anifa & Sanaji, 2022), and food delivery mobile applications (Sondakh, 2022). Especially, in the online shopping context, perceived ease of use has been examined by many previous studies, Iriani and Andjarwati (2020) conducted research on online shopping when the COVID-19 pandemic occurred, and they concluded that people chose online shopping based on the ease with which they could learn and interact with the web-based system, which included seeking products and making payments. The research conducted by Hansen, Saridakis, and Benson (2018) on transactions conducted through social media demonstrates that the primary effects of perceived ease of use stemming from TAM did not always hold true. Instead, they influenced one another. If consumers perceive that they did not have a lot of control over using social networking sites for transactions, then their intention to use these sites for transactions might not be very high even when consumers believe that using social networking sites for transactions is easy to use. Or, if customers believe they will have greater influence over their behavior but also believe it will be significantly more challenging to implement, they have less of an intention to utilize the product or service. This study proposed perceived ease of use as a motivation to examine the effect on the lack of self-control and emotional arousal.

2.2.5 Perceived enjoyment

Perceived enjoyment was the degree to which the activity of utilizing a particular technology that is perceived to be enjoyable, irrespective of any performance implications coming from technology use (Venkatesh, 2000). The greater the level of comfort possessed by information technology users, the more positive the user's attitude, which was subsequently related to the system's adoption. Users completed their work effectively and on time if they were pleased and at ease when utilizing information technology solutions (Natarajan, Balasubramanian & Kasilingam, 2018). Perceived enjoyment was a state in which a person uses technology in his/her activities to boost the sense of comfort, and it is also hedonistic in interactions with technology or systems (Akdim, Casaló & Flavián, 2022). Individuals were more likely to engage in a specific activity if it provided them with pleasure and enjoyment. Additionally, when an action is seen as fun, a favorable attitude toward the behavior will be developed. In retailing, shopping pleasure is an essential idea. Previous studies on consumer purchasing incentives have demonstrated the significance of enjoying the shopping experience (Adapa et al, 2020; Butt et al, 2022; Chopdar et al, 2018). In particular, in an online environment, the role of perceived enjoyment is more important due to that the pleasant experience combined with ease of use will entice and make consumers spend more time searching for product information, researching promotions, and searching for discount codes. In research of impulse buying behavior in live streaming shopping, Lin et al (2022) concluded that consumers' satisfaction is being boosted by factors including demand, accessibility, involvement, and playfulness. In addition, the anticipation of future pleasure is a direct motivator for consumers' desire to make an impulse purchase.

2.2.6 Online flow experience

The term "flow" refers to a state of heightened attention, vigor, and concentration experienced throughout a number of activities, from watching a movie to playing video games or web surfing (Herrando et al, 2022). One's emotional state is said to be in "flow" when they are totally absorbed in what they're doing or experiencing. According to the study of Csikszentmihalyi and Csikszentmihaly (1990), "flow" occurs when a person is so engrossed in an activity that they stop seeing their surroundings. For instance, when people are engaged in something they find rewarding, they tend to forget about distractions and focus only on the task at hand. A customer's ideal experience circumstance is one in which they are experiencing flow, a fleeting and subjective psychological state. Widespread use of flow experience can be found in many fields, including mobile shopping intention (Lin et al, 2020), online shopping (Bao & Yang, 2022), virtual reality (Kim, Jin & Shin, 2022), and short-form video on TikTok and Facebook (Qin, Omar & Musetti, 2022). However, the research of Chen, Hsu & Lu (2018) confirmed that the function of flow in environments based on web-based technology is not the same as the function of flow in environments based on modern technology. According to Guo & Klein (2009), the web-based flow position is a cognitive state that determines how quickly and effectively one responds and interacts with other online situations, as well as how much pleasure they take in these activities, how often they fail to reinforce themselves, and how much self-awareness and self-control they exhibit. Based on that, online flow experience is the antecedent to leading consumers to impulsive buying behavior.

In order to understand the motivational impact on hedonic value during online buying, this study suggests a flow experience factor based on flow theory. Whether one is engaged in an online or offline activity, the definition of "flow" will be different. In this research, the author focused on

two primary dimensions: Concentration and loss of control to characterize the state of flow that can be achieved when navigating the Internet (Csikszentmihalyi, & Csikszentmihalyi, 1989). When using e-commerce websites, customers are more likely to become immersed in the purchasing experience as a result of the sites' polished appearance and convenient features. In particular, online advertising initiatives play a crucial role in capturing the attention of customers (Koufaris, 2002). Online shopping can be so engrossing that customers may forget the practical reasons they originally had for making a purchase and instead focus solely on completing the tasks at hand. According to Lee & Wu (2017), there is a positive correlation between customer concentration and hedonic value.

2.2.7 Product quality

The term "product quality" refers to the degree to which a good or service satisfies the needs of customers, carries out its intended purpose, and conforms to the standards set out by consumers. When it comes to competitiveness, product quality is a factor that is always put at the forefront by marketers to create in order to capture customer buying intention, which leads to impulse buying behavior. This is done in order to increase sales and profits (Ladhari, Souiden & Dufour, 2017). In order to decide how to increase product quality and win the satisfaction and trust of customers, there are two aspects of product quality that need to be investigated: First, how customers define quality, and second, how quality may be improved. According to Han and Jeong (2013), the total product quality has a significant impact on the sensations and emotions of customers, including ease, pleasure, and even sensitivity.

Additionally, other aspects of the marketing stimuli that help to a better overall perception of product quality among customers (Baker, Grewal, & Parasuraman, 1994). The concept of hedonic shopping value

examines how customers value the shopping experience in terms of the sensory adventure, comfort, enjoyment, and emotional facets of the activity. Consumers are often coaxed into a feeling of comfort, increased trust, and successful communication through the use of marketing strategies, according to the findings of study on hedonic buying value (Kim, Song & Youn, 2020). Increasing one's awareness of product quality also involves a significant contribution from the element of perceived ease of use. According to Ampadu et al (2022), the recommended product quality has a favorable and statistically significant influence on the impulsive buying behavior of online consumers.

2.2.8 Communication effectiveness

Effective communication is one of the effects that may be anticipated from using promotion strategy. According to Hanninen and Karjaluoto (2017), it is possible to define it as the degree to which a campaign is successful in conveying information about goods and services to their target consumers with the intention of causing consumers to comprehend the product and have an intention to purchase it online. The content that marketers sent, which may include information on products, promotions, and discount offers, is what determines the level of efficacy that may be achieved. In addition to this, it is dependent on how to communicate with customers through the many different communication channels.

In the context of online shopping, consumers can be approached more effectively via social media and e-commerce platforms. Additionally, communication campaigns are more influential because they can reach their intended audiences with greater precision thanks to the utilization of transaction histories and consumers' profiles (Hudson et al, 2015). In addition, the efficacy of communication in today's world comes not only from traditional communication marketing strategies, but also from devoted

customers who, by spreading the word about a product or service via e-word of mouth, raise awareness about it (Liao et al, 2022). Customers who have a strong attachment to a particular brand are more likely to not only make more purchases from that brand but also to advocate for that brand by recommending it to their friends and family, publishing product reviews, and offering constructive criticism (Kotler, Kartajaya & Setiawan, 2017).

2.2.9 Web atmospherics

The term "atmospherics" refers to the practice of "consciously constructing space to achieve certain buyer effects," more specifically the creation of "purchasing environments" that elicit "certain emotional responses in the consumer" that increase the likelihood of a purchase (Kotler, 1973). The elements of a store's atmospherics were categorized by Baker et al (1994) as social, design, and ambient.

This study, the author conducts an examination into an online environment. Web atmospherics are defined by "the deliberate creation of favorable user experiences on the web in an effort to elicit more positive responses from customers" (Hunter & Mukerji, 2011). It's a multi-factor model that's intimately related to the idea of "customer experience" (Richard, 2010). Shoppers' online experiences, in-store visits, and overall satisfaction are all found to be favorably affected by web atmospherics, as indicated by Albarq (2021). Traditional shopping malls are examined, and the results were similar. It has been studied that when customers' expectations of a store's ambiance are not met, they may have a negative emotional reaction (Vijay, Prashar & Parsad, 2017). According to Dailey (2004) "website atmospheric" refers to the practice of designing a website so that it elicits a favorable emotional response from its visitors such as colors, noises, layouts, speeds, navigational instructions. This is the standard term for describing the ambiance of a retail area.

In today's e-commerce environment, the phrase is also used to describe a shop's website layout and design (Lim, 2013). In addition, Koo & Ju (2010) clarified that a web store's environment can be broken down into high-task and low-task zones depending on the type of information shown to customers. All textual and visual information displayed on a website is considered a high task cue if it aids in the completion of the task at hand and contributes to the satisfaction of the customer. All information regarding the goods, the pricing, the terms of sale, the delivery and return policies, the product photos, and the navigation mechanisms that make it easy for consumers to use the website are all examples of high task cues (Putri & Balqiah, 2017). The goal of the challenging assignment is to help customers reach their objectives while shopping. By contrast, "low task cues" encompass anything that has nothing to do with actual shopping behavior on the part of consumers. Colors, borders, patterns on the backdrop, fonts, animations, music and sounds, entertainment in the form of games and contests, other than product photographs, web counters, and prizes, and the affiliate website itself are all examples of low task cues. Following Hsieh et al (2014) this study employs both color and visual representations of products as research variables.

2.2.10 Price discount

Consumers' impulsive purchases can be influenced by a number of factors, including the quality, price, and symbolic value of a product, as illustrated by prior studies (Janiszewski & Cunha, 2004; Nusair et al, 2010; Lee & Stoel, 2014). As a result of these circumstances, some items will naturally have a larger customer base. The relationship between price and impulse purchases has been widely recognized (Karbasivar & Yarahmadi, 2011). Consumers rely more on external product qualities than intrinsic ones, as suggested by Zeithaml (1988), when the quality of the product is

hard to determine prior to purchase. In contrast to intrinsic product qualities, which are the actual properties of the product itself, extrinsic product attributes are only indicators of the product's quality. If customers have no way of knowing what kind of quality to expect from a service in advance, they will likely base their expectations on the cost (Alba et al, 1999).

Customers are warned off by deep price discounts, which may indicate a subpar product or service. In contrast, a price discount would be welcomed by customers who know the product is of high quality, leading to an overall good assessment. Customers have less of an opportunity to inspect a product's quality before making an online purchase. Online shoppers are more inclined to rely on extrinsic cues, such as price promotion, than on internal indicators when making purchasing decisions. But consumers may assume that a low-quality product is being sold at a discounted price while shopping online (Lee & Chen, 2018).

2.2.11 Lack of self-control

Self-control can be defined as an individual's "ability to regulate or conquer one's ideas, feelings, desires, and behaviors at will." (Gul & Pesendorfer, 2001). One prevalent method of thinking about self-control is via the lens of the strength model (Baumeister & Heatherton, 1996; Baumeister & Exline, 2000). It is generally agreed upon that both stable individual differences in trait self-control and transient fluctuations in state self-control are essential, and that it is necessary to take these variations into account while doing research. Take into consideration the fact that research provides substantial evidence for the hypothesis that self-control is a trait of personality that is characterized by a high degree of consistency throughout one's lifetime (Dweck, 2013). In a similar line, researchers have observed a link between lower levels of impulse buying and personality traits linked with self-control, such as conscientiousness. This finding supports the

hypothesis that self-control relates to lower levels of impulsive shopping (Chang, Eckman & Yan, 2011; Muruganantham & Bhakat, 2013; Dittmar et al, 2014).

A number of further studies have shown that an individual's capacity for self-control is capable of undergoing momentary shifts depending on the circumstances. According to the S-O-R model, this occurs because self-control can be influenced by both intrinsic and extrinsic stimuli as well as lateral self-induction based on individual traits. As a result, the degree of increase or decrease in self-control varies according to that stimulus, thereby causing a change in the individual organism and leading to different responses and behaviors in different environments.

2.2.12 Emotional arousal

A state of increased physiological activity characterizes the phenomenon known as emotional arousal. This involves having powerful emotions such as rage and terror and people enter the state of emotional arousal as a response to the things that happen daily. Attachment styles and relational feedback loops are two of the many factors that might have an effect on how emotionally aroused a person becomes. In many studies that investigate consumer behavior, the emotional state of the consumer acts as an organism, also known as the intervening variable. Mehrabian & Russell (1974) focused on pleasure, arousal, and dominance as three of the most important emotional states that were employed to mediate approach-avoidance behavior in the context of the environmental scenario or their opposites. Using semantic differential items, Mummalaneni (2005) assessed the enjoyment and arousal characteristics of the experience. This study defined pleasure as the degree to which a person feels good, joyful, or happy, and arousal as the degree to which a person feels excited, stimulated, alert, or active. This definition is based on the research of Mehrabian &

Russell (1974), which defines pleasure as the degree to which a person feels good.

2.2.13 e-word of mouth

According to Hennig-Thurau et al (2014), the definition of eWOM is favorable or negative reviews, as well as the comments about a product or a company made by potential users or real users through the use of social networks or online tools. As a result of the explosive rise of social networks in recent years, customers have developed a newfound propensity to seek one another for information and recommendations. They begin their hunt for knowledge by gathering it from individuals who are closely associated with them, such as members of their family, friends, and coworkers (De Bruyn & Lilien, 2008). After that, they broaden the scope of their inquiry and look for information elsewhere. Typically, they seek information from those who have some level of power over them or from internet influencers. According to Jeong & Koo (2015), consumers place a greater amount of trust in eWOM that is provided by other users than they do in communications that are generated by businesses. Additionally, the quality as well as the amount of eWOM influence the purchasing decisions of customers while using social media networks.

CHAPTER THREE

META-ANALYSIS

The purpose of meta-analysis in this study is to assess the strength of evidence for research hypotheses based on an integration of the results of previous. Thus, meta-analysis is served as an in-depth investigation of the evidence from the literature. There were two stages to this research. The first step was to conduct a meta-analysis, in which the author combined the findings of prior studies that were relevant to the research questions. This chapter presented and explained the meta-analysis hypotheses as well as the papers and studies that were used in the data collection for the meta-analysis. The results of the meta-analysis were also provided and discussed in this chapter. The results of the meta-analysis have led to the creation of new hypotheses for the second stage.

3.1 Research framework

There were several hypotheses in the suggested research framework that were being tested in this meta-analysis study. Almost all studies lack the capacity to precisely determine the effect size, making meta-analysis essential (Lipsey & Wilson, 2001). Meta-analysis was crucial since some primary studies may not have enough power (such as sample size) to generate statistically significant results. More accurate results could be drawn from meta-analytic research than from any of the main investigations because they combined the findings of numerous independent studies into a single estimate, while adjusting for artifacts that may generate the illusion of conflicting data (Hunter & Schmidt, 2004).

The goal of study one was to discover any evidence of a connection between the previously mentioned topics. Based on a review of the literature and the use of meta-analytic method. Figure 3-1 illustrates the research framework.

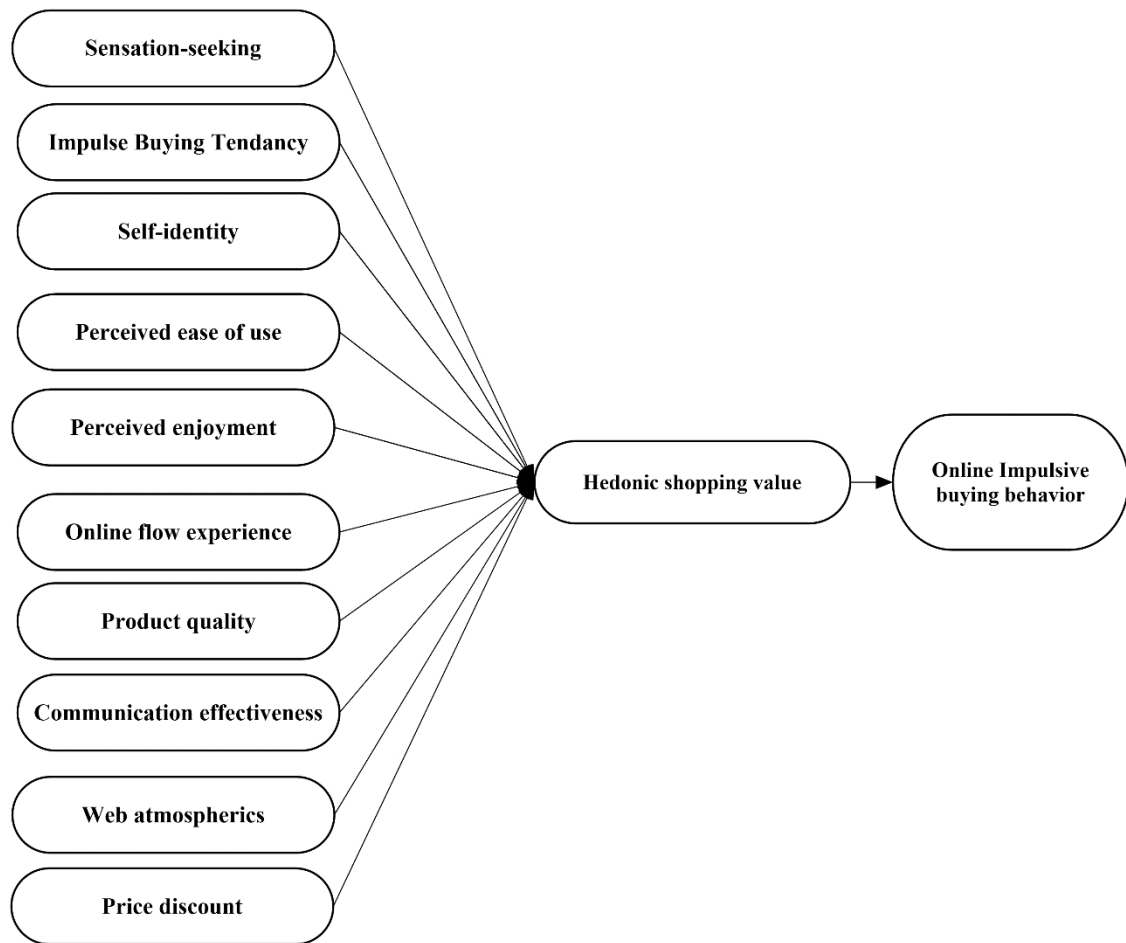


Figure 3-1 The conceptual framework of meta-analysis

This study intended to investigate the relationship between antecedents' factors and impulsive buying behavior. Using previous research findings, this meta-analysis study aimed to test a number of hypotheses derived from the framework for future research. For instance, some primary studies may not be able to produce statistically significant results due to insufficient power (e.g., sample size), and nearly all studies are unable to accurately estimate the effect size (Lipsey & Wilson, 2001). To arrive at more accurate conclusions than those presented in any of the primary studies, meta-analysis combined findings from multiple independent studies and corrects for the distorting effects of artifacts that may produce the illusion of conflicting findings (Hunter & Schmidt, 2004).

Eleven hypotheses were proposed for meta-analysis as follow:

MH1: Sensation seeking has positive influence on hedonic shopping value.

MH2: Impulse buying tendency has positive influence on hedonic shopping value.

MH3: Self-identity has positive influence on hedonic shopping value.

MH4: Perceived ease of use has positive influence on hedonic shopping value.

MH5: Perceived enjoyment has a positive influence on hedonic shopping value.

MH6: Online flow experience has positive influence on hedonic shopping value.

