A moderated mediation model for e-impulse buying tendency, customer satisfaction and intention to continue e-shopping

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Abstract
The global COVID-19 outbreak and consequent lockdown pushed consumers to engage in more e-shopping, which could lead to e-impulse purchases (e-IB). The purpose of this study is to investigate the interrelationships between e-impulse buying tendencies (e-IBT), e-impulse buying (e-IB), and customer satisfaction empirically (CS). The customers' intent to continue e-shopping is also investigated. Data was collected from 580 consumers in India's Union Territory of Delhi using a standardized instrument. The psychometric features of the research survey instrument were first verified using the LISREL Structural Equation Modeling Package. Hayes (2018) PROCESS was used to evaluate the moderated mediation model and hypotheses. The association between e-IBT and CS was empirically demonstrated to be mediated by e-IB. Furthermore, e-IBT is associated to e-IB in a good way. Furthermore, e-IB is positively connected to CS, indicating that consumers intend to continue shopping online. The findings also show that the e-IBT interacts with the website (first moderator) and stimulants and promotions (second moderator) to significantly influence the e-IB. Further, hedonic motives modify the e-IB-CS relationship.

Keywords: E-shopping, e-impulse buying, COVID-19, intention to continue, customer satisfaction, India

1. Introduction

COVID-19, a global pandemic, has brought a definitive transformation in consumer behavior in terms of engaging in e-shopping. Even the consumers who were not habituated to e-shopping had no choice but to opt for shopping with a click of a mouse (López-Cabarcos et al., 2020). Several countries have imposed lockdown sometime in March 2020, social distancing became mandatory, leaving the consumers with the only option to buy groceries and other necessities through the Internet (Xiao et al., 2020). The digital surge in technologies due to social distancing in pandemic has changed the lives of everyone and consumer behavior is not an exception (Chamakiotis et al., 2021; De et al., 2020; Donthu and Gustafsson, 2020; Dwivedi et al., 2020; Shirish et al., 2021). Goods bought through e-buying have increased from 40% to 50% during the pre-COVID period and 90% to 95% amid the COVID-19 pandemic (Al-Omoush et al., 2021). Besides the traditional e-shoppers, prevailing circumstances have forced new customers to join the club. As Naeem (2021) pointed out "…risk of going outside, COVID-19 outbreak among employees of local retail stores, and

health professionals' recommendations to stay at home, led to impulsive buying behaviour." (Naeem, 2021, p.377).

Impulse buying (IB) refers to the consumers' purchases that are unplanned, sudden, initiated on the spot, unreflective, and unintended (Luo, 2005; Vohs & Faber, 2007). The characteristics of IB behavior include the following: [i] Unplanned (purchases are made without any prior plan); [ii] Rapid or on-the-spot (instantaneous purchase without taking much time); [iii] Unintended (without any prior intention to buy); [iv] Hedonic (strong urge to buy immediately); [v] Thoughtless and unreflective (without thinking about the need or consequences); and [vi] Result of stimuli (prompted by website characteristics or in-shop environment) (Abdelsalam et al., 2020).

With the growth of e-commerce, IB could be observed in online shopping too (Akram et al., 2018a). Some researchers contend that internet shopping is conducive to IB than in-store shopping because consumers do not have to worry about the inconvenient shop locations, working hours in the shops, and time spent on making decisions (Chan et al, 2017; Liu et al., 2019).

For over five decades, marketing domain scholarship focused on IB (offline or in-store), only two decades back attention was directed towards empirically examining the precursors and outcomes of e-impulse buying (e-IB) (Akram et al., 2018a; Park et al., 2012; Punj, 2011; Verma & Singh, 2019; Wu et al., 2020; Zhao et al., 2021). Some of the reasons for the increasing number of e-shoppers were technological developments, the Internet, the use of social media, and changing consumer behavior towards convenience (Kim & Eastin, 2011). The latest research reveals a paradigmatic change in the consumer behavior (Zhang et al., 2021). For example, Shareef et al. (2019) documented that trust plays a vital role in purchase intention of consumers in e-commerce environment. The Internet has become a shopping avenue and in addition to regular or planned shopping, e-shoppers engage in IB. Realizing the

rapidly increasing e-shoppers, e-retailers attract customers through special deals, announcing new products, offering discounts, etc. Extant research on the e-shopping behavior of consumers reported that time-saving and convenience were important factors that influenced impulse purchase decisions (Abdelsalam et al., 2020; Chen & Wang, 2016; Wolfinbarger & Gilly, 2001; Yang et al., 2021). To tap the consumers, e-retailers advertise new products on their websites by gathering information about the potential customers from their social networks.