MH7: Product quality has a positive influence on hedonic shopping value.

MH8: Communication effectiveness has positive influence on hedonic shopping value.

MH9: Web atmospherics has positive influence on hedonic shopping value.

MH10: Price discounts has positive influence on hedonic shopping value.

MH11: Hedonic shopping value has positive influence on impulsive buying behavior

3.2 Meta-analysis procedure

When putting the research framework's hypotheses to the test, the author selected a quantitative approach. Through the use of the meta-analysis method (Wasserman, Hedges, & Olkin, 1988), the findings of multiple studies with similar contexts and aims were synthesized.

3.3 Data collection for meta-analysis

The author conducted a comprehensive search utilizing online journal databases like Science Direct, Taylor & Francis Online, Google Scholar, and the regular Google search. Several keywords associated with the research design were used to search for these studies: “sensation seeking”, “impulse buying tendency”, “self-identity”, "perceived ease of use", "perceived enjoyment", "online flow experience", "marketing stimuli", "hedonic shopping value,” and "impulse buying behavior". The author additionally looked through the reference list of the articles that were collected in order to locate the applicable articles. During the preliminary search, the study came across 46 different studies. But only 42 of the most recent articles that met the requirements, that were published between the years 2011 and 2021 were collected. All collected articles were written in English, and the fields of research were management as well as marketing and advertising. In addition, all articles utilized quantitative papers to test research hypotheses in their study. In every hypothesis test, the article needed to provide both the correlation coefficients and the standardized regression coefficients. Additionally, the sample size needed to be specified. This study used correlation coefficient r and t -value to compute the effect size at a 95% confidence interval. Table 3-1 showed the studies included in the meta-analysis. This meta-analysis evaluated most of previous studies to investigate the hypotheses as stipulated above.

Table 3-1 Studies used in meta-analysis

Studies Alphabetically by Source and Codes for Hypotheses Tests^{a,b}	
Avcilar & Ozsoy (2015), PEOU-HSV, 13	Nguyen et al (2018), PD-HSV, 24
Bandyopadhyay (2016), IBT-HSV, 27	Zhou (2020), OFE-HSV, 21
Chauhan & Dagar (2021), HSV-IBB, 22	Ozen & Engizek (2014), HSV-IBB, 2

Studies Alphabetically by Source and Codes for Hypotheses Tests^{a,b}	
Çavuşoğlu et al (2020), SSE-HSV, 29	Millan & Reynolds (2014), SI-HSV, 20
Chen & Chi (2021), CE-HSV, 24	Mahasuweerachai & Suttikun (2022), SI-HSV, 24
Deliberali et al (2020), PD-HSV, 3	Ozturk et al (2016), PEOU-HSV, 8
Confente et al (2020), SI-HSV, 15	Moon et al (2017), PD-HSV, 23
Dey & Srivastava (2017 PE-HSV), 18	Park et al (2012), PD-HSV, HSV-IBB), 15
Gao & Bai (2014), WA-HSV, 20	Rezaei et al (2016), WA-HSV, 17
Han et al (2018), PQ-HSV, 11	Song et al (2016), CE-HSV, 9
Irani & Hanzaee (2011), PD-HSV, 1	Sultan et al (2021), CE-HSV, 16
Irani & Hanzaee (2011), SSE-HSV, 28	Verhagen & Van Dolen (2011), HSV-IBB, 7
Jalees (2018), SSE-HSV, 25	Setyani et al (2019), PE-HSV, 12
Kesari & Atulkar (2016), PE-HSV, 20	Wang et al (2013), PE-HSV, 12
Kim & Kim (2020), PEOU-HSV, 10	Wang (2014), PEOU-HSV, 4
Kim & Lennon (2013), WA-HSV), 19	Wu et al (2013), WA-HSV, 14
Kimiagari & Malafe (2021), PD-HSV, HSV-IBB, 20	Yang et al (2021), HSV-IBB, 20
Konuk (2019), PQ-HSV, 20	Yin & Qiu (2021), OFE-HSV, 24
Lee & Chen (2018), PD-HSV, PQ-HSV, 5	Yu et al (2018), PE-HSV, 25
Lee & Wu (2017), OFE-HSV, 6	Shoham et al (2015), IBT-HSV, 26
Lin & Chuan (2013), IBT-HSV, 30	Zheng et al (2019), WA-HSV, 12

^a**Note: Codes in parentheses:** PEU= Perceived Ease of Use; PE= Perceived Enjoyment; OFE= Online Flow Experience; PQ= Product Quality; WA= Web Atmospherics; CE= Communication Effectiveness; PD= Price Discounts; HSV= Hedonic Shopping Value; IBB= Impulse Buying Behavior.

^b**Journals are footnoted in order:** 1. *African Journal of Business Management*; 2. *Asia pacific journal of marketing and logistics*; 3. *Brazilian Business Review*; 4. *Computers in Human Behavior*; 5. *Fashion and Textiles*; 6. *Industrial Management & Data Systems*; 7. *Information & Management*; 8. *International Journal of Hospitality Management*; 9. *International Journal of Business and Management*; 10. *International Journal of Environmental Research and Public Health*; 11. *International Journal of Contemporary Hospitality Management*; 12. *International Journal of Information Management*; 13. *International Journal of Marketing Studies*; 14. *International Journal of Retail & Distribution Management*; 15. *Journal of Business Research*; 16. *Journal of Cleaner Production*; 17. *Journal of Hospitality and Tourism Technology*; 18. *Journal of Indian Business Research*; 19. *Journal of Research in Interactive Marketing*; 20. *Journal of Retailing and Consumer Services*;

21. *Kybernetes*; 22. *Millennial Asia*; 23. *Spanish Journal of Marketing*; 24. *Sustainability*; 25. *Pakistan Journal of Psychological Research*; 26. *Journal of International Consumer Marketing*; 27. *Marketing Intelligence & Planning*; 28. *International Journal of Marketing Studies*; 29. *Review of International Business and Strategy*; 30. *Journal of Creative Communications*.

3.4 The selected papers for meta-analysis

This meta-analysis evaluated each study published to measure the influential factors of customer participation. The following journals were included to select papers in this study. The list of the journals is shown below:

1. African Journal of Business Management;
2. Asia pacific journal of marketing and logistics;
3. Brazilian Business Review;
4. Computers in Human Behavior;
5. Fashion and Textiles;
6. Industrial Management & Data Systems;
7. Information & Management;
8. International Journal of Hospitality Management;
9. International Journal of Business and Management;
10. International Journal of Environmental Research and Public Health;
11. International Journal of Contemporary Hospitality Management;
12. International Journal of Information Management;
13. International Journal of Marketing Studies;
14. International Journal of Retail & Distribution Management;
15. Journal of Business Research;
16. Journal of Cleaner Production;
17. Journal of Hospitality and Tourism Technology;
18. Journal of Indian Business Research;
19. Journal of Research in Interactive Marketing;
20. Journal of Retailing and Consumer Services;

21. Kybernetes;
22. Millennial Asia;
23. Spanish Journal of Marketing;
24. Sustainability;
26. Journal of International Consumer Marketing;
27. Marketing Intelligence & Planning;
28. International Journal of Marketing Studies;
29. Review of International Business and Strategy;
30. Journal of Creative Communications.

3.5 Data analysis techniques for meta-analysis

The effect size was determined by using the Comprehensive Meta-Analysis (CMA) program, and it was afterwards categorized as small ($r < 0.1$), medium ($0.1 < r < 0.4$), or big ($r > 0.4$). In addition to that, a confidence interval of 95% was also recorded in this study (CI). If the confidence interval for a point estimate at 95 percent did not contain the value zero, this suggested that the point estimate is likely to be either greater than or smaller than zero in 95 percent of the cases when the estimation procedures were carried out a number of times.

Another Q-statistic which Lipsey and Wilson (2001) explored was an examination of the homogeneity of the effects size distribution. The Q-statistic was referenced in the passage. It has a Chi-square distribution with a degree of freedom equal to $n-1$, where n was the total number of investigations. This test made the reasonable assumption that all effect sizes estimated the same population means, but this assumption was not tested. The requirements of the Q-statistic, the Q-value higher than Chi-square, and the p -value lower than 0.05. When the assumption of homogeneity, known as the null hypothesis was disproved, it showed that the variance in the size of the effect was attributable to the variables, rather than the sampling error

(De Matos & Rossi, 2008). It suggested that the homogeneity hypothesis with its null alternative has been accepted.

As a result, the variability across impact size was significantly lower than what one would anticipate based on the sampling. Discrepancies in effect magnitude may be assigned to reasons other than sampling if the null hypothesis of homogeneity is rejected; it indicated that variance heterogeneity did not exist. Within the scope of this study, the influence was analyzed.

The following was the equation for calculating the Q-statistic:

$$Q = \sum W_i (ES_i - \overline{ES}_j)^2 \quad (1)$$

Where: ES_i is the individual effect size

\overline{ES}_j : is the weight mean effect size for each group

W_i : is the weight for each effect size

In addition, the I^2 value provided an estimation of the proportion of error variation that couldn't be accounted for by sampling error. A test for heterogeneity was referred to as the I^2 statistic. I^2 could be computed from Cochran's Q, which was the heterogeneity statistic. The formula for calculating I^2 was as follows: $I^2 = 100\% \times (\text{Cochran's Q} - \text{degrees of freedom})$. Because any I^2 values that were less than 0 were treated as being equal to 0, the values of I^2 can range from 0% to 100%. If I^2 was greater than 50% the random model should be conducted. On the other side, if I^2 was lower than 50% the fixed model should be adopted.

3.6 Publication bias in meta-analysis

According to Thornton & Lee (2000) publication bias was a frequent issue that could significantly affected attempts to assess the investigated effect. Several aspects of the design or execution of a study, such as the size of the sample and the technique of data reporting, may contribute to publication

bias. There may be a great temptation for an author to sift through the data of a fundamentally negative study in search of positive results and publish only those. The likelihood of discovering a significant result increased dramatically as the number of endpoints or subgroups investigated increased. However, most studies were designed with a declared core aim, with secondary variables collected either to correct for potential confounding or to generate hypotheses. Consequently, the results relevant to the key hypotheses were typically accorded greater credence than unanticipated or incidental findings from the remaining data. In this study, the author conducted Fail-Safe N to confirm the publication bias, Z-value should be positive and p -value < 0.05 (Rosenthal, 1979).

3.7 Study result for meta-analysis

The findings of the meta-analysis regarding the antecedents that influence impulsive purchasing behavior were presented in table 3-2. The heterogeneity tests suggested that the causal path of perceived ease of use on hedonic shopping value had a medium level of heterogeneity. This was indicated by the findings of the study. Both the causal path of perceived enjoyment on hedonic shopping value and the experience of flow when shopping online has a significant impact on hedonic shopping value, although in very different ways. In addition, the Chi-square statistic were lower than the Q-values and I^2 was higher than 90%, which indicated that the effect sizes of all the subsets have a high degree of heterogeneity. The data demonstrated that the random-effects model is an appropriate basis for a meta-analysis, as the previous sentence indicated.

Strong correlations can be identified between sensation seeking on hedonic shopping value ($r = 0.580$, $p < 0.001$, $Q = 204.10$, $\chi^2 = 13.816$), impulse buying tendency on hedonic shopping value ($r = 0.359$, $p < 0.001$, $Q = 18.921$, $\chi^2 = 13.816$), and self-identity on hedonic shopping value ($r =$

0.383, $p < 0.001$, $Q = 66.39$, $\chi^2 = 13.816$). However, none of the 95% confidence intervals for these relationships contained the value zero. Confirmed that these correlations are significant, then the MH1, MH2, MH3 are supported.

Strong correlations can be identified between perceived enjoyment on hedonic shopping value ($r = 0.346$, $p < 0.001$, $Q = 47.89$, $\chi^2 = 18.467$), perceived ease of use on hedonic shopping value ($r = 0.248$, $p < 0.001$, $Q = 11.94$, $\chi^2 = 16.266$), and online flow experience on hedonic shopping value ($r = 0.495$, $p < 0.001$, $Q = 136.29$, $\chi^2 = 13.816$). However, none of the 95% confidence intervals for these relationships contained the value zero. Confirmed that these correlations are significant, then the MH4, MH5, MH6 are supported.

In additionally, table 3-2 also indicated the heterogeneity tests that, the causal path of all product quality, communication effectiveness, web atmospherics, price discounts on hedonic shopping value have high heterogeneity. In addition, all of Q -value was greater than Chi-square, the p -value ($p < 0.001$), which indicates that the effect sizes of all subsets should have a significant degree of heterogeneity. The data demonstrated that the random-effects model is an appropriate basis for a meta-analysis. The correlation between the product quality and hedonistic shopping value ($r = 0.324$, $p < 0.001$, $Q = 23.42$, $\chi^2 = 13.816$), communication effectiveness on hedonic shopping value ($r = 0.303$, $p < 0.001$, $Q = 37.09$, $\chi^2 = 13.816$), web atmospherics on hedonic shopping value ($r = 0.683$, $p < 0.000$, $Q = 106.13$, $\chi^2 = 18.467$), price discounts on hedonic shopping value ($r = 0.254$, $p < 0.001$, $Q = 85.37$, $\chi^2 = 22.458$) showed the strong correlations and they have none 95% confidence intervals contain zero. Confirmed that these correlations are significant, then the MH7, MH8, MH9, MH10 are supported.

Table 3-2 Summary of the effect size of path coefficients

Variables				Effect size & 95% confidence Interval			Heterogeneity				Fail-Safe N	
IV	DV	k	n	r	LCI	UCI	p-value	χ^2	Q-value	I-squared	Z-value	Significant
SSE	HSV	3	1766	0.580	0.170	0.818	0.000	13.816	204.10	99.02	25.674	0.000
IBT	HSV	3	615	0.359	0.172	0.520	0.000	13.816	18.921	92.43	10.933	0.000
SI	HSV	3	1351	0.383	0.104	0.607	0.000	13.816	66.39	96.98	14.706	0.000
PEU	HSV	4	1346	0.248	0.197	0.298	0.000	16.266	67.94	95.58	16.555	0.000
PE	HSV	5	2222	0.346	0.208	0.470	0.000	18.467	47.89	91.64	16.496	0.000
OFE	HSV	3	1281	0.495	0.274	0.566	0.000	13.816	136.29	98.53	17.637	0.000
PQ	HSV	3	806	0.324	0.107	0.520	0.000	13.816	23.42	91.46	9.313	0.000
CE	HSV	3	1527	0.303	0.112	0.471	0.000	13.816	37.09	94.60	13.040	0.000
WA	HSV	5	1882	0.683	0.534	0.791	0.000	18.467	106.13	96.23	35.603	0.000
PD	HSV	7	4356	0.254	0.138	0.364	0.000	22.458	85.37	92.97	17.001	0.000
HSV	IBB	6	2389	0.310	0.145	0.458	0.000	20.515	91.34	94.52	15.082	0.000

*Notes: k is the number of studies in the meta-analysis; n= sample size. r refers to the number of effect sizes. LCI is the lower confidence limit for effect size. UCI is the upper confidence limit for effect size. Chi-square is used to determine the stability of r and to yield appropriate confidence intervals. The Q-value denotes the degree of variance that cannot be explained by sampling error; a statistically significant cue value indicates that there is significant fluctuation in the effect size attributable to moderators. The I² value estimates the fraction of error variation that cannot be explained to sampling error.

And finally, the relationship between hedonic shopping value and impulsive buying behavior also has a strong correlation ($r = 0.310$, $p < 0.001$, $Q = 91.34$, $\chi^2 = 20.515$) and it has none 95% confidence intervals contain zero. Confirmed that this correlation is significant, then MH11 is supported.

3.8 Conclusion for meta-analysis

According to the findings of the study, the atmospherics of the web has the most significant influence on the hedonistic value of shopping. These findings are consistent with the findings of Zheng et al (2019). It

should not come as a surprise that the figures indicate that the web environment provides customers with the maximum amount of hedonic value when they make their purchases through the various distribution channels offered by e-commerce. The results of this study may help online retailers develop a greater awareness of the significance of web atmospherics and how the design of a website can increase hedonic value, induce sensations of joy and pleasure, and eventually lead to impulsive purchasing behavior. Besides that, results also revealed strong relationship between sensation seeking and self-identity on hedonic shopping value. In addition, online merchants should concentrate their efforts on preserving and enhancing the pertinent aspects of their websites in order to increase the overall level of convenience associated with the shopping experience while simultaneously cutting the number of potential hazards. Retailers may be able to persuade customers that their private information, including payment details and personal information, would be kept confidential if they posted a privacy policy on the website of their company. In order to instill a sense of ease in the minds of consumers and make sales through their commercial websites, online retailers needed to ensure that they consistently update their sites and provide improved web design that includes features that are quick, informative, and convenient. The most important thing that this study has added to the body of knowledge is clarity regarding the effect that various marketing cues have on the hedonistic value of purchasing.

Retailers can construct an integrated marketing strategy based on this information by integrating product, pricing, and communication techniques in order to optimize the effect of stimulating customers. As a result, the findings of this study implied that retailers should provide high-quality goods at prices that are competitive and also run promotions, particularly those that provide reductions or eliminate the cost of shipping altogether.

The findings also indicated that intrinsic motives have a statistically significant impact on hedonic shopping value, which is the aspect in which the influence of the online flow experience is most apparent. Therefore, stores that sell retail goods needed to place more emphasis on designing atmospherics that may foster a "flow experience" by fostering greater mental engagement and concentration. This will lead to an increase in the hedonic value of shopping, which will make customers feel more content with their shopping experience and give them the impulse to make a purchase right away. In addition, the characteristics of perceived simplicity of use and reported enjoyment were also required to be taken into consideration in order to maximize the shopper's overall shopping experience. The findings of this study are in line with those of Avcilar & Ozsoy (2015), who found that the perceived ease of use has a considerable bearing on the hedonic value of shopping. As a consequence of this, the process of buying online ought to be designed to be as easy and uncomplicated as possible to carry out, in particular the processes of searching for product information and making payments. Taking into consideration that shopping online is, at its very essence, a hedonistic activity, the results of the study demonstrated the existence of a constructive connection between hedonic shopping value and impulsive purchasing behavior.

Last but not least, the value of this study was to give evidence from a meta-analysis that confirmed the association that was hypothesized in the research framework. The impact of impulse buying traits and the secondary factors proposed in the conceptual framework model, which were sensation seeking, impulse buying tendency, and self-control on hedonic shopping value, have been the subject of a number of studies. Even though these studies have been conducted in an effort to gain a better understanding of

the factors that influence hedonic shopping value, it appeared that the majority of these studies ignore the impact of these factors. To be more specific, the author has made an effort to locate research articles that are related to these factors in order to conduct a meta-analysis; however, there are some limited in the research that has been done or has statistically significant to be able to support hypothesis MH1, MH2, and MH3 that the author has proposed, for each hypothesis the author only can found 02 articles. For example, the research that was conducted by Irani & Hanzaee (2011) failed in revealing the positive influence that an impulse buying tendency can have on the hedonic value of shopping. In addition to the findings of Afaq, Gulzar & Aziz (2020) study indicated that sensation seeking has a beneficial impact on the hedonic value of purchasing. This study used a meta-analysis approach in order to try and produce research evidence for additional studies connected to the factors of impulse buying tendency. Based on the study results, this study seeked to provide more research evidence from questionnaire survey.

CHAPTER FOUR

RESEARCH DESIGN AND METHODOLOGY

A questionnaire survey was used in the second stage. This chapter includes research framework, hypothesis development, questionnaire design, sampling design, data collection methods, and data analysis methodologies that were used in two stages of the study.

4.1 Research framework for survey

This study was based on extended S-O-R model and conducted in the context of online shopping to determine the factors that contribute to young people's impulsive online shopping behavior, including internal and external motivational factors, the influence of marketing stimuli, and the individual's psychological characteristics. Besides that, the study examined the moderating effects of gender and eWOM on the relationship between individual self-control and emotional arousal on impulsive buying behavior.

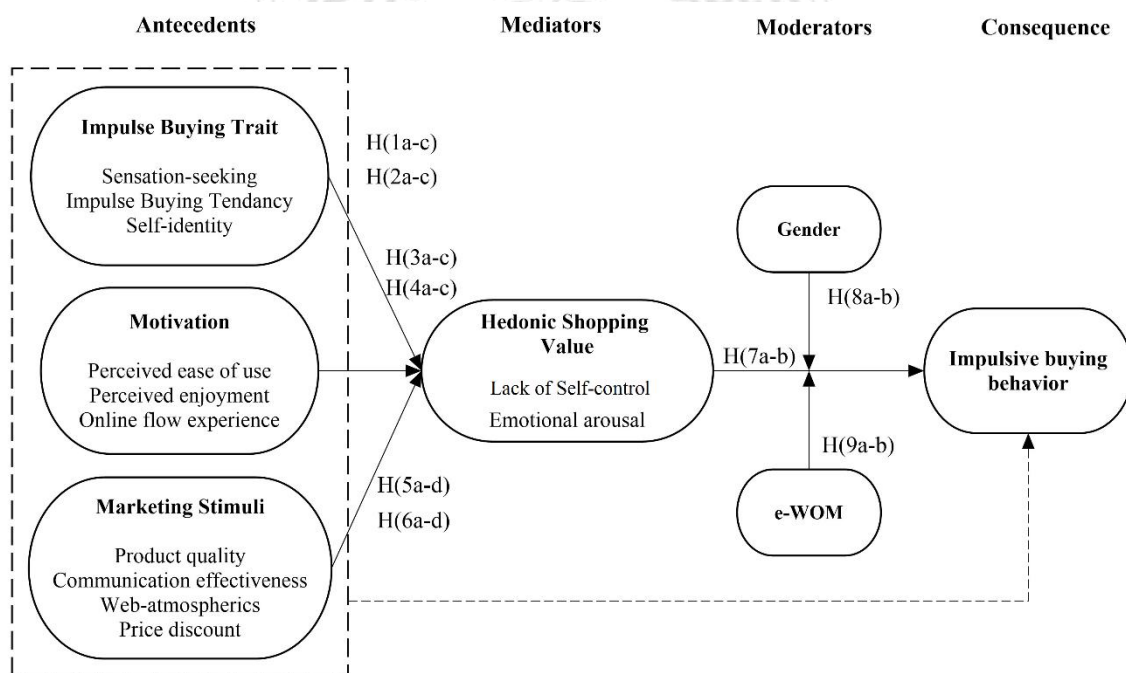


Figure 4-1 The research framework

4.2 Hypothesis development

4.2.1 The effects of impulse buying traits on lack of self-control

In this study, impulse buying traits were proposed including three sub-factors: sensation seeking, impulse buying tendency and self-identity to identify their impact on hedonic shopping value. The degree to which consumers are capable of controlling their own behavior in the face of temptations, stimuli, or attractiveness to anything that fits within the spectrum of needs and wants was referred to as self-control as known as self-regulation. A consumer who has higher self-control overall should also have greater self-control in other aspects of their lives, such as when it came to consuming and spending (Macrae et al, 2014). Consumers who struggle with self-control were typically less able to monitor and modify their own behaviors and thoughts (Farmer et al, 2017). Others have a tendency to engage in behaviors that are beneficial to them in the immediate term, but which may be at the expense of future, relatively long outcomes. Some people were more adept at controlling both their thoughts and their actions than others are (Nigg, 2017). This control will be affected by psychological elements as well as the personal impulse buying trait of each individual customer (Jiang, Zhao & Li, 2017). In the study of Baumeister (2002), it was shown that the failure of self-control when consumers shop to reduced stress or seek pleasure led to more purchases, more impulsive. Both successes and failures in practicing self-control can have a tremendous impact on individuals.

In fact, a number of antecedent factors can reduce self-control based on the consumer's personality. First, the opposite of self-control was sensation seeking. Sensation seeking was mentioned as the way to which consumers desire to experience novel sensations by being willing to put themselves at potential risk in order to achieve emotional satisfaction. As a

result, those who were more prone to sensation seeking were more likely to partake in potentially risk activities because they perceive them to be less risky than those who are less prone to sensation seeking (Pokhrel, Sussman & Stacy, 2014). In particular, impulsive buying behavior was a response based on hedonic motives, which makes it easier to achieve the desire for satisfaction about the new and novel experience. Previous studies have mainly focused on examining the effects of sensation seeking on self-control in a variety of contexts, taking health risks in order to find novel experiences such as vaping (Intravia, Vito & Rocheleau, 2022), e-cigarettes (Davis et al, 2022).

Second, an individual was considered to have a tendency toward impulse buying when the intensity to which they were prone to make unplanned, impulsive, and unreflective purchases was quantified (Beatty & Ferrell, 1998; Rook & Fisher, 1995). The study of Jones, Reynolds & Arnold (2006) came up with the term "consumer impulsiveness" to describe it. This construct was built on the characteristics of prudence (cognitive) and hedonism (affective). According to Babin et al (1994), hedonistic shoppers prioritize enjoyment over utilitarianism when making purchases. Consequently, hedonic buying was highly correlated with aspects like enhanced stimulation, excitement, fantasy completion, pleasure, autonomy, and release. Thus, this study suggested that consumers with high impulse buying tendency in personal trait will leading to low lack of self-control.

Third, a person's level of self-identity reflects how well they were able to identify their own personal identity. Research on consumer behavior by Kacen & Lee (2002) demonstrated that a person with a strong sense of personal identity will constantly feel the need to express and satiate that identity in the outer world. Particularly in the context of internet shopping, individuals were susceptible to being easily swayed by comments, ratings,

and product reviews that have the ability to transform the identities of consumers. They lose self-control and engage in impulsive purchasing activity when their drive to express their identity gets out of control and becomes unmanageable. Finally, studies on the influence of sensation seeking, impulse buying tendency, and self-identity on self-control in the context of impulsive buying behavior research, are still very limited. Therefore, in this study, we hypothesized as follows:

H(1a): Sensation seeking positively impacts lack of self-control.

H(1b): Impulse buying tendency positively impacts lack of self-control

H(1c): Self-identity positively impacts lack of self-control

4.2.2 The effects of impulse buying trait on emotional arousal

Sensation seekers look for stimulation by participating in experiences that are intense, unusual, and difficult, and they are willing to accept risks in order to participate in such experiences while having little or no cognitive awareness of the hazards involved (Zuckerman, 2007). In the context of consumption, such a need for stimulation is related with a number of exploratory actions, such as viewing advertising, investigating new items, and switching brands for the purpose of variety (Laros & Steenkamp, 2005). Therefore, it would appear that a desire for new experiences and an increase in emotional arousal are the primary motivating factors behind a wide variety of exploratory actions, including taking risks and looking for new experiences.

Besides that, the propensity to make rash purchases is referred to as the impulse buying tendency. Varied people have different levels of this inclination. Consumers who have a tendency to make hasty purchases were more likely to respond to buying impulses that arise on the spur of the moment and were more receptive to unanticipated opportunities to make purchases. According to Liao et al (2016), the frequency of the impulse to

make an impulsive purchase was proportional to the level of impulse buying tendency. When it comes to making impulsive purchases, customers who have a high propensity for impulse buying rely on their emotions. Thus, these following hypotheses were proposed:

H(2a): Sensation seeking positively impacts emotional arousal

H(2b): Impulse buying tendency positively impacts emotional arousal

H(2c): Self-identity positively impacts emotional arousal

4.2.3 The effects of motivation on lack of self-control

In this study, perceived ease of use, perceived enjoyment, online flow experience was presented as external stimuli to find out their impact on consumers' lack of self-control. The term "perceived ease of use" is applied to the technology and interface on e-commerce websites. A technology or interface that appears to be easier to access than another has a greater chance of being accepted by the participants. People are very precise, perfectionistic, and effective, thus they like anything that is very efficient to use. Consumers favor something that is very efficient to use. They will eagerly compare some aspects that make the website easier to grasp and, as a result, more efficient to use when they are searching for a website. Besides that, they are well aware of the benefits that may be gained by utilizing the function of the website. As consumers become more adaptive to the way they interact with websites or familiar to search for product information, they gradually become less self-control. Moreover, perceived enjoyment tends to make consumers more pleasurable, they will lose themselves in the moment to enjoy the experience that the shopping site offers. In addition, consumers will not attempt to suppress that pleasure, the lack of self-control will be inversely proportional to perceived enjoyment (Muraven & Baumeister, 1998).

Furthermore, flow in online buying is a form of pleasant emotional experience that was designed to keep customers involved in the activities they're performing. As consumers go with the flow of their online buying experience, customers were less likely to be distracted by unimportant details in their surroundings or by their own interior narrative (Wan et al, 2020). Customers were able to temporarily disengage from their immediate environment and the inherent risks of online buying due to the flow experience. In this study, we suggested:

H(3a): Perceived ease of use positively impacts lack of self-control

H(3b): Perceived enjoyment positively impacts lack of self-control

H(3c): Online flow experience positively impacts lack of self-control

4.2.4 The effects of motivation on emotional arousal

The study of consumers' impulsive behavior depends solely on both environmental inputs and customers' emotional responses. Therefore, the author applied the psychological principles of cognitive learning (S-O-R) to the realm of internet retailing. This study proposed a model positing that consumers put strong emotional reactions to the mobile interface, content, and behaviors while online purchasing is a direct result of the model's central proposition. Invoking positive feelings about the goods and the desire to have them in one's possession might help bring about a sense of delight and a need to buy. Non-regretful impulse purchases are motivated by good emotions and go beyond the buyer's original purchasing plan. In intrinsic motivation, perceived ease of use plays an important role in perceived ease of learning about the system, website content and usage (Kim & Shin, 2014). Through perceived ease of use, consumers believed that the online shopping system was specially designed for them, which increases the level of engagement with the sales website as well as the online shopping system. Therefore, consumers feel emotional stimulation

because all coordination and activities on the online shopping platform were easier and smoother for them (Cho & Sagynov, 2015).

In addition, another element of intrinsic motivation, perceived enjoyment, was proposed in a research model to examine the influence of consumers' emotional arousal during online shopping impulsive buying behavior. According to Irani and Hanzaae (2011), perceived enjoyment was played an important role in hedonic purchases. Usually, hedonistic tendencies were generated based on emotional factors, consumers wanted to have happy and comfortable emotions when participating in the shopping process (Byun & Mann, 2011). Especially in the online shopping environment, consumers appreciated the ease and convenience associated with happy feelings because of the benefits and convenience in the shopping process.

Therefore, perceived enjoyment contributed a lot to the process of forming arousal emotions in online shopping. In addition, in this study, online flow experience was also considered as the motivation to push consumers' impulsive buying behavior through emotional arousal. The expected outcome of online flow was to direct consumers to the sales website, making consumers spend more time engaged in online shopping (Lee & Wu, 2017). In this study, we proposed, the stronger the consumer engagement in the online flow, the higher the emotional arousal. Based on that, we proposed three hypotheses:

H(4a): Perceived ease of use positively impacts emotional arousal

H(4b): Perceived enjoyment positively impacts emotional arousal

H(4c): Online flow experience positively impacts emotional arousal

4.2.5 The effects of marketing stimuli on lack of self-control

In the online shopping environment, personal self-control plays a role in resisting external stimuli and attraction to prevent impulsive buying

behavior. According to Roberts and Manolis (2012), personal self-control can be disabled by external motivational stimuli. Perceived quality is an aspect that consumers always consider first in the shopping process. Customers often choose a suitable product based on the quality criteria of the product. This criterion is evaluated based on customer value. What they have to spend and the value they receive must be commensurate with each other (Razak, Nirwanto & Triatmanto, 2016). In addition, good product quality brings satisfaction to consumers. Waluya, Iqbal and Indradewa (2019) elucidated that product quality has a positive impact on brand image. Quality uncertainty in online shopping can be broken down into two categories, according to Pavlou, Liang and Xue (2007), uncertainty related to the product itself, and uncertainty related to sellers' deliberate concealment of real product information for profits. As a result, the goal of online shopping product quality supervision is to mitigate these two types of uncertainty. In today's online shopping environment, detailed information about products and brands, as well as product distributors, is easily accessible to consumers. Information that is easily accessible to consumers reduces the level of personal control over stimuli from the product. Therefore, the following hypothesis was proposed:

H(5a): Product quality positively impacts lack of self-control

The effectiveness of communication is employed by marketers with the aim of either increasing awareness among consumers or educating consumers. Consistently aiming to bring complete information and accurately conveying the goal of the strategy is one of the primary goals of a good communication strategy (Turkyilmaz, Erdem & Uslu, 2015). The high intensity of communication can increase the number of stimuli that are provided to the consumer. These stimuli can include information on products and services, information about stores, new products, and shared

experiences (Huang, 2016). Customers who are presented with a greater variety of stimuli may have a greater number of possibilities to participate in impulsive purchasing behavior. Because consumers will have access to a wealth of knowledge as a result of efficient communication, their faith in the company and its products will improve, which will result in a decreased need for self-control. Therefore, the following hypothesis was proposed:

H(5b): Communication effectiveness positively impacts lack of self-control

When applied to the context of a website, the term "atmospherics" can be described as a carefully planned environment that is aimed at creating positive impacts on the website's users in order to elicit a positive response from those users. The ultimate goal of such an environment is to elicit a positive reaction from the website's users (Dailey, 2004). Website-atmospherics refer to develop informativeness, entertainment, shopping enjoyment and quick respond. According to Eroglu et al (2001), the atmospherics of a website can have an effect on the customer's emotional side, which includes enjoyment, excitement, and dominance. This feature can lead to a lower lack of self-control. Therefore, the following hypothesis was proposed:

H(5c): Web atmospherics positively impacts lack of self-control

Consumers always respond positively to price discounts emotionally. The findings of research conducted by Mishra & Mishra (2011) on the impact of price discounts on consumers' emotions while they were shopping for food demonstrated that price discounts can cause consumers to have less self-control. Even if they do not have an immediate requirement for the product or a strong desire for it, consumers are led to believe that their spending is acceptable and that they are making a profitable investment for the future by taking advantage of price reductions. Therefore, the following hypothesis was proposed:

H(5d): Price discounts positively impacts lack of self-control

4.2.6 The effects of marketing stimuli on emotional arousal

Product quality is what retailers should ensure in order to attract customers' attention. There are barriers to online shopping that consumers can feel, such as not being able to hold, touch, or check. Instead, the general information, specific images, and accompanying video review should reflect the product's quality. To reduce scrutiny and doubt about the product's quality, the element that evokes the emotion of holding is highlighted in this context. Fang, Chou, & Hsu (2016) discovered that emotional arousal is related to customer experience. Customer experience is demonstrated in online shopping by not only providing detailed information about the product but also by the effectiveness of communication in order to gain consumer trust. Effective communication aims to persuade customers by evoking hidden emotions within them. According to Bozinoff and Ghingold (1983), an effective communication strategy can have a significant impact on arousing customer emotions toward a supplier's product.

Furthermore, Essawy (2019) suggested two directions in designing web-atmospherics towards consumer emotions (including pleasure, arousal, and dominance) by focusing on graphic design and design information. Research results show that in order to evoke the emotions of consumers, it is necessary to focus on design, providing complete information rather than focusing on graphic design. Based on that, this study suggested that focusing on building web-atmospherics will increase consumers' emotional arousal.

In addition, consumers always have a positive emotional response to the sales promotion strategy, especially the price discounts. The extrinsic motivation of discounting is highly effective in consumers' emotional arousing. In research on clothing products by DetaNatasya and Maridjo

(2022) revealed that in the context of online shopping, emotional arousal plays a mediating role in the positive relationship between price discounts and impulsive buying behavior. Thus, we suggested that:

H(6a): Product quality positively impacts emotional arousal

H(6b): Communication effectiveness positively impacts emotional arousal

H(6c): Web atmospherics positively impacts emotional arousal

H(6d): Price discounts positively impacts emotional arousal

4.2.7 The effects of lack of self-control on online impulsive buying behavior

Impulsive buying behavior played an important role in the field of consumer behavior research. This research tried to figure out how to take advantage of that to increase profits and sales based on strategies that increase impulsive behavior, unplanned purchases on various online shopping platforms. Fenton-O'Creevy et al (2018) pointed out that self-control plays a very important role in the study of impulsive buying behavior. In their study of how self-control works in impulsive buying behavior, Martins, Moayery and Cantín (2019) revealed two ways in which a consumer could avoid impulsive buying behavior. By practicing self-control, exercises of physical and cognitive self-control that are repeated over time reduce the urge to buy. In addition, consumers can improve control capacity based on the lack of self-control resources to emphasize stability in controlling the situation of self-regulating resources. According to the findings of Ramadan, Farah, and Bou Saada (2021), self-control has a negative relationship with impulsive buying behavior, which means that if a consumers have good control over their behavior and psychology, consumers will avoid hasty and impulsive buying behavior. Efendi, Indartono, and Sukidjo (2019) pointed out that the influence of self-control on impulsive buying behavior is negative and considerable. Besides that, Victoria, Kalyana and Manaf (2021) confirmed

that when lack of self-control is low, impulsive buying behavior occurs. Based on that, we proposed this hypothesis:

H(7a): Lack of self-control positively impacts impulsive buying behavior

4.2.8 The effects of emotional arousal online on impulsive buying behavior

The term "impulsive buying" refers to a type of emotionally reactive shopping behavior in which consumers engage in unplanned shopping as a direct result of intense emotional reactions to various stimuli that are presented in the shopping environment (Wiranata & Hananto, 2020). One of the three characteristics that describe the experience that makes into the PAD emotional state model is referred to as emotional arousal. Islam (2021) demonstrated that emotional responses are an important criterion that distinguishes between planned and impulsive buying and reveals that arousal and pleasure positively influence the intentions of individuals to engage in impulsive purchasing. In addition, the enjoyment one gets from mobile shopping leads to favorable attitudes, which in turn influence one's behavior when it comes to shopping (Anwar et al, 2020). In addition, Habib and Qayyum (2018) believed that customers will experience an emotional cognitive reaction before making an impulsive purchase decision. This cognitive reaction manifests itself through feelings, specifically arousal and pleasure. Consumers are motivated to experience arousal and pleasure by the qualities of online shopping platforms, which in turn influences the consumers' propensity for making impulsive purchases. The stronger the feeling of arousal and pleasure that a consumer is experiencing, the more impulsive their purchasing behavior will be. Thus, we hypothesized this:

H(7b): Emotional arousal positively impacts impulsive buying behavior

4.2.9 The moderator effect of eWOM

Electronic word of mouth (eWOM) has been defined by Hennig-Thurau et al (2004) as positive or negative reviews, as well as comments made by potential consumers or actual users about a product or a business via social networks or digital sites. As a result of the explosive rise of social networks in recent years, customers have increasingly developed a propensity to seek one another for information and recommendations. They begin their search for information by gathering it from individuals who are closely associated with them, such as members of their family, friends, and coworkers (Chu & Kim, 2011). Subsequently, they broadened the scope of their investigation to include additional sources. Typically, they seek information from those who have some level of power over them or from internet influencers. According to the findings of the study conducted by Lin and Xu (2017) customers place a greater amount of trust in eWOM that is provided by other users than in communications that are generated by business owners. Besides that, in addition, consumers' self-control will influence the selection and rating of comments and recommendations shared by internet users based on their shopping experience. Consumers tend to choose comments and reviews according to their preferences as well as their shopping experience, but they cannot choose articles they cannot trust or evaluate their authenticity. This problem arises because the uncertainty of information that is rampant on the internet forces consumers to exercise greater control.