Though the research on e-IB started only two decades back, substantial progress is being made by distinguishing between "impulse buying tendency" (IBT, hereafter) and "impulse purchase decisions." Earlier researchers have used IBT as "impulse purchase behavior" (Rook & Fisher, 1995). It is well documented that IBT is considered as a "trait" whereas IB decision is the "implementation of buying decision," i.e. act of engaging in buying. Researchers contend that IB traits like IBT may not necessarily result in IB (Sun & Wu, 2011). Previous researchers analyzed e-shoppers behavior and suggested that marketers need to change their strategies by diversifying the portfolio of products on websites (Akram et al., 2018a; Ganesh et al., 2010; Parsons, 2002). Before COVID-19, the research on e-IB was very readily publishing, and from 2005 to 2019 there were over 68 studies on online e-IB and majority of research focused on antecedent conditions (variables linked with socialization, marketing, website, consumers' characteristics, etc. of e-impulse buying tendency (e-IBT) (Abdelsalam et al., 2020). During COVID-19, several studies reported that fear of frequent lockdowns, social media fake news about the scarcity of products and essential goods on shelves, as well as social distancing have resulted in IB (Ahmed et al., 2020). Despite the volumes of investigations on e-IB, the consumer behavior concerning the continuation of e-buying behavior was understudied (Koch et al., 2020; Loxton et al., 2020). The inspiration for the current research stems from the absence of previous studies concentrating on post-

purchase behavior and the intention of consumers to engage in e-IB. Numerous studies focused on the key drivers of e-IB like marketing stimuli, an individual's impulsivity trait, and situation factors (Dawson & Kim, 2010; Huang, 2016; Lee & Johnson, 2010) while others delved into the influence of social media and social networking on e-impulsive behavior (Luo, 2005; Prashar et al., 2015). Thus, a handful of studies attempted to address the post-purchase behavior and consumer's intention to involve in e-IB (Deng et al., 2020; Li et al., 2020). Further, there is a paucity of research on the interplay of the effectiveness of websites, stimulants and promotions, and hedonic motives on the e-IBT and e-IB. Considering the present COVID-19, the present research attempts to link the gap by focusing on the following research questions (RQs), especially about e-IB in India:

RQ1: How does e-IB mediate the relationship between e-IBT and customer satisfaction (CS)?

RQ2: How do website characteristics, stimulants, and promotions moderate the relationship between e-IBT and e-IB?

RQ3: How do hedonic motives moderate the relationship between e-IB and CS?

This study makes five significant contributions to the literature. *First*, drawing from SOR and CIEF theories, this research enriches the knowledge on impulsive online buying by explaining consumer e-IB behavior as a response to environmental stimuli and impulsivity traits. *Second,* in addition to the direct effect of e-IBT on customer satisfaction, the indirect impact through e-IB contributes to the growing body of online impulse buying. *Third,* the multi-layered moderated moderated-mediated model highlighting the three-way interaction between e-IBT, the effectiveness of websites, and stimulants and promotions, which is the first of its kind, is a novel contribution to the literature. *Fourth,* the importance of hedonic motives interacting with e-IB in enhancing customer satisfaction is significant to the literature. *Fifth*, the complex interrelationships between e-IBT, customer satisfaction, and how the satisfied customers intend to continue to engage in i-IB are highlighted in this research.

The rest of the sections of the papers progresses as follows: In Section 2, historical development of IB in the Indian context is presented. Section 3 presents the theoretical framework, outline of the conceptual model and hypotheses development. The methodology will be expounded in Section 4 and analysis and results will be provided in Section 5. Section 6 provides discussions followed by theoretical contributions, implications for practice and limitations and future research directions. Finally, Section 7 concludes the paper.

2. Brief History of Impulse Buying and Indian Context

Digging up the literature we find the seminal research by Applebaum (1951), Clover (1950), and Stern (1962) who laid the foundation for IB, and subsequent researchers have focused on identifying the antecedent and consequences of IB (Aragoncillo & Orús, 2018; Beatty & Ferrell, 1998; Verma & Singh, 2019). Amos et al., (2014) found that about 50% to 80% of purchases made by consumers are amenable to IB. In a survey conducted in 2021, it was found that more than 80% of online buyers have indulge in IB which accounted for over 40% of the entire online spending by consumers on e-commerce applications (Saleh, 2021). Earlier researchers documented that IB depends on the emotions and moods of consumers (Foroughi et al., 2013), situational characteristics such as store features and products (Mehta & Chugan, 2013; Sahetape et al., 2019), and big five personality traits (Badgaiyan & Verma, 2014). Consumers engaging in offline (in-store) IB tend to be influenced by ambience of the store (Dubé & Morin, 2001; Summers & Hebert, 2001). As consumers in the shop are exposed to the stimuli, online shoppers are exposed to website attractions and stimuli (Dawson & Kim, 2010; Youn & Faber, 2000).

According to India Brand Equity Foundation (IBEF), India, being one of the most thickly inhabited nations in the world (the first being China), has a substantial retail market that accounts for 10% of Gross Domestic Product and around 8% of employment. As a result, India ranks fifth in the world's largest global destination in retail space ((IBEF, 2021). The

COVID-19 pandemic has significantly affected the retail market of India. Research has highlighted that the retail industry faced financial problems and to meet the requirements of growing demand retailers used technology gadgets (Ravichandra, 2020). The online retail market has been growing in India at a rapid pace because of Internet connectivity, digitalization, globalization, and changing consumer behavior. E-retailers are aware that providing ultra-convenience and making digital payments through smartphones is easy (Kapuria & Nalawade, 2011; Verma & Singh, 2019). During COVID-19, customers prefer online transactions because of social distancing norms and frequent lockdowns. It is estimated that average online shoppers are forecasted to reach over 920 million by 2025 (Tiwari, 2021). With the persistent COVID-19 threat, the online platforms will continue to grow as the future retailing alternatives and e-retailers must adapt to the changing scenario.

3. Theoretical Background, Conceptual Model, and Hypotheses Development

Previous researchers used psychological theories in explaining the e-IB behavior of consumers (Kimiagari & Asadi Malafe, 2021; Lucas & Koff, 2017; Verplanken & Sato, 2011; Zafar, Qiu, Li, Wang, & Shahzad, 2021). Latent state-trait theory observes personality differences in consumption patterns and hence is not suitable for the present study (Steyer et al., 1999). Social influence theory elucidates the course of attitudinal change in individuals and posits that the social influence of others mainly shape behavior of an individual (Kelman, 1958). Hence, IB by consumers can be attributed to the behavioral stimulus from social media and influence of friends and other relations. But social influence theory would not explain the process of e-IB behavior. Social network theory considers individuals as part of networks and that the other individuals in the network are also very important (Milgram, 1967). The interdependence of actors influences consumer behavior to some extent but social influence theory fails to explain the cognitive process of individuals engaging in e-IB. Of the theories mentioned earlier, the most commonly used theory is the SOR framework suggested

by Jacoby in 2002 (Buckley, 1991; Laato et al., 2020; Piron, 1991; Smith & Sivakumar, 2004). The basic tenet of the SOR theory is that stimulus triggers response in individuals based on the internal evaluation of the organism. The evaluation could be positive or negative and conscious or unconscious (Mehrabian & Russell, 1974). Emotions play a vital role in responding to an environmental stimulus (Mowen, 2002). Individuals differ in the way in which they respond to environmental stimuli. Based on the stimuli (such as website attraction, appealing objects, special deals offered by e-retailers), some consumers make unintended and immediate purchases, whereas others may not be influenced by the stimuli (Bayley & Nancarrow, 1998; Jones et al., 2003; Wu et al., 2015).

Apart from SOR framework, the present study also considers the cognitive and volitional processes explained in the Consumption Impulse Formation Enactment (CIFE) model (Dholakia, 2000). According to the CIFE model, the consumption impulse of an individual depends on marketing stimulus, buying impulsivity, and situational factors. After considering these three factors, an individual forms either positive or negative evaluations. Positive evaluations result in IB and negative evaluations help in developing a defense mechanism. Individuals who have low cognitive control engage in spontaneous behavior and IB (Sharma et al., 2010).

The CEFE model is employed for explaining IB because of its ability to explain impulsive buying behavior elaborately. According to the CEFE model, marketing stimuli (external factors), situational factors (internal factors), and impulsivity traits determine the “irresistible urge to consume” (called consumption impulse). At that time consumers engage in the evaluation of constraining factors. The absence of constraining factors leads to CIFE and the presence of constraining factors necessitates cognitive evaluation. Positive evaluation results in the enactment and negative evaluation results in consumption impulse dissipation. Because of its intuitive appeal of explaining the consumer’s impulsive decision process, this theory is

being used by researchers (Dawson & Kim, 2010). Concerning e-impulse buying, online retailers use their websites to see whether they trigger impulsive buying.

To sum, the extent to which consumers' e-IB is trigged by stimulants and web environment is explained by SOR theory. Moreover, how consumers evaluate stimulants and impulsivity, the CIFE model is helpful. Thus the concepts in this model integrate both the theories in explaining the antecedents and consequences of e-IB of consumers.

3.1 Mediation hypothesis

The direct relationship between consumers' e-IBT and e-impulse purchases has been recorded by earlier researchers (Mihic & Kursan, 2010; Sharma et al., 2010). Around two decades back Donthu & Garcia (1999) observed that e-shoppers were highly "impulsive" in comparison to traditional buyers. Recently some researchers reported that IB decision was related to e-IBT (as a trait) and personality of consumers (Aragoncillo & Orús, 2018; Dhurup, 2014; Sahetapy et al., 2020). Currently, the increase in e-commerce, social commerce (s-commerce), and COVID-19 since March 2020 have increased e-shoppers. E-retailers are also aware of the social media's influence on e-IB decisions (Abdelsalam et al., 2020). The e-IBT may also result in CS (even before the purchases are made). Some consumers enjoy visiting various websites to shop and derive intrinsic satisfaction. These consumers may not end up buying products or services but go over different websites, as sometimes recommended by their social networking groups. Real satisfaction comes only after the consumption of a product or service. *Ex post*, in Latin terminology, means after the event' and backward-looking whereas *ex ante* refers to 'before the event' and forward-looking. Thus, consumer's expected satisfaction can be labeled as ex ante and satisfaction after the consumption of the product is referred as ex post. It is logical to believe that consumer e-IBT would lead to e-IB, hence resulting in CS. For convenience, intrinsic satisfaction can be labeled as ex-ante (planned or expected) and CS as realized or ex-post. In retail stores (offline or in-store), CS