Therefore, a reliable source of information and quality online reviews will form a good attitude towards products and services as well as reduce unnecessary self-control in online shopping. Research results of Shih, Lai and Cheng (2015) shown that perceived control plays a positive mediating role in the relationship between source credibility and cognitive attitudes towards e-WOM. Additionally, Fang (2014) has demonstrated that positive

eWOM messages with complete information and high reliability provide an appropriate level of stimulation to arouse emotions in consumers. Besides, the characteristics of impulsive buying behavior are hasty, unplanned, and unintentional. Impulsive buying behavior often happens very quickly, so it only takes a positive flow of information from previous users about the quality of a product or service for consumers to easily make a decision. Research by Husnain (2016) verified that eWOM has a positive impact on impulsive buying behavior. Therefore, we propose the following hypothesis:

H(8a): eWOM moderates the relationship between lack of self-control and impulsive buying behavior. Specifically, higher eWOM could decrease lack of self-control and lead to impulsive buying behavior.

H(8b): eWOM positively moderates the relationship between emotional arousal and impulsive buying behavior, such that emotional arousal influences impulsive buying behavior more strongly when eWOM is higher.

4.2.10 The moderator effect of gender

Male often have different buying behavior from female, especially in impulsive buying behavior. Gangai and Agrawal (2016) clarified that men often have higher impulsive buying behavior than female. Male often spend less time shopping than women, they make faster, more emotional decisions. In contrast, the study carried out by Cheng, Chuang, Wang, and Kuo (2013), came to the conclusion that females are more prone to exhibit impulsive buying behavior and have a decision-making process that is more prone to deviation. For the purpose of satisfying this concern, females are more likely to give in to impulse purchases since they are more concerned with how they will be perceived and how admirable or commended they will appear for their purchases (Chen & Seock, 2002). Thus, we hypothesize:

H(9a): Gender moderates the relationship between lack of self-control and impulsive buying behavior, such that a male and a female will bring different levels of self-control that influence impulsive purchasing behavior.

H(9b): Gender moderates the relationship between emotional arousal and impulsive buying behavior, such that a male and a female will bring different levels of emotional arousal that influence impulsive buying behavior.

4.3 Construct measurement

In this research, we determined impulse buying traits (sensation seeking, impulse buying tendency, self-identity), motivation (perceived ease of use, perceived enjoyment, online flow experience), marketing stimuli (product quality, communication effectiveness, web atmospherics, price discounts) as antecedents of the mediator variable: hedonic value (lack of self-control, emotional arousal) and online impulsive buying behavior consequently. Finally, e-WOM is defined as the moderating variable that moderates the relationship between the lack of self-control on online impulsive buying behavior as well as the relationship between emotional arousal on online impulsive buying behavior. A total of fourteen latent constructs comprised of 62 items were developed based on previous research literature. For each research construct, measurement items were also identified. The detailed questionnaire items are shown in the Appendix.

4.3.1 Sensation seeking

The study identified sensation seeking with five items adapted from Pokhrel, Sussman & Stacy (2013). All measurement items were designed in a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The questionnaire items are as follow:

Sensation seeking (Pokhrel, Sussman & Stacy, 2013)

SSE1 I like to have new and exciting experiences and sensations, even if they are a little frightening

SSE2 I enjoy getting into new situations where you can't predict how things will turn out

SSE3 I like doing things just for the thrill of it

SSE4 I would like to explore strange places

SSE5 I would like to take off on a trip with no preplanned or definite routes or timetable

4.3.2 Impulse buying tendency

The study identified impulse buying tendency with four items collected from Weun, Jones & Beatty (1998). All measurement items were designed in a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The questionnaire items are as follow:

Impulse buying tendency (Weun, Jones & Beatty, 1998)

IBT1 I buy things that are not on my shopping list

IBT2 When I go shopping, I buy things that I had not intended to buy

IBT3 I am a person who makes unplanned purchases

IBT4 When I see something that really interests me, I buy it without considering the consequences

4.3.3 Self-identity

The study identified self-identity with four items adapted from Kaufman, Puzia, Crowell & Price (2019). All measurement items were designed in a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The questionnaire items are as follow:

Self-identity (Kaufman, Puzia, Crowell & Price, 2019)

SI1 I always have a good sense of what is important to me

SI2 I know what I believe or value

SI3 When someone describes me, I know if they are right or wrong

SI4 I am basically the same person that I've always been

4.3.4 Perceived ease of use

The study identified perceived ease of use with five items adapted from Davis (1989). All measurement items were designed in a five-point

Likert scale from 1 = strongly disagree to 5 = strongly agree. The questionnaire items are as follow:

Perceived ease of use (Davis, 1989)

PEU1 Learning to interact with online shopping websites is easy for me.

I find it easy to get the online shopping website to do what I want it

PEU2 to do.

My interaction with online shopping websites is clear and

PEU3 understandable.

PEU4 It is easy for me to become skillful at using online shopping websites.

PEU5 I find the online shopping website easy to use.

4.3.5 Perceived enjoyment

The study identified perceived enjoyment with three items adapted from Chang & Cheung (2001). All measurement items were designed in a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The questionnaire items are as follow:

Perceived enjoyment (Chang & Cheung, 2001)

PE1 My interaction with online shopping websites was enjoyable

PE2 My interaction with online shopping websites was exciting

PE3 My interaction with online shopping websites was pleasant

4.3.6 Online flow experience

The study identified online flow experience with two factors: time distortion of three items and concentration of three items modified from Shahpasandi, Zarei and Nikabadi (2020). All measurement items were designed in a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The questionnaire items are as follow:

Online flow experience (Shahpasandi, Zarei & Nikabadi, 2020)

While using an online shopping website, I am so focused that I

OFE1 completely lose track of time.

OFE2 I realized time went faster than I thought, and I did not even sense

it as I was using an online shopping website.

OFE3 I often spend more time on online shopping websites than I intend to

OFE4 While using an online shopping website, I'm fully absorbed by it.

OFE5 While using online shopping websites, I'm deeply engrossed.

OFE6 While using online shopping websites, I'm completely concentrated on what I am doing

4.3.7 Product quality

The study identified product quality with six items adapted from Clotney, Collier and Stodnick (2008). All measurement items were designed in a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The questionnaire items are as follow:

Product quality (Clotney, Collier & Stodnick, 2008)

PQ1 Retailer offers merchandise of very high quality

The quality of merchandise at retailer is higher than similar
PQ2 merchandise at other stores

PQ3 Retailers merchandise quality holds up well after repeated using

PQ4 The merchandise I buy from this retailer is of consistent quality

PQ5 These retailers merchandise always meets my quality standards

PQ6 The quality of merchandise at this retailer consistently meets my expectations

4.3.8 Communication effectiveness

The study identified communication effectiveness with three items adapted from Shen, Chiou, Hsiao, Wang & Li (2016). All measurement items were designed in a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The questionnaire items are as follow:

Communication effectiveness (Shen, Chiou, Hsiao, Wang & Li, 2016)

CE1 the online advertising and communication activities are creative

CE2 the online advertising and communication activities are impressive

CE3 the online advertising and communication activities are interesting

4.3.9 Web atmospherics

The study identified web atmospherics with four items adapted from Mummalaneni (2005). All measurement items were designed in a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The questionnaire items are as follow:

Web atmospherics (Mummalaneni, 2005)

WA1	online shopping website was designed very attractive
WA2	online shopping website was designed very bright
WA3	online shopping website was designed very lively
WA4	online shopping website was designed very stimulating

4.3.10 Price discounts

The study identified price discounts with three items adapted from Yoo, Donthu, and Lee (2000). All measurement items were design in a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The questionnaire items are as follow:

Price discount (Yoo, Donthu & Lee, 2000)

PD1	In the online distribution channel, retailers frequently offer price discounts
PD2	In the online distribution channel, Retailers often uses price discounts
PD3	Retailers often offer discounts on online channels more than other channels

4.3.11 Lack of self-control

The study identified lack of self-control with six items adapted from Maloney, Grawitch and Barber (2012). All measurement items were designed in a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The questionnaire items are as follow:

Lack of self-control (Maloney, Grawitch & Barber, 2012)

LSC1	I am not good at resisting temptation.
LSC2	I have a hard time breaking bad habit.

LSC3 I do certain things that are bad for me, if they are fun.

LSC4 I wish I had more self-discipline.

LSC5 I have trouble concentrating.

LSC6 I often act without thinking through all the alternatives.

4.3.12 Emotional arousal

The study identified emotional arousal with four items adapted from Hosany & Witham (2010). All measurement items were designed in a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The questionnaire items are as follow:

Emotional arousal (Hosany & Witham, 2010)

EA1 My online purchase experience was stimulating

EA2 My online purchase experience was exciting

EA3 My online purchase experience was enjoyable

EA4 My online purchase experience was interesting

4.3.13 e-word of mouth

The study identified e-word of mouth as moderating effect with four items adapted from Chu & Kim (2011). All measurement items were designed in a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The questionnaire items are as follow:

e-word of mouth (Chu & Kim, 2011)

eWOM1 I have recommended my online shopping experience on social media to others without being asked.

eWOM2 I offer favorable comments and information about my online shopping experience on social media to those who ask for my advice.

eWOM3 I often persuade my contacts on social networks that online shopping can bring benefits.

eWOM4 I often persuade my contacts on social networks about the benefits of online shopping that can save time, money, and effort.

4.3.14 Online impulsive buying behavior

The study identified online impulsive buying behavior influence as the outcome of consequence. This factor is measured with five items adapted from Park, Kim, Funches & Foxx (2012).

Online impulsive buying behavior (Park, Kim, Funches & Foxx, 2012)

“Buy now, think about it later” describes my online shopping

IBB1 behavior

IBB2 During online shopping, I often buy things without a lot of thinking.

IBB3 I tend to buy things I have no desire to buy during online shopping.

when online shopping, I buy things according to how I feel at the

IBB4 moment

When I find something, I like during online shopping, I purchase it

IBB5 immediately.

4.4 Questionnaire design

The questionnaire of this study was designed and developed based on above construct measures, including 15 sections (1) respondents' characteristics, (2) sensation seeking, (3) impulse buying tendency, (4) self-identity, (5) perceived ease of use, (6) perceived enjoyment, (7) online flow experience, (8) product quality, (9) communication effectiveness, (10) web atmospherics, (11) price discounts, (12) lack of self-control, (13) emotional arousal, (14) online impulsive buying behavior, (15) e-word of mouth. The questionnaire was translated to Vietnamese and modified in order to be suitable for the research context and clarity to understand for the young adults who responded.

4.5 Sampling plan

The respondents, who are familiar with internet buying, received the questionnaire and accompanied with the cover letter. Respondents were informed that any information they provided would be handled privately and anonymously, and that the results would be used for academic research. The questionnaire was completed in an average time of 30 minutes per

respondent. To ensure that the question was well-defined, we ran a pilot test with 45 respondents who were familiar with the online shopping experience. This study conducted a pilot test with a small group of students at the Sports Club at Ton Duc Thang University. The reason for choosing this group of students for this sports club is that the club is operated at night, including many students with different demographics, ages, genders, and majors. The questionnaire was printed and distributed directly to 45 students. The objective of the pilot test was to test the accuracy of the translation of the questionnaire contents, which were translated from English. In addition, test the students' understanding of the questionnaire content and terminology. Based on the feedback and suggestions of the respondents, the questionnaire has been adjusted to increase the level of understanding and suggest the content of the question that the research wants to target.

The confidence interval, relative standard error, and proportion should all be considered when determining the appropriate sample size, according to Burn & Bush (1995). Assuming the population size is unknown, the formula for determining the sample size is as follows:

$$n = Z^2 \frac{(p \times q)}{e^2} \quad (2)$$

In which:

- n: sample size;
- p: the estimated percentage of population size;
- q = 1- p;
- e: margin of error (5%)
- Z: the number of standard deviations a given proportion corresponding with the sampling confidence level (if the sampling confidence level is 95%, the z score is 1,96).

In this investigation P and q are defined as 50%/50%, and e equals 0.05. The minimum sample size necessary to achieve the degree of confidence in the sampling results is:

$$n = Z^2 \frac{p * q}{e^2} = 1.96^2 \frac{0.5 * 0.5}{0.05^2} = 385$$

A sample size of at least five respondents per observation item was recommended by Hair et al (1998), however the ratio of 20:1 is more adequate. A sample size of at least (1) ten times the greatest number of formative indicators of a single construct, and (2) ten times the greatest number of structural routes leading directly to any given latent construct, was also advocated by Hair, Ringle and Sarstedt (2011). Because of this, the study's sample size should be greater than 400.

4.6 Data analysis procedures

Following data collection, this study used quantitative analysis to analyze the data. SPSS version 20 and Smart PLS3 were used to analyze the valid data collected. The following analysis methods were used to examine the hypotheses and ascertain the role of the components in this study:

4.6.1 Descriptive statistical analysis

To describe the characteristics of the collected data in quantitative terms, descriptive statistics analysis was used. This study computed the data set's characteristic parameters, which included the means, frequency, and standard deviation of each research variable, as well as the cross-tabulation of the demographic variables.

4.6.2 Reliability and validity measures

In order to identify the dimensions of the research constructs that were employed in this study and the reliability of the research constructs, a number of different methods of purification were utilized. These methods include factor analysis, correlation analysis, and the coefficient alpha (α). In

order to determine the dimensions of each research construct, factor analysis was utilized. Additionally, it has been utilized in order to choose questionnaire questions that have high factor loadings and to compare these selected items to items that are theoretically indicated. In addition, item-to-total correlation and coefficient alpha were computed in order to determine the internal consistency and reliability of the constructs. The evaluation of Eigenvalues was the method that was used to determine the number of dimensions that needed to be recovered from the principal component factor analysis. Following, Hair Ringle and Sarstedt (2011), the following criteria were selected in this study: factor loading greater than 0.7; Eigenvalue greater than 1, accumulated explained variance greater than 0.6, item-to-total correlation greater than 0.5, and coefficient alpha (α) greater than 0.7. Besides that, Kaiser-Meyer-Olkin (KMO) is a test used to determine how strongly two variables were correlated and how well they explained each other. In general, KMO levels in the range of 0.5 – 1.0 are acceptable, but values below 0.5 were deemed unacceptable. And to check if the correlation matrix was indeed an identity matrix, we utilize Bartlett's test of sphericity. If correlation matrix was an identity, then factor analysis was not the best choice for data. To confirm that the correlation matrix is not an identity matrix, a statistical test with a p-value of less than 0.05 is performed (rejection of the null hypothesis).

4.6.3 Convergent Discriminant Validity

Furthermore, the following discriminant validity check was performed to exclude the possibility of common method variance (or skewed percept-percept correlations resulting from collecting two measures from the same source using the same method simultaneously). Initially, we performed a principal component factor analysis using the Harmon one-factor test, which incorporates all variables (Podsakoff & Organ, 1986). Second, we assessed

the Pearson correlations between the constructs and the square root of the AVE (average variance extracted) to establish discriminating validity. All estimated AVEs should be higher than their corresponding intraclass correlation coefficient values (Fornell & Larcker, 1981; Hair et al, 2017). Finally, the Heterotrait-monotrait (HTMT) was applied to confirm no discriminant validity with the HTMT criterion higher than 90% (Henseler et al, 2015).

4.6.4 Hypotheses testing techniques

Structural Equation Modeling (SEM) is one of the research techniques used in many fields because of the flexibility with which it models relationships between independent and dependent variables. In the field of complicated interrelationships between observable and latent variables, covariance-based structural equation modeling (CB-SEM) has been the dominating research method for many years, and it continues to be so. That partial least squares structural equation modeling (PLS-SEM) began to garner more attention has only been lately realized (Hair et al, 2012). PLS-SEM seems to be very intriguing to academics since it eliminates the need for scholars to make assumptions about the distribution of the data, which enables them to estimate complex models with contain constructs, indicator variables, and structural paths. This method puts a focus on prediction while simultaneously estimating statistical models, the structures of which are designed to offer causal explanations for observed data (Sarstedt, Ringle & Hair, 2017). As recommended by Fornell & Lacker (1981), this study examined a number of factors to determine the reliability and validity of the measurement model under consideration. It is the average variance extracted (AVE) that determines the relationship between the two independent variables as well as their dependencies as the first criterion. According to Fornell and Lacker (1981), AVE larger than 0.5 indicates that the latent

variables can explain a higher proportion of the average. The second requirement is the composite reliability (CR), which must be more than 0.7 in order to establish that the variance shared by the various indicators is robust in nature. The final requirement is the Cronbach's alpha coefficient, which should be larger than 0.7 in order to indicate that the measuring items are internally consistent.



CHAPTER FIVE

EMPIRICAL RESULTS

This chapter presented the empirical results. The hypotheses were tested by analyzing the data collected from the questionnaire survey.

5.1 Descriptive analysis

The study decided to choose the Millennium generation, in order to be suitable with the research gaps and research context. Because the Young are most effected by Internet, and they are also one of the important targets of online marketers. They love to share, review, and tell a story about their online buying experience.

Table 5-1 Demographic and descriptive information of respondents

Demographic		Frequency (n=436)	Percentage (%)
Gender	Male	263	60.3
	Female	173	39.7
Age	18 – 20	178	40.8
	21 – 22	163	37.4
	23 – 24	95	21.8
Income	Lower than 2M VND	287	65.8
	2M – 5M VND	94	21.5
	Higher than 5M VND	55	12.7
Times of online shopping purchase per month	1 – 5 times	122	27.9
	6 – 10 times	211	48.5
	Over than 10 times	103	23.6

During the months from January to March of 2021, data were gathered from students at Ton Duc Thang University in Vietnam. Since this study's intended audience is comprised of young adults, undergraduate students will fill the role of responders. As a prerequisite, they needed to fulfill the following conditions. First, they had to have online shopping

experience. Second, they had to have purchased at least one up to five products per month in online distribution channels.

This study used convenience sampling by choosing random students from random faculties of Ton Duc Thang University due to the restriction and social distancing of COVID-19. To collect data, the author created a Google Forms survey and distributed it to the target demographic. Respondents were required to use their university email accounts to prevent survey responses from being recorded duplicated. The number of usable samples returned was 436. In particular, 436 people participated; 173 male (39.7%) and 263 female (60.3%) with an average age between 18 and 24 years old; all are bachelor students. A total of 122 people (27.9%) said they regularly made 1-5 online transactions per month. The demographic profile of the respondents is detailed in Table 5-1.

5.2 Characteristic research constructs

Table 5-2 summarizes the mean values and standard deviations for each of the four research variables for 436 respondents. According to the findings, all respondents indicate higher levels of agreement for most of the constructs in this study, the mean value is all greater than 3.4 on a five-point Likert-scale.

Table 5-2 Descriptive analysis for questionnaire items

Research Items	Mean	Std. Dev
Research Constructs: Impulse buying traits		
<u>Sensation seeking (SSE)</u>		
[SSE1] I like to have new and exciting experiences and sensations even if they are a little frightening	3.82	1.025
[SSE2] I enjoy getting into new situations where you can't predict how things will turn out	4.05	1.130
[SSE3] I like doing things just for the thrill of it	3.86	.987
[SSE4] I sometimes do "crazy" things just for fun	3.83	1.054
[SSE5] I would like to take off on a trip with no preplanned or definite routes or timetable	3.99	1.120

Research Items	Mean	Std. Dev
<u>Impulse buying tendency (IBT)</u>		
[IBT1] I buy things that are not on my shopping list	3.75	.884
[IBT2] When I go shopping, I buy things that I had not intended buying	3.77	.951
[IBT3] I am a person who makes unplanned purchases	3.77	.936
[IBT4] When I see something that really interests me, I buy it without considering the consequences	3.75	.923
<u>Self-identity (SI)</u>		
[SI1] I always have a good sense about what is important to me	3.94	1.043
[SI2] I know what I believe or value	3.92	1.041
[SI3] When someone describes me, I know if they are right or wrong	4.04	1.015
[SI4] I am basically the same person that I've always been	3.97	1.048
<u>Research Constructs: Motivation</u>		
<u>Perceived ease of use (PEU)</u>		
[PEU1] Learning to interact with online shopping website is easy for me.	3.86	1.062
[PEU2] I find it easy to get the online shopping website to do what I want it to do.	3.98	1.093
[PEU3] My interaction with online shopping website is clear and understandable.	3.86	1.024
[PEU4] It is easy for me to become skillful at using the online shopping website.	3.95	1.043
[PEU5] I find the online shopping website easy to use.	3.83	1.008
<u>Perceived enjoyment (PE)</u>		
[PE1] My interaction with online shopping website was enjoyable	3.71	.986
[PE2] My interaction with online shopping website was exciting	3.66	.949
[PE3] My interaction with online shopping website was pleasant	3.68	1.071
<u>Online flow experience (OFE)</u>		
[OFE1] While using online shopping website, I am so focused that I completely lose track of time.	3.64	.991
[OFE2] I realize time went faster than I thought, and I did not even sense it as I was using online shopping website.	3.58	1.038

Research Items	Mean	Std. Dev
[OFE3] I often spend more time on online shopping website than I intend to	3.75	.997
[OFE4] While using online shopping website, I'm fully absorbed by it.	3.67	1.006
[OFE5] While using online shopping website, I'm deeply engrossed.	3.82	1.045
[OFE6] While using online shopping website, I'm completely concentrated on what I am doing	3.68	1.011
Research Constructs: Marketing stimuli		
<u>Product quality (PO)</u>		
[PQ1] Retailer offers merchandise of very high quality	3.98	1.014
[PQ2] The quality of merchandise at retailer is higher than similar merchandise at other stores	4.07	.955
[PQ3] Retailers merchandise quality holds up well after repeated using	3.96	1.058
[PQ4] The merchandise I buy from this retailer is of consistent quality	3.79	1.068
[PQ5] These retailers merchandise always meets my quality standards	3.81	1.110
[PQ6] The quality of merchandise at this retailer consistently meets my expectations	3.72	1.115
<u>Communication effectiveness (CE)</u>		
[CE1] the online advertising and communication activities are creative	3.47	.747
[CE2] the online advertising and communication activities are impressive	3.46	.811
[CE3] the online advertising and communication activities are interesting	3.66	.731
<u>Website atmospherics (WA)</u>		
[WA1] online shopping website was designed very attractive	3.82	1.114
[WA2] online shopping website was designed very bright	3.80	1.060
[WA3] online shopping website was designed very lively	3.79	1.064
[WA4] online shopping website was designed very stimulating	3.83	.989
<u>Price discounts (PD)</u>		
[PD1] In the online distribution channel, retailers frequently offer price discounts	3.85	1.075

Research Items	Mean	Std. Dev
[PD2] In the online distribution channel, retailers often use price discounts	3.85	1.075
[PD3] Retailers often offer discounts on online channels more than other channels	3.86	1.044
Research Constructs: Hedonic shopping value		
<u>Lack of self-control (LSC)</u>		
[LSC1] I am often restless	3.75	.987
[LSC2] I cannot control myself sometimes	3.72	.971
[LSC3] I often do things that I regret later	3.76	.981
[LSC4] I am quite careless sometimes	3.77	.983
[LSC5] I often make silly mistakes	3.95	1.049
[LSC6] I find it difficult to concentrate sometimes	4.01	1.070
<u>Emotional arousal (EA)</u>		
[EA1] My online purchase experience was stimulating	3.87	1.032
[EA2] My online purchase experience was exciting	3.92	1.066
[EA3] My online purchase experience was enjoyable	3.86	1.036
[EA4] My online purchase experience was interesting	3.92	1.065
Research Constructs: Impulsive buying behavior (IBT)		
[IBB1] “Buy now, think about it later” describes my online shopping behavior	3.93	.985
[IBB2] During online shopping, I often buy things without a lot of thinking.	3.87	.903
[IBB3] I tend to buy things I have no desire to buy during online shopping.	3.86	.973
[IBB4] when online shopping, I buy things according to how I feel now	3.98	.995
[IBB5] When I find something I like during online shopping, I purchase it immediately.	4.02	.988
Research Constructs: e-Word of mouth (eWOM)		
[eWOM1] I have recommended my online shopping experience on social media to others without being asked.	3.36	.892
[eWOM2] I offer favorable comments and information about my online shopping experience on social media to those who ask for my advice.	3.54	.918
[eWOM3] I often persuade my contacts on social networks about online shopping can brings benefits.	3.61	.965
[eWOM4] I often persuade my contacts on social networks about benefits of online shopping can save time, money, and effort.	3.65	.899

5.3 Factor analysis and reliability test

This study utilized SPSS software to conduct factor loading analysis and reliability tests. According to Hair et al (2012), the generated values must meet the following requirements: Eigenvalue greater than one, factor loading greater than 0.7, more than 60% of the variance can be explained, item-to-total correlation greater than 0.5, Cronbach's alpha > 0.7 (Hair et al, 1998). If any variable did not match the required criteria, it will be removed for further consideration. Based on the results in tables 5-3 to 5-8, there are no variable values under the mentioned thresholds and are omitted from the analysis of the data. The detailed results of the confirmative factor analysis and reliability tests are shown in Tables 5-3 to 5-8.

5.3.1 Impulse buying traits

Impulse buying traits include three factors: sensation seeking, impulse buying tendency, self-identity. Table 5-3 shows that, factor loading of all items are greater than 0.7 and the greatest factor loading is SSE3 (0.969) and the lowest is IBT3 (0.817) and the Item-to total correlations of each item are ranged from 0.672 to 0.846.

For sensation seeking, the Eigenvalue is 3.898, cumulative explained variance is 77.950%, Cronbach's alpha is 0.929 and KMO = 0.902 > 0.5 , Bartlett p-value is less than 0.05. For impulse buying tendency, the Eigenvalue is 2.971, cumulative explained variance is 74.267%, Cronbach's alpha is 0.826 and KMO = 0.902 > 0.5 , Bartlett p-value is less than 0.05. For self-identity, the Eigenvalue is 2.784, cumulative explained variance is 69.601%, Cronbach's alpha is 0.854 and KMO = 0.827 > 0.5 , Bartlett p-value is less than 0.05.

Table 5-3 Results of factor analysis and reliability test for impulse buying traits

Research Items	Factor loading	Eigenvalue	Cumulative Explained Variance (%)	Item-to total correlation	Cronbach's alpha
Sensation seeking (KMO= 0.902, Bartlett= 0.000)					
SSE2	.905	3.898	77.950	.846	.929
SSE5	.898			.836	
SSE1	.872			.798	
SSE3	.969			.794	
SSE4	.869			.794	
Self-identity (KMO= 0.827, Bartlett= 0.000)					
SI3	.871	2.971	74.267	.762	.884
SI1	.869			.758	
SI2	.861			.747	
SI4	.846			.724	
Impulse buying tendency (KMO= 0.826, Bartlett= 0.000)					
IBT4	.845	2.784	69.601	.711	.854
IBT1	.843			.708	
IBT2	.832			.693	
IBT3	.817			.672	

5.3.2 Motivation

Motivation includes three factors: perceived ease of use, perceived enjoyment, online flow experience. Table 5-4 shows that, factor loading of all items are greater than 0.7 and the greatest factor loading is PEU4 (0.900) and the lowest is OFE1 (0.762) and the Item-to total correlations of each item are ranged from 0.651 to 0.840.

For perceived ease of use, the Eigenvalue is 3.987, cumulative explained variance is 79.739%, Cronbach's alpha is 0.936 and KMO = 0.901 > 0.5, Bartlett p-value is less than 0.05. For perceived enjoyment, the Eigenvalue is 2.245, cumulative explained variance is 74.828%, Cronbach's alpha is 0.832 and KMO = 0.724 > 0.5, Bartlett p-value less is than 0.05.

For self-identity, the Eigenvalue is 3.704, cumulative explained variance is 61.737%, Cronbach's alpha is 0.876 and KMO = 0.900 > 0.5, Bartlett *p*-value is less than 0.05.

Table 5-4 Results of factor analysis and reliability test for motivation

Research Items	Factor loading	Eigenvalue	Cumulative Explained Variance (%)	Item-to total correlation	Cronbach's alpha
Perceived ease of use (KMO= 0.901, Bartlett= 0.000)					
PEU4	.900	3.987	79.739	.840	.936
PEU2	.897			.836	
PEU1	.897			.836	
PEU5	.893			.830	
PEU3	.877			.807	
Perceived enjoyment (KMO= 0.724, Bartlett= 0.000)					
PE2	.871	2.245	74.828	.700	.832
PE1	.866			.691	
PE3	.858			.680	
Online flow experience (KMO= 0.900, Bartlett= 0.000)					
OFE3	.804	3.704	61.737	.702	.876
OFE4	.797			.694	
OFE2	.792			.688	
OFE6	.784			.678	
OFE5	.775			.667	
OFE1	.762			.651	

5.3.3 Marketing stimuli

Marketing stimuli includes four factors: product quality, communication effectiveness, web atmospherics, price discounts. Table 5-5 shown that, factor loading of all items are greater than 0.7 and the greatest factor loading is PD2 (0.937) except PQ6 (0.697 < 0.7) has been deleted than and the Item-to total correlations of each item range from 0.541 to 0.847. For product quality, the Eigenvalue is 3.649, cumulative explained variance is 60.812%, Cronbach's alpha is 0.870 and KMO = 0.848 > 0.5, Bartlett *p*-value is less than 0.05. Communication effectiveness, the Eigenvalue is 2.118, cumulative explained variance is 70.601%, Cronbach's

alpha is 0.790 and KMO = 0.676 > 0.5, Bartlett *p*-value is less than 0.05. For web atmospherics, the Eigenvalue is 2.590, cumulative explained variance is 64.754%, Cronbach's alpha is 0.818 and KMO = 0.828 > 0.5, Bartlett *p*-value is less than 0.05. For price discounts, the Eigenvalue is 2.475, cumulative explained variance is 82.489%, Cronbach's alpha is 0.893 and KMO = 0.720 > 0.5, Bartlett *p*-value is less than 0.05.

Table 5-5 Results of factor analysis and reliability test for marketing stimuli

Research Items	Factor loading	Eigenvalue	Cumulative Explained Variance (%)	Item-to total correlation	Cronbach's alpha
Product quality (KMO= 0.848, Bartlett= 0.000)					
PQ1	.870	3.244	64.872	.764	.862
PQ2	.865			.756	
PQ3	.840			.716	
PQ4	.714			.581	
PQ5	.722			.589	
PQ6		Deleted			
Communication effectiveness (KMO= 0.676, Bartlett= 0.000)					
CE2	.878	2.118	70.601	.692	.790
CE1	.866			.673	
CE3	.773			.541	
Website atmospherics (KMO= 0.828, Bartlett= 0.000)					
WA1	.816	2.590	64.754	.656	.818
WA2	.812			.649	
WA3	.808			.645	
WA4	.782			.610	
Price discounts (KMO= 0.720, Bartlett= 0.000)					
PD2	.937	2.475	82.489	.847	.893
PD1	.911			.794	
PD3	.876			.734	

5.3.4 Hedonic value

Hedonic value includes two factors: lack of self-control, emotional arousal. Table 5-6 shown that, factor loading of all items is greater than 0.7 and the greatest factor loading is EA2 (0.905) and the lowest is LSC5

(0.798) and the Item-to total correlations of each item are ranged from 0.716 to 0.824.

For lack of self-control, the Eigenvalue is 4.309, cumulative explained variance is 71.812%, Cronbach's alpha is 0.921 and KMO = 0.910 > 0.5, Bartlett p-value is less than 0.05. For emotional arousal, the Eigenvalue is 3.176, cumulative explained variance is 79.398%, Cronbach's alpha is 0.913 and KMO = 0.808 > 0.5, Bartlett p-value is less than 0.05

Table 5-6 Results of factor analysis and reliability test for hedonic value

Research Items	Factor loading	Eigenvalue	Cumulative Explained Variance (%)	Item-to total correlation	Cronbach's alpha
Lack of self-control (KMO= 0.910, Bartlett= 0.000)					
LSC4	.886	4.309	71.812	.824	.921
LSC3	.874			.806	
LSC2	.872			.804	
LSC1	.848			.769	
LSC6	.803			.722	
LSC5	.798			.716	
Emotional arousal (KMO= 0.808, Bartlett= 0.000)					
EA2	.905	3.176	79.398	.823	.913
EA1	.892			.803	
EA3	.885			.793	
EA4	.883			.790	

5.3.5 Impulsive buying behavior

Table 5-7 shows that, factor loading of all items are greater than 0.7 and the greatest factor loading is IBB1 (0.912) and the lowest is IBB5 (0.738) and the Item-to total correlations of each item are ranged from 0.626 to 0.848. The Eigenvalue is 3.768, cumulative explained variance is 75.353%, Cronbach's alpha is 0.917 and KMO = 0.873 > 0.5, Bartlett p-value is less than 0.05.

Table 5-7 Results of factor analysis and reliability test for impulsive buying behavior

Research Items	Factor loading	Eigenvalue	Cumulative Explained Variance (%)	Item-to total correlation	Cronbach's alpha
Impulsive buying behavior (KMO= 0.873, Bartlett= 0.000)					
IBB1	.912	3.768	75.353	.848	.917
IBB3	.903			.837	
IBB4	.897			.826	
IBB2	.879			.798	
IBB5	.738			.626	

5.3.6 e-Word of mouth

Table 5-8 shown that, factor loading of all items is greater than 0.7 and the greatest factor loading is eWOM3 (0.821) and the lowest is eWOM2 (0.798).

Table 5-8 Results of factor analysis and reliability test for eWOM

Research Items	Factor loading	Eigenvalue	Cumulative Explained Variance (%)	Item-to total correlation	Cronbach's alpha
e-Word of mouth (KMO= 0.799, Bartlett= 0.000)					
eWOM3	.821	2.638	65.950	.666	.828
eWOM4	.814			.658	
eWOM1	.814			.658	
eWOM2	.798			.634	

The Item-to total correlations of each item ranges from 0.634 to 0.666. The Eigenvalue is 2.638, cumulative explained variance is 65.950%, Cronbach's alpha is 0.828 and KMO = 0.799 > 0.5, Bartlett p-value is less than 0.05.

5.4 The test of common method variance

The author analyzed the data with partial least squares (PLS) and the Smart-PLS program in software version 3.0. (Ringle et al, 2015). PLS-SEM

is an approach that works equally well for both hypothetical model research and exploratory studies. Its strength lies in its ability to handle models with multicollinear variables, including those with many dependent and independent variables. Next, the author employed the heterotrait-monotrait ratio and the Fornell-Larcker criterion (Fornell et al, 1981) to determine the validity of the discriminant function (Henseler et al, 2015). Correlation values for other constructs are lower than the square root of the AVE for all variables, as shown in Table 5-9. Furthermore, the greatest HTMT value is 0.842, which is less than 0.9, as shown in Table 5-9, supporting the idea that (Henseler et al, 2015). Therefore, the discriminant validity across the board is significant. In conclusion, this investigation used Harman's one-factor test to investigate the prevalence of the common technique bias (Podsakoff et al, 2003). A single component explained only 41.64 percent of the variation, which was much less than the 50% requirement. So, it has been determined that the investigation was free of any potential methodological bias.

Table 5-9 The assessment of discriminant validity

Constructs	CE	LSC	EA	e-WOM	IBB	IBT	OFE	PD	PE	PEU	PQ	SI	SSE	WA
CE	0.838	0.223	0.167	0.171	0.219	0.204	0.148	0.181	0.131	0.155	0.142	0.147	0.146	0.063
LSC	0.201	0.847	0.739	0.071	0.769	0.749	0.752	0.802	0.704	0.807	0.817	0.735	0.815	0.208
EA	0.149	0.681	0.891	0.089	0.702	0.695	0.584	0.786	0.569	0.797	0.721	0.670	0.779	0.195
eWOM	0.007	-0.016	-0.079	0.800	0.171	0.086	0.219	0.080	0.035	0.062	0.075	0.076	0.081	0.147
IBB	0.192	0.710	0.644	-0.162	0.868	0.788	0.565	0.762	0.553	0.781	0.689	0.644	0.745	0.117
IBT	0.169	0.667	0.616	-0.041	0.696	0.834	0.616	0.711	0.654	0.736	0.641	0.713	0.727	0.101
OFE	0.121	0.677	0.524	0.164	0.507	0.533	0.786	0.680	0.756	0.675	0.766	0.637	0.665	0.236
PD	0.151	0.730	0.711	-0.057	0.689	0.622	0.603	0.908	0.611	0.842	0.740	0.691	0.791	0.166
PE	0.104	0.617	0.498	-0.001	0.483	0.552	0.646	0.528	0.865	0.591	0.719	0.509	0.612	0.088
PEU	0.137	0.754	0.738	-0.059	0.724	0.660	0.614	0.771	0.523	0.893	0.768	0.771	0.838	0.172
PQ	0.122	0.745	0.635	-0.034	0.609	0.546	0.660	0.643	0.602	0.684	0.832	0.803	0.795	0.334
SI	0.122	0.664	0.604	0.012	0.579	0.620	0.564	0.615	0.438	0.703	0.709	0.862	0.720	0.413
SSE	0.133	0.756	0.718	-0.072	0.687	0.648	0.602	0.721	0.541	0.783	0.714	0.654	0.883	0.158
WA	-0.025	0.202	0.189	0.094	0.117	0.090	0.223	0.166	0.065	0.176	0.313	0.367	0.156	0.804

Note: CE= Communication effectiveness; LSC= Lack of self-control; EA= Emotional arousal; EWOM= e-Word of mouth; IBB= Impulsive buying behavior; IBT= Impulse buying tendency; OFE= Online flow experience; PEU= Perceived ease of use; PE= Perceived enjoyment; PD= Price discounts; PQ= Product quality; SI= Self-identity; SSE= Sensation seeking; WA= Web atmospherics. The diagonal values represent the square roots of AVEs, above the diagonal are the values of HTMT values, and below the diagonal are the correlation coefficients between the construct values.