largely depends on staff friendliness, shopping economy, shopping ambiance, music being played in the store, and other factors (Paul et al., 2016). Similar to the concept of offline or in-store ambiance, e-retailers understand that customers look for a web-friendly environment, web ambiance, and fixing low prices. When prompted by attractive websites and discounts offered by e-retailers, consumers make purchase decisions. The consumer buying tendency, therefore, results in the e-IB decision and hence one can infer that e-IB precede CS. Earlier, Beatty and Ferrell (1998) found that the "felt urge to buy impulsively" mediated the association between IBT and IB behavior. Sharma et al. (2010) also demonstrated that consumer impulsiveness affects IB. To date, researchers have not observed the mediating role of an e-IB in the association between e-IBT and CS. Considering this discussion, the following exploratory hypothesis is offered:

H1: e-IB mediates the relationship between e-IBT and CS.

3.2 e-Impulse buying tendency and e-impulse buying

In IB, consumers do not go through the normal process of rational decision-making which involves various steps like information search, problem recognition, evaluate available alternatives, make a purchase decision, and post-purchase evaluation. An individual acts spontaneously based on the impulse (Dholakia, 2000; Rook & Fisher, 1995). Individuals who have low emotional control cannot resist the temptation of buying because of high buying impulsivity (Chang, 2017). Earlier researchers documented that most impulse buying decisions are emotional rather than rational choices (Stern, 1962; Zafar et al, 2021). When an individual feels "a strong and irresistible urge to buy", without consideration of consequences the e-IBT leads to e-IB (Lo et al., 2016; Prashar et al., 2015). Extant research demonstrated a positive relationship between IBT and IB (Mihic & Kursan, 2010; Sharma et al., 2010; Thamizhvanan & Xavier, 2012). Based on this discussion, we hypothesize:

H2: e-IBT is positively connected to e-BI.

3.3 e-Impulse buying tendency and customer satisfaction

Previous researchers have studied antecedents of IBT but have not examined the direct association between the IBT and CS (Abdelsalam et al., 2020; Karbasivar & Yarahmadi, 2012; Sun & Wu, 2011; Tandon et al., 2017). Because of hedonic motives, some consumers have a tendency of visiting websites and go over several available products, read the reviews about the products, and derive pleasure. From the review of literature, it can be derived that researchers have not yet studied the relationship between e-IBT and CS as it is not intuitively logical to derive satisfaction before buying and consuming the product. Whatever statistically significant relationship one can find between e-IBT and CS, it would be either spurious or reflects only "intrinsic" satisfaction. As explained earlier, the *ex-ante* satisfaction during the pre-consumption or by window e-shopping, customers derive some satisfaction. As Arnold & Reynolds (2003) pointed out, consumers with hedonic motives derive satisfaction from the shopping experience itself more than from product consumption. As there is no previous theoretical and empirical evidence to back the direct relationship between e-IBT and CS, this study has a strong argument that leads to hypothesize the following exploratory hypothesis:

H3: e-IBT is positively related to CS.

3.4 e-Impulse purchases and customer satisfaction

Though some scholars contend that chronic IB is a sign of an individual's dysfunctional self-regulation and causes financial strain, the positive evaluation of environmental stimuli supersedes the negative side of impulse buying (Fenton-O'Creevy et al., 2018). In a study on online buying conducted in India, it was found that website functionality and usefulness were positively associated with CS (Tandon et al., 2016). In another study conducted among college students with regard to fashion products, it was found that the e-impulse buying is positively related to satisfaction (Park & Park, 2013). Conceptually the intrinsic factors that contribute to CS include promotional offers, product quality and appearance, and website

attributes and the extrinsic factors include variety and availability of products, return and refund policies of e-retailers, ease of shopping, etc. (Verma & Singh, 2019). During the pandemic, in addition to e-IBT, the compulsion and lack of alternative methods of shopping are making customers resort to e-shopping. In this process, customers engage in IB when they go over various websites. Initially, the risk of visiting websites may prohibit the customers to shop online but eventually, they would discover websites that are safe and less risky. Cybercrime is increasing day-by-day, yet customers do not shy away from online shopping either because of necessity (economic reasons) or low self-regulation (Shah, 2019). As per some researchers a positive attitude, in addition to IBT, has a meaningful part in the formation of CS (Chen et al., 2012; Ha et al., 2010; Pavlou & Fygenson, 2006). On the basis of available research evidence and intuitive logic, we hypothesize:

H4: e-IB is positively associated with CS.