5.5 Evaluation of the measurement model

Table 5-10 displays the results of the model's construct reliability and validity assessment using Hair et al (2011) criteria. Cronbach's alpha values (0.790 - 0.936) are exceeded the recommended value of 0.7. (Hair et al, 2012). Furthermore, each structure had a CR greater than 0.7 (0.875 - 0.946). This demonstrates that the measurement scale has high internal consistency and reliability. The AVE must be greater than 0.5 to achieve convergent validity (Chin, 1998; Höck et al, 2010). As a result of these findings, all AVE (0.608 - 0.825) meet the required criteria. Overall, the results show adequate model fit, good reliability, and adequate convergent and discriminant validity.

Table 5-10 Evaluation of the measurement model

Construct	AVE	Composite Reliability (C.R)	Cronbach's Alpha
Sensation seeking	0.779	0.946	.929
Impulse buying tendency	0.696	0.901	.854
Self-identity	0.743	0.920	.884
Perceived ease of use	0.797	0.952	.936
Perceived enjoyment	0.748	0.899	.832
Online flow experience	0.617	0.906	.876
Product quality	0.692	0.902	.862
Communication effectiveness	0.703	0.875	.790
Web atmospherics	0.647	0.880	.818
Price discounts	0.825	0.934	.893
Lack of self-control	0.718	0.938	.921
Emotional arousal	0.794	0.939	.913
Online impulsive buying behavior	0.754	0.938	.917
eWOM	0.640	0.876	.828

The bootstrapping algorithm was used to evaluate the path significance of the hypothesized model with a total of 5000 re-samples and 436 cases, as recommended by Hair et al (2011). For the R^2 result of four endogenous constructs. The model explains 58.1% of the variance in impulsive buying

behavior, 63.6% of the variance in impulsive buying behavior, and 75.5% in lack of self-control.

Table 5-11 showed the result of hypotheses testing. For the impact of impulse buying traits, the results indicated that, sensation seeking had a positive effect on lack of self-control ($\beta = 0.182$, $t = 3.682$, $p < 0.001$) and impulse buying tendency had a positive effect on lack of self-control ($\beta = 0.120$, $t = 3.568$, $p < 0.001$), but the influence of self-identity was unexpectedly not significant on lack of self-control ($\beta = 0.182$, $t = 0.192$, $p > 0.05$). Thus, H1a and H1b were supported and H1c was rejected.

The results also showed that only sensation seeking ($\beta = 0.217$, $t = 3.472$, $p < 0.001$) had positive influence on emotional arousal. Impulse buying tendency ($\beta = 0.091$, $t = 1.853$, $p > 0.05$) and self-identity ($\beta = 0.080$, $t = 1.722$, $p > 0.05$) were found to have non-significant effect on emotional arousal. Based on that, H2a was supported and H2b, H2c were rejected.

For motivation variable, the results pointed out that, perceived ease of use had a positive impact on lack of self-control ($\beta = 0.123$, $t = 2.524$, $p < 0.01$) and perceived enjoyment ($\beta = 0.089$, $t = 2.405$, $p < 0.01$) had a positive impact on lack of self-control and online flow experience ($\beta = 0.112$, $t = 2.668$, $p < 0.01$) had statistical significance. Therefore, H3a, H3b, H3c were supported.

In the relationship between perceived ease of use, perceived enjoyment, online flow experience on emotional arousal, only perceived ease of use ($\beta = 0.240$, $t = 4.030$, $p < 0.001$) showed the positive effect on emotional arousal, and perceived enjoyment had no significant impact on emotional arousal ($\beta = 0.033$, $t = 0.887$, $p > 0.05$), online flow experience had no significant impact on emotional arousal ($\beta = -0.018$, $t = -0.546$, $p > 0.05$). Thus, H4a was supported and H4b and H4c were rejected.

Table 5-11 The hypothesis testing results

Hyps	Path	Beta	t-value	Remarks
H1a	Sensation seeking → Lack of self-control	0.182	3.682***	Supported
H 1b	Impulse buying tendency → Lack of self-control	0.120	3.568***	Supported
H1c	Self-identity → Lack of self-control	0.007	0.192	Not supported
H2a	Sensation seeking → Emotional arousal	0.217	3.472***	Supported
H2b	Impulse buying tendency → Emotional arousal	0.091	1.853	Not supported
H2c	Self-identity → Emotional arousal	0.080	1.722	Not supported
H3a	Perceived ease of use → Lack of self-control	0.123	2.524**	Supported
H3b	Perceived enjoyment → Lack of self-control	0.089	2.405**	Supported
H3c	Online flow experience → Lack of self-control	0.112	2.668**	Supported
H4a	Perceived ease of use → Emotional arousal	0.240	4.030***	Supported
H4b	Perceived enjoyment → Emotional arousal	0.033	0.887	Not supported
H4c	Online flow experience → Emotional arousal	-0.018	-0.546	Not supported
H5a	Product quality → Lack of self-control	0.125	2.808***	Supported
H5b	Communication effectiveness → Lack of self-control	0.064	2.636***	Supported
H5c	Web atmospherics → Lack of self-control	0.084	1.941	Not supported
H5d	Price discounts → Lack of self-control	0.125	2.808***	Supported
H6a	Product quality → Emotional arousal	0.119	2.455**	Supported
H6b	Communication effectiveness → Emotional arousal	0.024	0.835	Not supported
H6c	Web atmospherics → Emotional arousal	-0.026	-0.563	Not supported
H6d	Price discounts → Emotional arousal	0.226	4.581***	Supported
H7a	Lack of self-control → Online impulsive buying behavior	0.504	11.510***	Supported
H7b	Emotional arousal → Online impulsive buying behavior	0.286	5.686***	Supported

Noted: *** p<0.001, ** p<0.01, *p<0.05

For the impact of marketing stimuli, the results indicated that, product quality have a positive influence on lack of self-control ($\beta= 0.125$, $t= 2.808$, $p< 0.001$), communication effectiveness had a positive influence on lack of self-control ($\beta= 0.064$, $t= 2.636$, $p< 0.001$), price discounts had a positive influence on lack of self-control ($\beta= 0.125$, $t= 2.808$, $p<0.001$) and the relationship between web atmospherics on lack of self-control ($\beta= 0.084$, $t= 1.941$, $p> 0.05$) had no significant. Therefore, H5a, H5b, H5d were supported and H5c was rejected.

In the relationship between product quality and emotional arousal had significant ($\beta= 0.119$, $t= 2.455$, $p< 0.01$). The relationship between communication effectiveness and emotional arousal had no significant ($\beta=0.024$, $t=0.835$, $p>0.05$). The relationship between web atmospherics and emotional arousal had no significant ($\beta= -0.026$, $t= -0.563$, $p> 0.05$). Besides that, price discounts had a positive influence on emotional arousal ($\beta= 0.226$, $t= 4.581$, $p< 0.001$). Hence, H6b, H6c were rejected and H6a, H6d were supported.

In the relationship between lack of self-control and online impulsive buying behavior ($\beta= 0.504$, $t= 11.510$, $p< 0.001$). The relationship between emotional arousal and online impulsive buying behavior had a positive impact ($\beta= 0.286$, $t= 5.686$, $p< 0.001$). Thus, H7a and H7b were supported.

5.6 Mediating of lack of self-control

The Smart PLS 3.0 software was used to examine the significant of mediating role of lack of self-control by conducting Bootstrapping with the 5000 sub-samples method. According to Zhao et al (2010) and Hair et al (2017), ρ_1 represents the direct effect of the independent variable on the mediator variable, ρ_2 represents the direct effect of the mediator variable on the dependent variable, and ρ_3 represents the direct effect of the independent variable on the dependent variable. If ρ_1 , ρ_2 and ρ_3 are all significant and

positive, there is complementary (partial mediation). If ρ_1 , ρ_2 and ρ_3 are all significant and non-positive, there is competitive (partial mediation). If ρ_1 , ρ_2 are insignificant and ρ_3 is significant, there is a direct-only effect (non-mediation). If ρ_1 , ρ_2 and ρ_3 are all insignificant, there is no-effect (non-mediation). Table 5-12 showed the results of mediation testing.

As a results, lack of self-control significantly mediated the relationship between sensation seeking and impulsive buying behavior with indirect effects ($\beta= 0.092$, $t= 3.566$, $p< 0.001$). Furthermore, the direct effect of sensation seeking on impulsive purchasing behavior ($\beta= 0.154$, $t= 4.802$, $p< 0.001$) showed statistically significant, we can conclude that lack of self-control partially mediated the relationship between sensation seeking and impulsive buying behavior.

Besides that, lack of self-control significantly mediated the relationship between impulse buying tendency and impulsive buying behavior with indirect effects ($\beta= 0.092$, $t= 3.566$, $p< 0.001$). Furthermore, the direct effect of impulse buying tendency on impulsive purchasing behavior ($\beta= 0.086$, $t= 3.671$, $p< 0.001$) showed statistically significant, we can conclude that lack of self-control partially mediated the relationship between impulse buying tendency and impulsive buying behavior.

Moreover, lack of self-control insignificantly mediated the relationship between self-identity and impulsive buying behavior with indirect effects ($\beta= 0.003$, $t= 0.194$, $p> 0.05$). Furthermore, the direct effect of self-identity on impulsive purchasing behavior ($\beta= 0.026$, $t= 1.184$, $p> 0.05$) shows statistically insignificant, we can conclude that lack of self-control has no mediation effect on the relationship between self-identity and impulsive buying behavior. Furthermore, lack of self-control significant and mediated the relationship between perceived ease of use and impulsive buying behavior with indirect effects ($\beta= 0.062$, $t= 2.413$, $p< 0.01$). Furthermore, the direct

effect of perceived ease of use on impulsive purchasing behavior ($\beta= 0.130$, $t= 4.139$, $p< 0.001$) showed statistically significant, we can conclude that lack of self-control partially mediated the relationship between perceived ease of use and impulsive buying behavior.

As a results, lack of self-control significantly mediated the relationship between perceived enjoyment and impulsive buying behavior with indirect effects ($\beta= 0.045$, $t=2.401$, $p< 0.01$). Furthermore, the direct effect of perceived enjoyment on impulsive purchasing behavior ($\beta=0.054$, $t=2.412$, $p< 0.01$) showed statistically significant we can conclude that lack of self-control partially mediated the relationship between perceived enjoyment and impulsive buying behavior.

Moreover, lack of self-control insignificantly mediated the relationship between online flow experience and impulsive buying behavior with indirect effects ($\beta= 0.016$, $t= 0.038$, $p> 0.05$). Furthermore, the direct effect of online flow experience on impulsive purchasing behavior ($\beta= -0.006$, $t= -0.304$, $p> 0.05$) showed statistically insignificant, we can conclude that lack of self-control has full mediation on the relationship between online flow experience and impulsive buying behavior.

As a results, lack of self-control significantly mediated the relationship between product quality and impulsive buying behavior with indirect effects ($\beta= 0.147$, $t= 5.427$, $p< 0.001$). Furthermore, the direct effect of product quality on impulsive purchasing behavior ($\beta= 0.167$, $t= 5.379$, $p<0.001$) showed statistically significant. We can conclude that lack of self-control partially mediated the relationship between product quality and impulsive buying behavior.

As a results, lack of self-control significantly mediated the relationship between communication effectiveness and impulsive buying behavior with indirect effects ($\beta= 0.032$, $t= 2.591$, $p< 0.01$). Furthermore, the direct effect of

communication effectiveness on impulsive purchasing behavior ($\beta= 0.039$, $t= 2.5.95$, $p< 0.01$) showed statistically significant we can conclude that lack of self-control partially mediated the relationship between communication effectiveness and impulsive buying behavior.

As a results, lack of self-control significantly mediated the relationship between web atmospherics and impulsive buying behavior with indirect effects ($\beta= 0.042$, $t= 1.972$, $p< 0.05$). Furthermore, the direct effect of web atmospherics on impulsive purchasing behavior ($\beta= 0.035$, $t= 1.311$, $p> 0.05$) showed statistically non-significant, we can conclude that lack of self-control has a direct effect only on the relationship between web atmospherics and impulsive buying behavior.

Finally, lack of self-control significantly mediated the relationship between price discounts and impulsive buying behavior with indirect effects ($\beta= 0.063$, $t= 2.620$, $p< 0.01$). Furthermore, the direct effect of price discounts on impulsive purchasing behavior ($\beta= 0.127$, $t= 4.651$, $p< 0.001$) showed statistically significant, we can conclude that lack of self-control partially mediated the relationship between price discounts and impulsive buying behavior.

Table 5-12 The results of mediation testing

Direct and Indirect Path	Beta	t-value	p-value	Remarks
SSE → LSC	0.182	3.682	0.000	Significant
SSE → IBB	0.154	4.802	0.000	Significant
LSC → IBB	0.504	11.510	0.000	Significant
SSE → LSC → IBB	0.092	3.566	0.000	Significant
IBT → LSC	0.120	3.568	0.000	Significant
IBT → IBB	0.086	3.671	0.000	Significant
LSC → IBB	0.504	11.510	0.000	Significant
IBT → LSC → IBB	0.060	3.281	0.001	Significant
SI → LSC	0.007	0.192	0.848	Insignificant
SI → IBB	0.026	1.184	0.236	Insignificant
LSC → IBB	0.504	11.510	0.000	Significant
SI → LSC → IBB	0.003	0.194	0.847	Insignificant

Direct and Indirect Path	Beta	t-value	p-value	Remarks
PEOU → LSC	0.123	2.524	0.000	Significant
PEOU → IBB	0.130	4.139	0.000	Significant
LSC → IBB	0.504	11.510	0.000	Significant
PEOU → LSC → IBB	0.062	2.413	0.016	Significant
PE → LSC	0.089	2.405	0.016	Significant
PE → IBB	0.054	2.412	0.016	Significant
LSC → IBB	0.504	11.510	0.000	Significant
PE → LSC → IBB	0.045	2.401	0.016	Significant
OFE → LSC	0.112	2.668	0.008	Significant
OFE → IBB	-0.006	-0.304	0.761	Insignificant
LSC → IBB	0.504	11.510	0.000	Significant
OFE → LSC → IBB	0.016	0.038	0.970	Insignificant
PQ → LSC	0.292	5.698	0.000	Significant
PQ → IBB	0.167	5.379	0.000	Significant
LSC → IBB	0.504	11.510	0.000	Significant
PQ → LSC → IBB	0.147	5.427	0.000	Significant
WA → LSC	0.084	1.941	0.052	Insignificant
WA → IBB	0.035	1.311	0.190	Insignificant
LSC → IBB	0.504	11.510	0.000	Significant
WA → LSC → IBB	0.042	1.972	0.049	Significant
CE → LSC	0.064	2.636	0.008	Significant
CE → IBB	0.039	2.595	0.009	Significant
LSC → IBB	0.504	11.510	0.000	Significant
CE → LSC → IBB	0.032	2.591	0.010	Significant
PD → LSC	0.125	4.581	0.005	Significant
PD → IBB	0.127	4.651	0.000	Significant
LSC → IBB	0.504	11.510	0.000	Significant
PD → LSC → IBB	0.063	2.620	0.009	Significant

Note: CE= Communication effectiveness; LSC= Lack of self-control; EA= Emotional arousal; EWOM= e-Word of mouth; IBB= Impulsive buying behavior; IBT= Impulse buying tendency; OFE= Online flow experience; PEU= Perceived ease of use; PE= Perceived enjoyment; PD= Price discounts; PQ= Product quality; SI= Self-identity; SSE= Sensation seeking; WA= Web atmospherics.

5.7 Moderating effects

5.7.1 Moderating role of eWOM

This study also conducted moderation effect testing by Bootstrapping with 5000 sub-samples function in PLS 3.0 software. The results indicated

that, eWOM has a significant impact on impulse buying behavior ($\beta = -0.119$, $t = -3.650$, $p < 0.001$). Besides that, the direct effect of lack of self-control has a strong impact on impulse buying behavior ($\beta = 0.504$, $t = 11.510$, $p < 0.001$) and the interaction between lack of self-control and eWOM on impulse buying behavior also has statistically significant ($\beta = 0.151$, $t = 2.739$, $p < 0.001$). It proved that eWOM plays a significant moderating role in the relationship between lack of self-control and impulse buying behavior. In additionally, this study conducted slopes analysis by Aiken and West (1991). Figure 5-1 indicated that eWOM strengthens the positive relationship between lack of self-control and impulse buying behavior. More specifically, consumers with higher levels impact of eWOM will lead to higher levels of impulse buying behavior by increasing higher levels of lack of self-control. Thus, based on these results, H8a is supported.

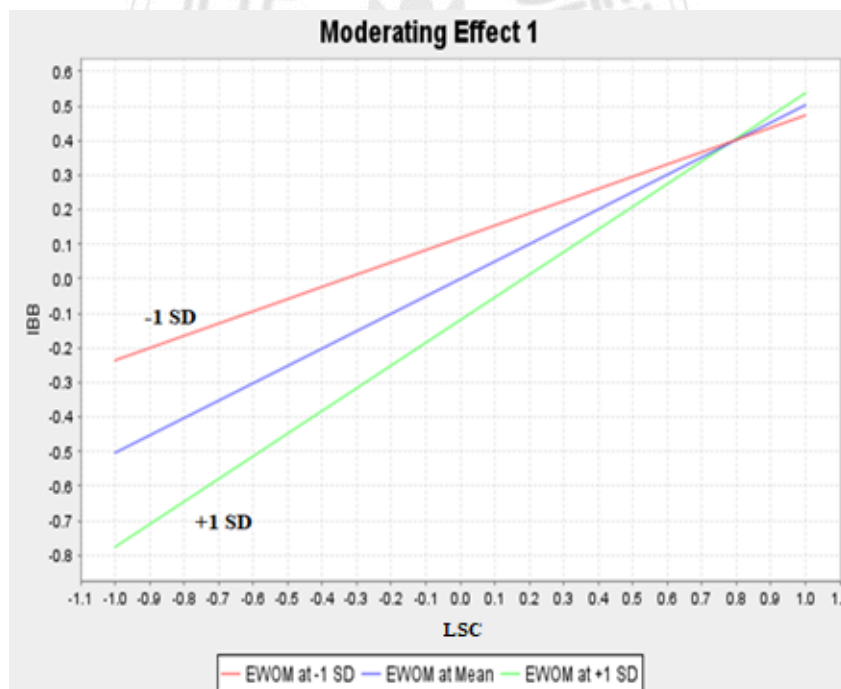


Figure 5-1 The moderating role of eWOM

In additionally, table 5-13 also pointed out that, the direct influence of eWOM to impulse buying behavior has a statistical significant ($\beta = -0.119$, $t =$

-3.650, $p < 0.001$) and the direct impact of emotional arousal on impulse buying behavior also significant ($\beta = 0.286$, $t = 5.686$, $p < 0.001$), but the interaction of emotional arousal and eWOM on impulse buying behavior is insignificant ($\beta = -0.042$, $t = -0.883$, $p > 0.05$). Therefore, eWOM has no moderation role on the relationship between emotional arousal and impulse buying behavior, we can conclude that H8b is rejected.

Table 5-13 The moderating role of eWOM

Hyps	Direct and Indirect Path	Beta	t-value	p-value
H8a	eWOM → IBB	-0.119	-3.650	0.000
	LSC → IBB	0.504	11.510	0.000
	Moderating Effect 1 -> IBB	0.151	2.739	0.000
H8b	eWOM → IBB	-0.119	-3.650	0.000
	EA → IBB	0.286	5.686	0.000
	Moderating Effect 2 -> IBB	-0.042	-0.883	0.405

Note: EWOM= e-Word of mouth; IBB= Impulsive buying behavior.

* $p < .05$, ** $p < .01$, *** $p < .001$

5.7.2 Moderating role of Gender

In this part, the moderating role of gender was analysis by PROCESS macro 4.0 model 1 by Hayes (2022). Table 5-14 shown the significant influence of lack of self-control on impulse buying behavior ($\beta = 1.258$, $p < 0.001$) and gender significant influence on impulse buying behavior ($\beta = 2.321$, $p < 0.001$). Besides that, the interaction of gender and lack of self-control on impulse buying behavior has statistically significant ($\beta = -0.511$, $p < 0.001$). Based on this result, the moderating role of gender on the relationship of lack of self-control on impulse buying behavior is supported.

Table 5-14 The moderating role of gender on lack of self-control

	Moderator: Gender				ΔR^2 (LSC*Gender)
	β	SE	LLCI	ULCI	
Constant	2.260***	0.395	1.484	3.036	0.072
LSC → IBB	0.457***	0.101	0.257	0.656	
Gender → IBB	0.211**	0.267	0.185	0.364	
LSC*Gender → IBB	0.171*	0.068	0.037	0.305	
Conditional effects of moderator (slope test)	β	SE	LLCI	ULCI	
1. Male	0.628***	0.043	0.543	0.713	
2. Female	0.799***	0.052	0.696	0.902	

Note: LSC= Lack of self-control; IBB= Impulsive buying behavior.

* $p < .05$, ** $p < .01$, *** $p < .001$

This study conducted slopes analysis by Aiken and West (1991) to determine the moderating role of male and female on lack of self-control and impulse buying behavior. The result in table 5-14 pointed out that, lack of self-control positive influence on impulse buying behavior for both male ($\beta = 0.747$, $p < 0.001$) and female ($\beta = 0.236$, $p < 0.001$). More specifically, the figure 5-2 indicated that, gender plays an importance moderation role in consumers' impulsive buying behavior with male as well as female. Females tend to be less careful and less controlling in their impulsive buying behavior. Thus, based on these results, H9a is supported.

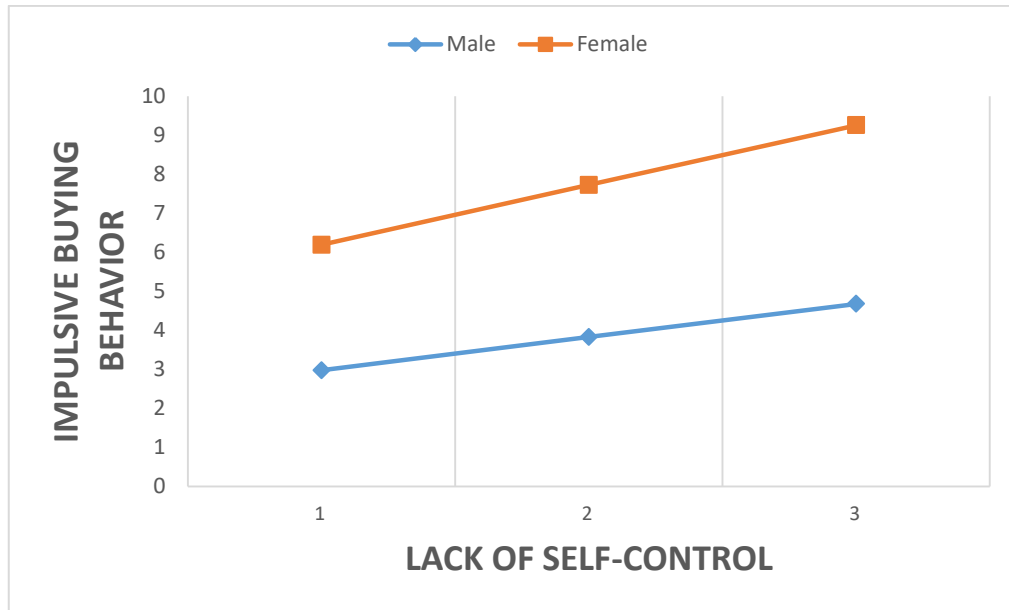


Figure 5-2 The moderating role of gender on lack of self-control

Moreover, Table 5-15 showed the significant influence of emotional arousal on impulse buying behavior ($\beta = 1.005, p < 0.001$) and gender significant influence on impulse buying behavior ($\beta = 1.970, p < 0.001$). Besides that, the interaction of gender and emotional arousal on impulse buying behavior has statistically significant ($\beta = -0.402, p < 0.001$). Based on this result, the moderating role of gender on the relationship of emotional arousal on impulse buying behavior is supported.

This study conducted slopes analysis by Aiken and West (1991) to determine the moderating role of male and female on emotional arousal and impulse buying behavior. The result in table 5-15 pointed out that, emotional arousal positive influence on impulse buying behavior for both male ($\beta = 0.597, p < 0.001$) and female ($\beta = 0.194, p < 0.001$). More specifically, the figure 5-3 indicated that, gender plays an importance moderation role in consumers' impulsive buying behavior with male as well as female. The levels of emotional arousal of female are higher than male, it leads to higher

levels of impulsive buying behavior. Thus, based on these results, H9B is supported.

Table 5-15 The moderating role of gender on emotional arousal

	Moderator: Gender				
	β	SE	LLCI	ULCI	ΔR^2 (EA*Gender)
Constant	2.013	0.405	1.214	2.806	0.077
EA → IBB	0.509***	0.102	0.309	0.709	
Gender → IBB	0.226***	0.267	0.185	0.299	
EA*Gender → IBB	0.142***	0.066	0.083	0.178	
Conditional effects of moderator (slope test)	β	SE	LLCI	ULCI	
1. Male	0.556***	0.044	0.469	0.644	
2. Female	0.603***	0.049	0.504	0.701	

Note: EA= Emotional arousal; IBB= Impulsive buying behavior.
*p<.05, **p<.01, ***p<.001

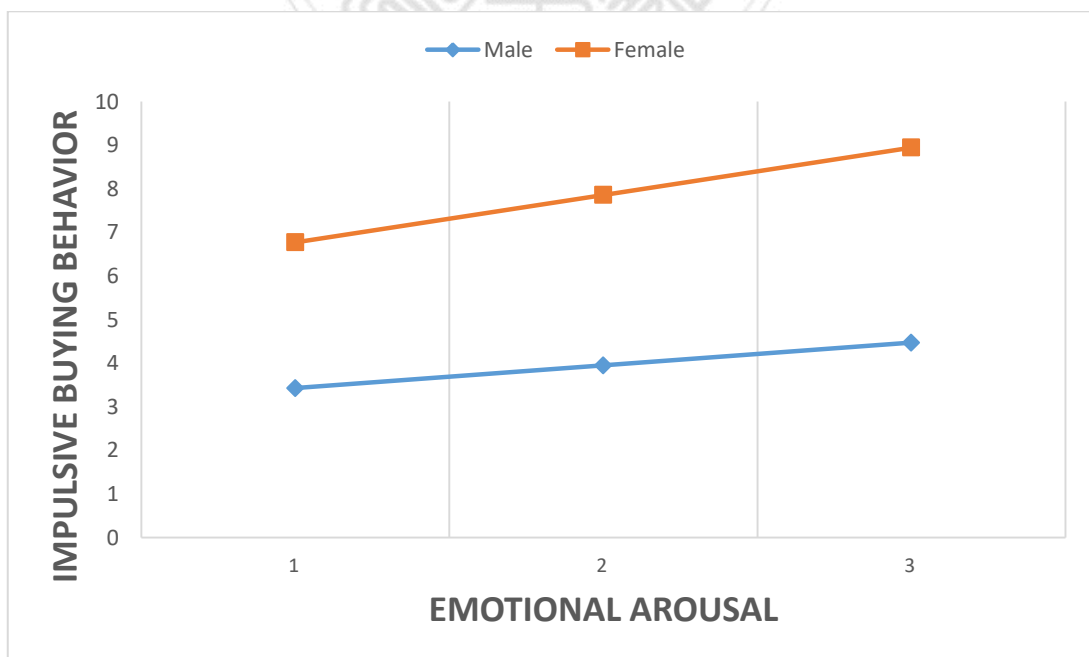


Figure 5-3 The moderating role of gender on emotional arousal

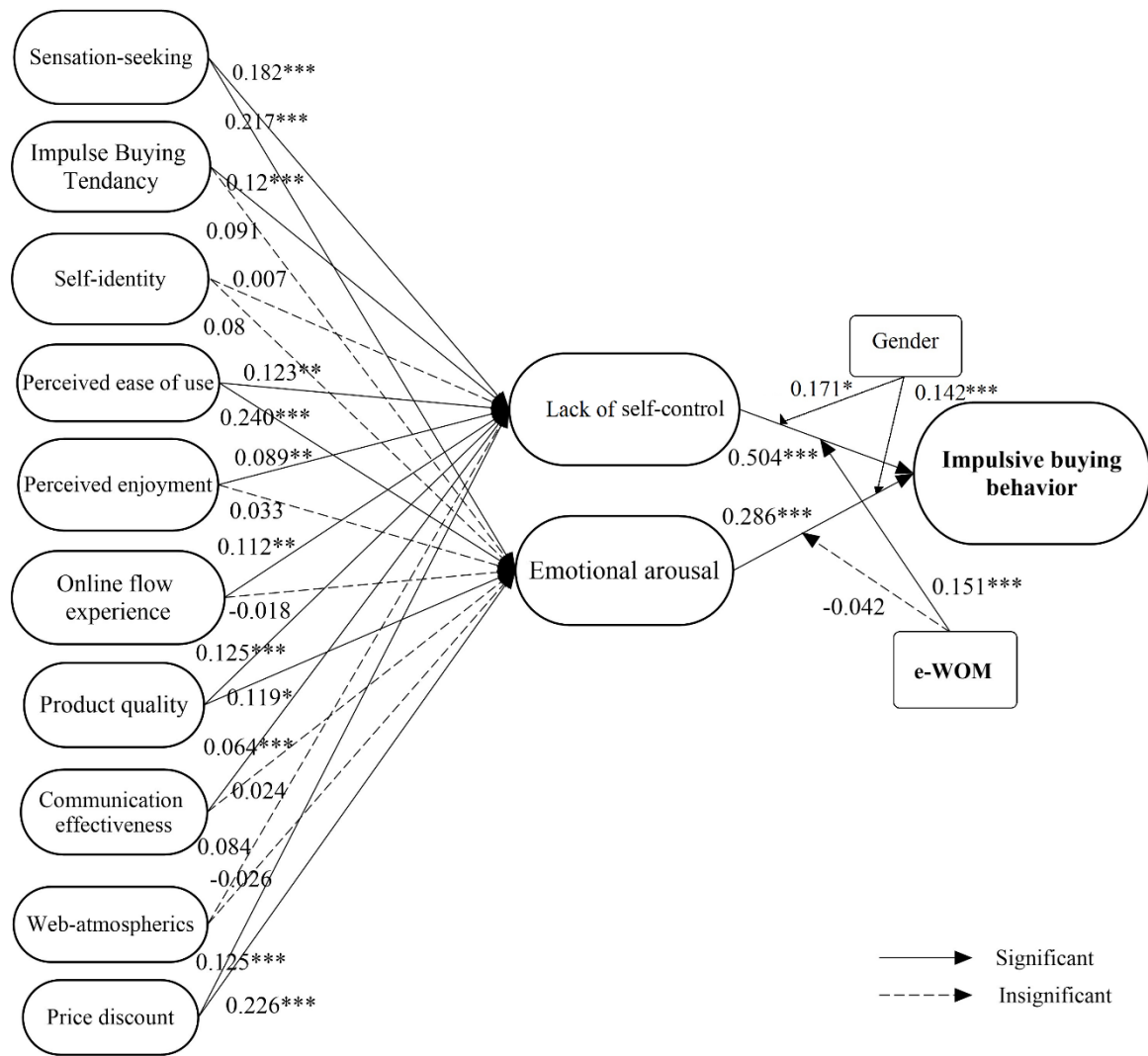


Figure 5-4 The result of direct and moderating effects.

CHAPTER SIX

CONCLUSION AND SUGGESTION

In this chapter, the research discussion, conclusion, implication and limitations, and future research directions were presented.

6.1 Research discussion and conclusion

The main objective of this study was to find out the factors affecting the impulsive buying behavior of consumers. This study has identified the impact of the following factors: sensation seeking, impulse buying tendency, self-identity, perceived ease of use, perceived enjoyment, online flow experience, product quality, communication effectiveness, web atmospherics, price discounts as antecedents of impulsive buying behavior and lack of self-control, emotional arousal as mediators. Moreover, the moderator's role of eWOM and gender were also revealed. A total of twenty-six hypotheses were proposed and tested. Table 6-1 showed the summary result of each hypothesis in this study.

Table 6-1 Summary of the results of the hypotheses testing

Hyps	Hypothesis statement	Results
H1a	Sensation seeking positively impacts lack of self-control.	Significant $\beta= 0.182, t= 3.682, p< 0.001$
H1b	Impulse buying tendency positively impacts lack of self-control	Significant $\beta= 0.120, t= 3.568, p< 0.001$
H1c	Self-identity positively impacts lack of self-control	Insignificant $\beta=0.182, t= 0.192, p> 0.05$
H2a	Sensation seeking positively impacts emotional arousal	Significant $\beta= 0.217, t= 3.472, p< 0.001$
H2b	Impulse buying tendency positively impacts emotional arousal	Insignificant $\beta= 0.091, t= 1.853, p> 0.05$

Hyps	Hypothesis statement	Results
H2c	Self-identity positively impacts emotional arousal	Insignificant $\beta = 0.080, t = 1.722, p > 0.05$
H3a	Perceived ease of use positively impacts lack of self-control	Significant $\beta = 0.123, t = 2.524, p < 0.01$
H3b	Perceived enjoyment positively impacts lack of self-control	Significant $\beta = 0.089, t = 2.405, p < 0.01$
H3c	Online flow experience positively impacts lack of self-control	Insignificant $\beta = 0.112, t = 2.668, p < 0.01$
H4a	Perceived ease of use positively impacts emotional arousal	Significant $\beta = 0.240, t = 4.030, p < 0.001$
H4b	Perceived enjoyment positively impacts emotional arousal	Insignificant $\beta = 0.033, t = 0.887, p > 0.05$
H4c	Online flow experience positively impacts emotional arousal	Insignificant $\beta = -0.018, t = -0.546, p > 0.05$
H5a	Product quality positively impacts lack of self-control	Significant $\beta = 0.125, t = 2.808, p < 0.001$
H5b	Communication effectiveness positively impacts lack of self-control	Significant $\beta = 0.064, t = 2.636, p < 0.001$
H5c	Web atmospherics positively impacts lack of self-control	Insignificant $\beta = 0.084, t = 1.941, p > 0.05$
H5d	Price discounts positively impacts lack of self-control	Significant $\beta = 0.125, t = 2.808, p < 0.001$
H6a	Product quality positively impacts emotional arousal	Significant $\beta = 0.119, t = 2.455, p < 0.05$

Hyps	Hypothesis statement	Results
H6b	Communication effectiveness positively impacts emotional arousal	Insignificant $\beta = 0.024, t = 0.835, p > 0.05$
H6c	Web atmospherics positively impacts emotional arousal	Insignificant $\beta = -0.026, t = -0.563, p > 0.05$
H6d	Price discounts positively impacts emotional arousal	Significant $\beta = 0.226, t = 4.581, p < 0.001$
H7a	Lack of self-control positively impacts impulsive buying behavior	Significant $\beta = 0.504, t = 11.510, p < 0.001$
H7b	Emotional arousal positively impacts impulsive buying behavior	Significant $\beta = 0.286, t = 5.686, p < 0.001$
H8a	eWOM moderates the relationship between lack of self-control and impulsive buying behavior. Specifically, higher eWOM could decrease lack of self-control lead to impulsive buying behavior.	Significant $\beta = 0.151, t = 2.739, p < 0.001$
H8b	eWOM positively moderates the relationship between emotional arousal and impulsive buying behavior, such that emotional arousal influences impulsive buying behavior more strongly when eWOM is higher.	Insignificant $\beta = -0.042, t = -0.883, p > 0.05$

Hyps	Hypothesis statement	Results
H9a	Gender moderates the relationship between lack of self-control and impulsive purchasing behavior, such that a male and a female will bring different levels of self-control that influence impulsive purchasing behavior.	Significant $\beta = 0.171, t = 2.513, p < 0.05$ Male: $\beta = 0.628, t = 14.492, p < 0.001$ Female: $\beta = 0.799, t = 15.228, p < 0.001$
H9b	Gender moderates the relationship between emotional arousal and impulsive purchasing behavior, such that a male and a female will bring different levels of emotional arousal that influence impulsive purchasing behavior	Significant $\beta = 0.142, t = 2.286, p < 0.001$ Male: $\beta = 0.556, t = 12.492, p < 0.001$ Female: $\beta = 0.603, t = 12.175, p < 0.001$

According to the findings of this research, the following conclusions could be inferred: Firstly, in the dimension of impulse buying traits, sensation seeking has a positive influence on both degree self-control and emotional arousal. It has been demonstrated that sensation-seeking consumers were attracted to items that provide novel sensations and experiences. This personality trait could cause consumers to take the risks necessary to obtain the sense of adventure they seek, which reduces their lack of self-control. This result was in contrast with the study of Afaq et al (2020) in the context of researching consumer repurchase behavior in mall shopping. It could be conceivable that the impact of sensation seeking would change depending on different distribution channels, especially online shopping. Furthermore, impulse buying traits focused on sensation seeking would arouse consumers'

emotions. Consumers tended to look for strong experiences and sensations that were easily stimulated emotionally. Therefore, attracting and guiding their emotions through new experiences was an effective method to raise the level of hedonic shopping value (Sinha et al, 2014). In the impulse buying tendency aspect, this personal trait has a significant positive effect on lack of self-control but is insignificant in terms of its impact on emotional arousal. This finding suggested that consumers who have a tendency to make unintended purchases often find it difficult to control themselves against impulses based on the value-based effects of hedonic shopping. This result was also consistent with the results of previous studies (Achtziger et al, 2015; Horváth et al, 2015).

Moreover, the impact of sensation seeking on one's lack of self-control was greater than that of impulse buying tendency. By offering additional activities that enrich the new experience, it diminished the consumer's individual control while stimulating and evoking their emotions. And impulse buying tendency was confirmed to have no effect on consumer emotional arousal in impulsive buying behavior. The results indicated that there was no significant impact of self-identity on either lack of self-control or emotional arousal. This means consumers' self-identification did not influence self-control or evoke emotions. Impulsive buying behavior was often driven by personal judgments, identity deficits, and, in turn, the needed to express themselves or compensate for those deficits. (Dittmar et al. 2009).