3.5 Customer satisfaction and intention to continue e-impulse buying

CS is an important dependent variable that the marketing researchers focus on because satisfied customers tend to continue to engage in purchasing products and brands and dissatisfied customers tend to withdraw from both products and brands. With regard to e-impulse buying, CS determines their intention to continue, and as some researchers contend the long-term growth of e-retailers depends on customer retention (Chen et al., 2012; Chung & Shin, 2010). In a study conducted on the Internet banking sector, Yiu et al. (2007) documented those customers who continued to engage in e-banking. In a similar vein, customers who are satisfied with e-impulse buying are expected to continue online shopping. Especially during COVID-19, customers who are happy with the services of e-retailers tend to continue to engage in online buying. One of the essential conditions, however, is that e-retailers take feedback from the existing customers and engage in dialogue with them to improve. In experimental research, Chang & Tseng (2014) found that post-purchase

communication tends to reduce post-purchase cognitive dissonance of impulse buyers and increase e-satisfaction. CS is more likely to result in online purchase retention and also intention to repurchase the items already bought (especially concerning consumer non-durables like groceries) (Gupta & Kim, 2010; Tsai & Huang, 2007; Wang & Head, 2007). Accordingly, the study hypothesizes:

H5: CS is positively related to the intention to continue to engage in e-shopping.

3.6 First stage moderation hypothesis

In this research, the importance of website characteristics, stimulants, and promotions offered by e-retailers in influencing the customers to engage in e-IB are emphasized. Extant research documented that website functionality, security of websites, ease of navigation, and website service quality positively influence CS (Ha & Stoel, 2009; Lee & Kozar, 2012; Tandon et al., 2016). Previous researchers found that website environment, enjoyment from webstore purchases, and shopping convenience positively influence the online buying behavior of consumers (Prasad & Aryasri, 2009). In a study conducted in India, the findings indicated that online shopping websites offer utilitarian shopping value and contributed to online purchases by students (Khare & Rakesh, 2011). E-retailers also consider social networking sites and elicit information from them to have a better understanding of what customers want (Castrogiovanni et al., 2016). Sometimes e-retailers integrate social networking features of sites like Facebook and Twitter to enhance interactive communication with potential customers.

One of the strategies e-retailers employ is offering promotions (buy-one-get-one-free, price discounts on new products, etc.) to attract customers (Dawson & Kim, 2010; Gordon-Hecker, et al., 2019; Verma & Sing, 2019). As the demand for groceries is increasing during the lockdown period, e-retailers attempted to capture the market share by offering discounts, free delivery of products, ease in making payments (digital), and prompting consumers to engage

in e-shopping to buy the products that have huge discounts (Luo et al., 2021). Anecdotal evidence suggests that even the customers who are not habitual buyers of online products are getting accustomed to the new ways of shopping. In developing countries like India, social distancing prompted consumers to engage in e-shopping as it is very risky to have in-store shopping. Lack of organized structure and frequent violation of norms of wearing face masks, consumers prefer to order groceries and products online to avoid the risk of getting infected. Impulse buying tendency apart, the compulsion of online buying changed the competitive landscape and e-retailers take this as an opportunity of attracting new customers by promotional offers and discounts on the products.

The website characteristics, product quality, timely delivery of products, and safety and security in payment methods enable the customers to rely on the e-retailers. The stimulants and promotions offered by the e-retailers combined with website reliability and usability interact with impulse buying behavior to result in impulse purchases. To this end, the below mentioned moderation hypothesis is offered:

H2a: e-IBT interacts with stimulants and promotions to moderate the moderation effect of effectiveness of websites on satisfaction mediated through IB.: In a highly effective website, higher or lower stimulations and promotions will strengthen or weaken this relationship.

3.7 Second-stage moderation hypothesis

IB is sometimes triggered by the hedonic motives of consumers. These motives include shopping for gratification, adventure shopping, and window shopping through which consumers reduce boredom and derive pleasure. The impact of hedonic motives on online shopping has been researched by earlier researchers (Sahetapy et al., 2020). While consumers with utilitarian motives engage in task-related, goal-oriented e-shopping (Batra & Ahtola, 1991; Wolfinbarger & Gilly, 2001), the consumers with hedonic motives buy products or services for enjoyment, amusement, and variety (Hausman, 2000). IB is mostly stimulus-driven (Rook & Fisher, 1995), hedonic motives play a major role in influencing consumers.

Hedonic motives represent internal factors of individuals that would increase the urge to buy products on the spot. IB made to satisfy the hedonic motives make customers happy. In recent research conducted in Indonesia, Kempa et al. (2020) found that hedonic motives and sales promotions have a positive impact on IB decisions made. While IB result in CS especially when they get the products delivered on time, hedonic motives would enhance the satisfaction. Based on the available existing research and intuitive logic it is argued that hedonic motives moderate the relationship between e-IB and CS. If the e-IB are driven by hedonic motives, then CS would be more than when the e-IB are driven by utilitarian motives or when hedonic motive strength is low. We, therefore, offer the following exploratory moderation hypothesis:

H4a: Hedonic motives moderate the relationship between e-IB and satisfaction such that at higher (lower) levels of hedonic motives the relationship between e-IB and satisfaction becomes stronger (weaker).

The conceptual model proposed by this study is illustrated in Figure 1.

{Insert Figure 1 about here}

4. Method

4.1 Sample

Since this study aims to observe the consumers' intention to continue to engage in e-shopping, the focus was on customers who are habitual e-shoppers. The data collection was done during COVID-19 when social distancing has become the norm. Survey questionnaires were sent through Google by sending emails to the population. The respondents were asked to participate only if they are engaged in e-shopping. Data collection was stopped with 680 respondents. Google does not allow missing information from respondents. The respondents mentioned that they used Amazon, Flipkart, Snapdeal, and eBay as the websites through which they bought clothes, accessories, home products, electronic goods, and gaming and music products. As far as demographics are concerned, 278 were males and 403 were

females. In the income category, 138 (20.3%) had yearly income of under Rs. 6,00,000 ($8000); 146 (21.4%) had income between Rs. 6,00,000 and Rs 12,00,000 ($8,000—$16,000), 198 had an income between Rs. 12,00,000 and Rs. 18,00,000 ($16,000–$24,000), and 199 had income over Rs. 18,00,000 (over $24,000). The respondents' age varied from 15 to 78 years with an average age of 28.80 years. We checked the non-response bias by comparing the 100 respondents with the last 100 respondents and noted that the difference between these two groups concerning the variables was not statistically significant in the study.

4.2 Measures

After reviewing the literature, a self-administered survey was designed by using scale items adapted from the established validated measures. The indicators were measured using Likert's 5-point scale ("1" representing "strongly disagree" and "5" representing "strongly agree."

The e-*IBT* was measured with five statements borrowed from Kacen and Lee (2002) and Rook and Fisher (1995). *e-IB* is captured with two items secured from Jeon (1990) and three items from Badgaiyan and Verma (2015). The construct *stimulants and promotions* were measured with five items adapted from Dawson and Kim (2010). The construct *hedonic motives* were measured with five items taken from the work of Voss et al. (2003) and Arnold and Reynolds (2003). *CS* was gauged with five items developed by Devaraj et al. (2002); Hernandez et al. (2009); Maditinos & Theodoridis (2010) and used by Tandon et al. (2017). The *effectiveness of websites* was measured with five items adapted from Luo et al. (2012). The *intention to continue* was measured with five items adapted from Rahi and Ghani (2019). Table 1 briefly provides the information about items.

{Insert Table 1 about here}

5. Results

5.1 Confirmatory factor analysis and measurement properties

Following the procedure suggested by Anderson & Gerbing (1988), the analysis of the measurement model was performed. The measurement properties and confirmatory factor analysis (CFA) reveal that the baseline seven-factor model fitted the data well (χ^2 = 1799.62; df = 539; χ^2/df = 3.34; RMSEA = 0.064; RMR = 0.121; Standardized RMR = 0.059; CFI = 0.903;1 TLI = 0.882; GFI = 0.840) (Table 2). These goodness of fit indicators for the seven-factor model demonstrate evidence of construct distinctiveness for e-IBT, e-IB, hedonic motives, stimulants and promotions, satisfaction, the effectiveness of websites, and intention to continue. In this research, the variance extracted estimates for all variables was more than the suggested level of 0.50 thus achieving discriminant validity (Fornell & Larcker 1981). Table 2 provides the details about the discriminant validity between seven variables of the model.

{Insert Table 2 about here}

Descriptive statistics are displayed in Table 3.

{Insert Table 3 about here}

The central limit theorem posits that the increasing sample size leads to the normal sampling distribution, irrespective of the shape of the data (Elliott & Woodward, 2007; Field, 2009). However, the Kolmogorov-Smirnov test result was examined to check univariate normality assumption. Following the common practice to detect multicollinearity, this research has utilized the Variance Inflation Factors (VIF) as a general diagnostic measure. It was found that the VIF values for all the variables were below 5, rejecting the presence of multicollinearity (Hair et al, 2009). The variable correlation matrix was also double-checked to see if there are any correlations over 0.80, which may signal the presence of multicollinearity (Kennedy, 1979). The highest correlation between e-IBT and e-IB (r =

0.739) and the lowest correlation (which was significant) was between income and satisfaction (r = 0.088). These results provide additional support the absence of multicollinearity.

5.2 Common method bias

Common method bias is fundamental in social science research and cannot be avoided but can be minimized. However, to address this problem, Harman's single-factor test was suggested by Podsakoff et al. (2003). The single factor accounted for 30.72% variance which suggests that common method variance is not prevalent in the data. The single factor showed the following fit: (χ^2 = 6737.21; df = 560; RMSEA = 0.138; RMR = 0.365; Standardized RMR = 0.151; CFI = 0.476; TLI = 0.435; GFI = 0.404) (see Table 2). When compared to five-factor measurement model, the one-factor model showed a poor fit ($\Delta \chi^2$ = 4937.59, Δdf = 21, $p < 0.01$). The survey questions were also randomized to minimize the common method bias.