Secondly, for the stimulus of external and internal motivations, such as perceived ease of use, perceived enjoyment, and online flow experience: according to the results of this study, perceived ease of use has a positive effect on both lack of self-control and emotional arousal. This result was consistent with the findings of Danish Habib and Qayyum (2018). Indeed, in the hedonic shopping context, the ease of interaction with one system was

always considered first. Perceived ease of use raises consumers' emotions, they became comfortable and trusting toward the online shopping website because they believed that the e-commerce website was designed for them, and they could interact with it without any difficulty. Based on that trust, consumers' psychological stress would reduce their vigilance and resistance to self-control so that they could fully enjoy the online shopping website. Besides that, the effect of perceived enjoyment was only slightly significant on lack of self-control. Thus, perceived ease of use should be the first factor to be considered in the designing of a technology system (Venkatesh, 2000). Simultaneously, the relationship between online flow experience and self-control had no statistical significance in young adults. Thus, from the customers' point of view, online flow experience could only have an effect on emotional arousal and perceived value in hedonic aspect. Indeed, according to the research of Lee & Jeong (2012) emphasized the important role of website design in order to increase web atmospherics and create consumer's flow.

Thirdly, in the marketing stimuli dimensions, unsurprising that, prices discounts showed the strongest impact positive significant on both the lack of self-control and emotional arousal. Moreover, product quality also revealed a strong impact on the lack of self-control and emotional arousal as well. This finding confirmed the results of Lian, Safari, & Mansori (2016). Product quality and price discount were always the elements that customers paid the most attention to when considering the four marketing stimuli listed above. When a product achieved consistent quality while also engaging in discount pricing activities, it could completely influence consumer self-control. If customers saw a quality product at low prices, they could no longer be hesitant to purchase it and would no longer be able to resist their impulse to do so.

However, communication effectiveness is only slightly significant on the lack of self-control and has no significant on emotional arousal. For this phenomenon, it could be explained that the perception of consumers has been changed in this digital era, especially among young adults. Because they knowed how to select and acquired accurate information, communication campaigns no longer completely won the trust of consumers. Information about products and services exchanged between consumers was more reliable than information given by manufacturers (Kotler, Kartajaya & Setiawan, 2017). Additionally, the website atmosphere also revealed the insignificant impact on the lack of self-control and emotional arousal. This outcome seemed as unusual as the author had predicted. Because consumers no longer concerned themselves with environmental factors such as web atmospherics in the online shopping process, the focus on website design to increase the shopping experience for customers has always been there from the very beginning. Therefore, consumers always experienced the best online shopping environment, making them feel that it was an obvious thing they receive when participating in online shopping. Consumers could still resist these urgent impulses by controlling their emotions if they were exposed to stimuli from the shopping environment on a regular basis.

As a result of the response in front of stimuli elements, the findings of this research indicated that both self-control and emotional arousal have a significant impact on impulsive buying behavior. More precisely, the lack of self-control has a greater effect on impulsive buying behavior than emotional arousal has on impulsive buying behavior. The studies of Efendi et al (2019); Rozana et al (2022) confirmed the effect of low self-control on impulsive purchasing behavior. This study's findings were consistent with those of Islam et al (2021), who discovered that in the COVID-19 pandemic, panic buying behavior was influenced by emotional arousal. Thus, in order to engage

consumers' impulsive buying behavior, lack of self-control should be given priority consideration over emotional arousal.

Finally, eWOM showed a significant moderating role in the relationship between lack of self-control and impulsive buying behavior. It demonstrated that, when consumers receive a higher level of eWOM about products and services from people in their networks, they would self-regulate their level of self-control and bypassed the meticulous process of reviewing products and making decisions to buy more arbitrarily and permissively. The role of gender in this study was also clarified. For young adults, female tended to make impulsive buying decisions more easily than male and elicit emotions for them as well. This result was also completely consistent with the personality traits of a female with low lack of self-control who was more easily receptive to emotional arousal (Blackwell, and Piquero, 2005; Gibson et al, 2010).

6.2 Research implications

6.2.1 Academic implications

This study proposed a conceptual research model based on S-O-R theory, and it made the following contributions to academicians and researchers: First, this study provided an extended S-O-R model by applying three aspects of stimuli to investigate the response of impulsive buying behavior through the organism of shopping hedonic value, including the lack of self-control and emotional arousal. It validated the applicability of the S-O-R theory to the study of online impulse-buying behavior and thus provided a trustworthy conceptual framework for this aspect of online consumer behavior. This research shed light on the mental processes that take place in the minds of consumers in the moment before they make an impulsive buy.

Second, the stimuli aspects were deeply examined regarding impulse buying traits, internal and external motivation, as well as marketing stimuli.

Those stimuli could prove very clear in impulsive buying behavior. To differentiate itself from past research, this study proposed psychological components based on customer attributes. It found that the primary driver of high emotional arousal and poor impulse control was the need for novel sensory experiences. Furthermore, research into self-identity has been proposed as a predictive factor toward the notion that self-identification raised emotional responses and the desire to possess things that conveyed personal identity for consumer reasons, but the discovery goal was not met. The elements provided by marketing stimuli also influence the direction of diversity in marketing strategy. This research added to the literature by proving the importance of investigating issues like product quality and discounts as well as marketing channel diversity in the context of online shopping.

Moreover, lack of self-control was tested as the mediator to explain the relationships between stimulus variables and the consequence was impulsive buying behavior. It showed the importance of lack of self-control in the research of impulsive buying behavior. Besides that, this study also revealed the moderating role of eWOM could strengthen the positive effect of lack of self-control and impulsive buying behavior. The significant role of eWOM has a significant influence on digital marketing, increasing the impulsive buying behavior of consumers and releasing their self-control toward impulsive buying behavior. Therefore, in the context of online shopping, eWOM played an intimate role in the reduction of consumers' control over impulsive buying behavior. Especially in this study, it was aimed at young people who are constantly exposed to and affected by the internet environment. Thus, eWOM was especially important in the study of impulsive consumer behavior due to the variety of information and types of

consumer outreach that marketers can use to reduce self-control and increase emotional arousal in consumers.

Finally, gender indicated a difference in behavior between male and female when it came to impulsive purchasing on shopping online. The purpose of this thesis was to develop a model that illustrates the effect of several stimuli on the response of impulsive purchasing behavior, focusing on two organism factors in particular: lack of self-control and emotional arousal. The findings of this study demonstrated how marketers have evolved a marketing strategy that places a greater emphasis on activities that stimulate consumers' emotions and impair their self-control. The consumer journey, which included touch points designed to improve the consumer experience, should also be addressed considering these two variables.

6.2.2 Managerial implications

According to the findings, marketers and managers could derive certain managerial implications from this study. Consumer impulse purchasing behavior was critical to research before developing a marketing campaign for a product or service. Consumers occasionally purchase items they did not require or desire, not because they believed they would require them in the future, but because of the way they were presented. Numerous variables contributed to customers' impulsive purchasing behavior. Sensation seeking has an effect on the consumer's degree of personal control.

Sensation seeking consumers were drawn to items that provide novel sensations and experiences and have a tough time restraining themselves in the presence of these items. As a result, an activity enhanced a new experience and fostered a sense of accomplishment. In addition, enhancing consumers' emotions also played an important role in hedonic shopping. The aim of marketers is to come up with engaging activities to capture the interest of consumers and arouse their emotions. More specifically, it was necessary

to understand the personal traits of consumers, especially the psychology of seeking a sense of adventure and risk-taking, so that they could develop more reasonable customer attraction strategies. Besides, the design of the system as well as the website interface needed to focus on the ease of use first, because the perceived ease of use made consumers not have to spend a lot of time or effort interacting with the online shopping system, and the impact of perceived enjoyment could also contribute to reducing the level of personal control for consumers.

In addition, to increase the emotional state of the consumer and to reduce the level of personal control of the consumer, marketing strategists should focus on controlling the quality of products and services. Because this was an important factor that strongly stimulates the emotions and control of consumers, when looking for products, product quality is always considered by consumers in terms of both practical value and enjoyment value.

Simultaneously, activities such as seasonal discounts and special holidays discounts to stimulate consumption were always highly effective in influencing the ability to control as well as eliciting impulsive emotions so that consumers make a quick buying decision. In addition, the extensive visibility of products and services on the homepage and social networks is necessary to entice visitors to provide reviews and feedback regarding the product quality content. Based on the influence of eWOM, this was very advantageous for service or product providers. It is advised that affiliation programs be adopted in the current environment, particularly for commerce. Service providers should anticipate the impact of eWOM because it has both positive and negative aspects. Negative comments and reviews could raise consumers' self-control. Therefore, a support team for customer care should be in place to answer queries and remedy the dissatisfaction of service users.

Finally purchasing stimulation strategies should target female because female have lack of self-control in response to stimuli than males and were more susceptible to emotional arousal, making impulsive purchases without hesitation. Marketers should focus on building separate strategies aimed at male customers to increase sales, as this audience needs a more thoughtful and precise approach to achieve impulsive buying behavior from them.

6.3 Limitations and future research directions

There were several limitations to this research, even though this study made some contributions. Firstly, due to the fact that the data was only collected at a university in Vietnam, it cannot accurately represent the behavior of customers across cultures. Future study should investigate a greater number of cities or nations. Secondly, this study proposed twenty-six hypotheses, but only half of them were statistically significant, especially in the factors of marketing stimuli dimension. Future study should re-examine those relationships, this will help to give a broad understanding of impulsive buying behavior in online shopping context research. Thirdly, this study's target respondents were young adults. It indicates that further segmentation targets have been omitted. Future research should explore more target respondents, such as men and women, to determine how they make online purchase decisions.

Finally, this study only focused on the hedonic shopping value aspect to determine impulsive buying behavior as a consequence of the S-O-R framework. The future study should also examine other factors, such as negative emotions. Moreover, long-term consequences also needed to be determined like product return intention, post-purchase emotional and how consumer's loyalty change after making impulsive buying decision.

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APPENDIX I

Questionnaire (English version)

Exploring the Influential Factors for Young Adults: The Moderating Roles of eWOM and Gender

Dear Respondents:

This academic questionnaire is to investigate the factors affecting consumers' impulsive buying behavior. This study proposes a theoretical framework impulsive buying behavior based on Stimulus Organism Response (SOR) theory. This study also analyzes the relationship of consumers impulsive buying behavior to the structure are selected as their degree of self-control, emotional arousal and other factors not directly impact as: e-word of mouth, genders.

You have been reported as one of the interested respondents for this study. We have taken the liberty of your joining to express your viewpoint about these issues. Your countenance and assistance will be greatly appreciated. We sincerely invite you to spend a maximum of 15 minutes to complete the questionnaire below. No personal information will be made public. Please be assured that your answers will be kept in strict confidentiality. Please take the time to fill out this questionnaire as accurately as possible. Your help is crucial for this research and for our understanding of these issues. We deeply appreciate your kind cooperation. Thank you.

Faithfully Yours,

Wann-Yih Wu, Ph.D.

Ying-Kai Liao, Ph.D.

Le Quang Trang

Section 1. Demographic Information

Gender	<input type="checkbox"/> Male	<input type="checkbox"/> Female	
Age	<input type="checkbox"/> 18-20 years old	<input type="checkbox"/> 20-22 years old	<input type="checkbox"/> 22-24 years old
Income	<input type="checkbox"/> < 2 million VNĐ	<input type="checkbox"/> 2-5 million VNĐ	<input type="checkbox"/> >5 million VNĐ
Times of online shopping purchase per month	<input type="checkbox"/> 1 – 5 times	<input type="checkbox"/> 5 – 10 times	<input type="checkbox"/> > 10 times



Section 2. Sensation seeking

Please take a short look at the questions below related to your Sensation seeking, and then CIRCLE the level of agreement on each of the items below based on your opinion.	Levels of Agreement				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Sensation seeking					
SSE1 I like to have new and exciting experiences and sensations even if they are a little frightening	1	2	3	4	5
SSE2 I enjoy getting into new situations where you can't predict how things will turn out	1	2	3	4	5
SSE3 I like doing things just for the thrill of it	1	2	3	4	5
SSE4 I sometimes do "crazy" things just for fun	1	2	3	4	5
SSE5 I would like to take off on a trip with no preplanned or definite routes or timetable	1	2	3	4	5

Section 3. Impulse buying tendency

Please take a short look at the questions below related to your Impulse buying tendency, and then CIRCLE the level of agreement on each of the items below based on your opinion.	Levels of Agreement				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Impulse buying tendency					
IBT1 I buying things that are not on my shopping list	1	2	3	4	5
IBT2 When I go shopping, I buy things that I had not intended buying	1	2	3	4	5
IBT3 I am a person who makes unplanned purchases	1	2	3	4	5
IBT4 When I see something that really interests me, I buy it without considering the consequences	1	2	3	4	5

Section 4. Self-identity

Please take a short look at the questions below related to your Self-identity, and then CIRCLE the level of agreement on each of the items below based on your opinion.	Levels of Agreement				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Self-identity					
SI1 I always have a good sense about what is important to me	1	2	3	4	5
SI2 I know what I believe or value	1	2	3	4	5
SI3 When someone describes me, I know if they are right or wrong	1	2	3	4	5
SI4 I am basically the same person that I've always been	1	2	3	4	5

Section 5. Perceived ease of use

Please take a short look at the questions below related to your Perceived ease of use, and then CIRCLE the level of agreement on each of the items below based on your opinion.	Levels of Agreement				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Perceived ease of use					
PEU1 Learning to interact with online shopping website is easy for me.	1	2	3	4	5
PEU2 I find it easy to get the online shopping website to do what I want it to do.	1	2	3	4	5
PEU3 My interaction with online shopping website is clear and understandable.	1	2	3	4	5
PEU4 It is easy for me to become skillful at using the online shopping website.	1	2	3	4	5
PEU5 I find the online shopping website easy to use.	1	2	3	4	5

Section 6. Perceived enjoyment

Please take a short look at the questions below related to your Perceived enjoyment, and then CIRCLE the level of agreement on each of the items below based on your opinion.	Levels of Agreement				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Perceived enjoyment					
PE1 My interaction with online shopping website was enjoyable	1	2	3	4	5
PE2 My interaction with online shopping website was exciting	1	2	3	4	5
PE3 My interaction with online shopping website was pleasant	1	2	3	4	5



Section 7. Online flow experience

Please take a short look at the questions below related to your Online flow experience, and then CIRCLE the level of agreement on each of the items below based on your opinion.	Levels of Agreement				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Online flow experience					
OFE1 While using online shopping website, I am so focused that I completely lose track of time.	1	2	3	4	5
OFE2 I realize time went faster than I thought and I did not even sense it as I was using online shopping website.	1	2	3	4	5
OFE3 I often spend more time on online shopping website than I intend to	1	2	3	4	5
OFE4 While using online shopping website, I'm fully absorbed by it.	1	2	3	4	5
OFE5 While using online shopping website, I'm deeply engrossed.	1	2	3	4	5
OFE6 While using online shopping website, I'm completely concentrated on what I am doing	1	2	3	4	5

Section 8. Product quality

Please take a short look at the questions below related to your Product quality, and then CIRCLE the level of agreement on each of the items below based on your opinion.	Levels of Agreement				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Product quality					
PQ1 Retailer offers merchandise of very high quality	1	2	3	4	5
PQ2 The quality of merchandise at retailer is higher than similar merchandise at other stores	1	2	3	4	5
PQ3 Retailers merchandise quality holds up well after repeated using	1	2	3	4	5
PQ4 The merchandise I buy from this retailer is of consistent quality	1	2	3	4	5
PQ5 These retailers merchandise always meets my quality standards	1	2	3	4	5
PQ6 The quality of merchandise at this retailer consistently meets my expectations	1	2	3	4	5

Section 9. Communication effectiveness

Please take a short look at the questions below related to your Communication effectiveness, and then CIRCLE the level of agreement on each of the items below based on your opinion.	Levels of Agreement				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Communication effectiveness					
CE1 the online advertising and communication activities are creative	1	2	3	4	5
CE2 the online advertising and communication activities are impressive	1	2	3	4	5
CE3 the online advertising and communication activities are interesting	1	2	3	4	5

Section 10. Website atmosphere

Please take a short look at the questions below related to your Website atmosphere, and then CIRCLE the level of agreement on each of the items below based on your opinion.	Levels of Agreement				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Website atmosphere					
WA1 online shopping website was designed very attractive	1	2	3	4	5
WA2 online shopping website was designed very bright	1	2	3	4	5
WA3 online shopping website was designed very lively	1	2	3	4	5
WA4 online shopping website was designed very stimulating	1	2	3	4	5

Section 11. Price discounts

Please take a short look at the questions below related to your Price discounts, and then CIRCLE the level of agreement on each of the items below based on your opinion.	Levels of Agreement				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Price discounts					
PD1 In the online distribution channel, retailers frequently offer price discounts	1	2	3	4	5
PD2 In the online distribution channel, Retailers often uses price discounts	1	2	3	4	5
PD3 Retailers often offer discounts on online channels more than other channels	1	2	3	4	5

Section 12. Lack of self-control

Please take a short look at the questions below related to your Lack of self-control, and then CIRCLE the level of agreement on each of the items below based on your opinion.	Levels of Agreement				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Lack of self-control					
LSC1 I am often restless	1	2	3	4	5
LSC2 I cannot control myself sometimes	1	2	3	4	5
LSC3 I often do things that I regret later	1	2	3	4	5
LSC4 I am quite careless sometimes	1	2	3	4	5
LSC5 I often make silly mistakes	1	2	3	4	5
LSC6 I find it difficult to concentrate some times	1	2	3	4	5

Section 13. Emotional arousal

Please take a short look at the questions below related to your Emotional arousal, and then CIRCLE the level of agreement on each of the items below based on your opinion.	Levels of Agreement				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Impulse buying tendency					
EA1 My online purchase experience was stimulating	1	2	3	4	5
EA2 My online purchase experience was exciting	1	2	3	4	5
EA3 My online purchase experience was enjoyable	1	2	3	4	5
EA4 My online purchase experience was interesting	1	2	3	4	5

Section 14. Impulsive purchase behavior

Please take a short look at the questions below related to your Impulsive purchase behavior, and then CIRCLE the level of agreement on each of the items below based on your opinion.	Levels of Agreement				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Impulsive buying behavior					
IBB1 “Buy now, think about it later” describes my online shopping behavior	1	2	3	4	5
IBB2 During online shopping, I often buy things without a lot of thinking.	1	2	3	4	5
IBB3 I tend to buy things I have no desire to buy during online shopping.	1	2	3	4	5
IBB4 when online shopping, I buy things according to how I feel now	1	2	3	4	5
IBB5 When I find something I like during online shopping, I purchase it immediately.	1	2	3	4	5

Section 15. e-Word of mouth

Please take a short look at the questions below related to your e-Word of mouth, and then CIRCLE the level of agreement on each of the items below based on your opinion.	Levels of Agreement				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
e-Word of mouth					
eWOM1 I have recommended my online shopping experience on social media to others without being asked.	1	2	3	4	5
eWOM2 I offer favorable comments and information about my online shopping experience on social media to those who ask for my advice.	1	2	3	4	5
eWOM3 I often persuade my contacts on social networks about online shopping can brings benefits.	1	2	3	4	5
eWOM4 I often persuade my contacts on social networks about benefits of online shopping can save time, money, and effort.	1	2	3	4	5