5.3 Hypotheses testing

Hypothesis 1 suggests that e-impulse purchase mediates the relationship between e-impulse buying tendency and CS. As can be seen in Table 4 (Step 1), the regression coefficient of e-impulse buying tendency on satisfaction (total effect) was positive and significant ($\beta = 0.113$; $t = 3.418$; $p < 0.001$), thus supporting Hypothesis 3. The regression coefficient of e-impulse buying tendency on e-impulse purchase was positive and significant ($\beta = 0.826$; $t = 28.90$; $p < 0.001$), thus supporting Hypothesis 2 (Table 4, Step 2). The regression coefficient of e-impulse purchase on CS was positive and significant ($\beta = 0.129$; $t = 2.931$; $p < 0.001$). The indirect effect was 0.1066 [0.826 x 0.129 = 0.1066]. The total effect was direct effect (0.0061) plus indirect effect (0.1066) equals 0.1127 (rounded to 0.113). The bootstrapping results are based on 20,000 bootstrap samples in Hayes's (2018) PROCESS macros. The

results show that 95% Confidence Intervals (CIs) are between 0.0274 and 0.1853. Because zero is not contained in the CIs, Hypothesis 1 is supported.

{Insert Table 4 about here}

Hypothesis 2a is related to the interaction effect of e-impulse buying tendency, the effectiveness of websites, and stimulants and promotions on e-impulse purchase (see Table 5). We used Model 11 in Hayes (2018) to test this moderated moderated-mediation hypothesis. The regression coefficient of interaction term: e-impulse buying tendency x effectiveness of Websites x stimulations and promotions was significant ($\beta = -0.039$, $t = -2.462$ $p < 0.05$), supporting Hypothesis 2a. The effect size of three-way interaction is very small (Cohen's $f^2 = 0.007$) [Cohen's $f^2 = 0.02$ (small effect); Cohen's $f^2 = 0.15$ medium effect; and Cohen's $f^2 = 0.35$ large effect] but the significance for practice is high (Hayes, 2018). The stimulants and promotions were having different effects on at different levels (low and high) of the effectiveness of websites.

The effects are presented in Figure 2 by showing the dispersion of moderators (Levine, 2018; Välikangas , 2018). As can be seen in Figure 2, when stimulants and promotions are high, the e-IB is higher than when stimulations and promotions are low. Figure 3 has two panels. The left panel shows the interaction effect of e-IBT and stimulations when the effectiveness of websites is low, and the second panel shows the relationship when the effectiveness of websites is high. In the second panel, the gap between the high and low stimulants is gradually decreasing. These results indicate that when websites' effectiveness is high, as e-IBT increases, even lower level of stimulations would increase the e-IB of consumers. Conditional effects of the focal predictor (IBT) at values of moderators (effectiveness of websites x stimulants) were presented at the bottom of Table 5. This renders support to Hypothesis 2a. The moderator value(s) defining Johnson-Neyman significance region(s) values were 3.1811 (% below 10.7195 and % above 89.2805). Johnson-Neyman techniques

allow the researchers to probe interactions and identify the range of values of the moderator at which the interaction effect is significant. The significance region(s) show the range of the moderator (Stimulants) values at which the conditional effect of Impulse Buying Tendency x Effectiveness of Websites is significant. Here, as can be seen at the bottom of Table 4, for all the values of stimulants from 1.000 to 3.1811, the interaction was significant. For all the values over 3.1811, the interaction effect was not significant. The three-way interaction model was significant and explains 60% variance in the e-IB because of main variables and interaction variables ($R^2 = 0.60$; $\Delta R^2 = 0.007$; $F = 100.46$, $p < .001$; df1 = 10; df2 = 670; $\Delta F = 6.06$, $p < 0.014$). The index of moderated moderated-mediation presented in Table 5 show that the index was -0.055 (BOOT se = 0.0031), and BOOT LL (-0.0122), BOOT UL (-0.0004) vouch for the significance of moderated mediation model as hypothesized in H2a (Model 11 in Hayes (2018).

{Insert Table 5 and Figure 2 about here}

Table 6 presents the results of testing Hypotheses 4, 4a, and 5. Hypothesis 4 proposes that e-IB is positively associated with CS. As can be seen in Table 6 (Column 2, Step 1), the regression coefficient of e-IB was ($\beta = 0.107$; $t = 4.678$; $p < 0.001$) thus supporting H4. Hypothesis 4a proposes hedonic motives that moderates the relationship between e-IB and CS. The regression coefficient of the interaction term (e-IB x hedonic motives) was significant ($\beta = 0.045$, $t = 2.612$; $p < 0.01$) thus supporting H4a. Conditional effect of focal predictor (impulse purchase) at values of the moderator Z (hedonic motives) were given at the bottom of the Table 6. Moderator value(s) defining Johnson-Neyman significance region(s) values were 4.4110 (% below 59.0308, % above 40.9692). The two-way interaction model was significant and explains 28.7% variance in the CS because of main variables and interaction variables ($R^2 = 0.287$; $\Delta R^2 = 0.007$; $F = 45.17$, $p < 0.001$; df1 = 6; df2 = 674; $\Delta F = 6.82$, $p < 0.01$).

The interaction plot (Figure 3) shows that e-IB is associated with higher CS at higher levels of hedonic motives than at lower levels. Further, as e-IB increase from low to high, the slope of the line becomes negative (steeper) for lower hedonic motives than for the higher ones. These results corroborate support for interaction hypothesis 4a.

{Insert Table 6 and Figure 3 about here}

Hypothesis 5 proposes that CS is positively related to consumer's intention to continue to engage in e-shopping. The regression results presented in Table 6 (Column 1) shows that the regression coefficient of satisfaction was positive and significant ($\beta = 0.751$; $t = 25.603$; $p < 0.001$), thus supporting H5. The model was significant and explains 59.2% of variance in intention to continue ($R^2 = 0.49$; $F = 167.51$, $p < 0.001$; $df1 = 4$; $df2 = 676$).

5.4 Post-hoc analysis

Though it was not hypothesized that CS mediates the relationship between (i) e-IBT and intention to continue, and (ii) e- IB and intention to continue, a post hoc analysis was conducted using Hayes (2018) PROCESS. The results reveal the effect of satisfaction was 0.0795 (Boot SE = 0.0265; the Boot LLCI = 0.0282; Boot ULCI = 0.1314). Since zero was not contained in the Lower and Upper limits of Confidence intervals, CS mediates the relationship between e-IBT and consumers' intention to continue.

Also, the PROCESS results of CS as a mediator in the relationship between e-IB and consumers' intention to continue reveal that the effect of satisfaction was 0.0998 (Boot SE = 0.0241; Boot LLCI = 0.0505; Boot ULCI = 0.1458). Since zero was not contained in the LLCI and ULCI, the mediation hypothesis was supported. The empirical model was presented in Figure 4.

{Insert Figure 4 about here}

6. Discussion

This research aims to assess the customers' intention to continue to e-IB during and post-global pandemic. A conceptual model was developed and it proposed that e-IB mediates the association between e-IBT and CS. The relationship between CS and their intention to consume products online is also tested. First, the results empirically confirm that e-IB mediate the association between e-IBT and CS. This is consistent with the Betty & Ferrell (1998) model that the e-IBT of customers leads to buying impulsivity, which results in e-impulse purchase. When e-IB occurs after experiencing a strong need to buy a product, consumer satisfaction can be studied. The e-IBT in itself would not result in CS. As we hypothesized, the results showed mediation of e-IB in the association between e-IBT and CS which is both intuitive and echoed the findings of past studies.

Further, e-IBT, the effectiveness of websites, and stimulants and promotions moderate the relationship between e-IBT and e-IB. Though consumers have a shopping list in hand, they engage in e-IB subsequent to the sales promotions, offers, or discount coupons provided. The results are supportive of existing literature that when consumers enter into the website without any prior knowledge of the promotions and offers, they buy the product when they find these deals lucrative (Prashar et al., 2015; Wells et al., 2011). Further, confirming the findings of previous studies, this work suggests that website features and quality have a positive influence on e-IB, the present results reveal the strong moderating effect of the effectiveness of websites and stimulants on e-IB. Though prior studies delved into the direct effects of website quality and stimulants, it was found that there was a three-way interaction effect of quality of websites, stimulants, and e-IBT on e-IB behavior (Akram et al., 2018b).

Another finding from the present study is the positive association between e-IB and CS. Tandon et al. (2017) found a positive association between online purchases and CS. As mentioned earlier, consumers making online purchases may frequently engage in IB, though

Tandon et al. (2017) are not directly linked to IB, considering some consumers engage in e-IB the result from this study corroborates with other comparable studies in the literature. If the consumers are not satisfied with the products and customer service rendered by online retailers, it is more unlikely that they continue to engage in e-shopping of those products they bought. While the direct relationship between e-IB and CS is having intuitive appeal, what is more interesting is that the hedonic motives of consumers strengthen the relationship as found in this research. Prior research has documented the benefits of hedonic motives of consumers on IB (Lee & Wu, 2017; Sahetapy et al., 2019). Results exhibit that hedonic motives strengthen the positive effect of an e-IB, and CS is consistent with the literature. Instead of showing the direct relationship of hedonic motives, this work goes a step further to empirically test the moderating effect of hedonic motives on the e-IB and CS.

The most crucial insight from the present empirical assessment is the relationship between CS and consumer's willingness to engage in e-shopping. While there was a dearth of studies that focused on consumers' intention to continue to engage in e-shopping, the present study is novel in formulating a comprehensive model that shows the associations between e-IBT and consumers' intention to continue. To sum, the result from this research corroborates the findings from the previous studies about the positive association between e-IBT and e-IB and add to the literature the importance of three-way interaction of e-IBT, web quality, and stimulants in influencing the e-IB. The present study also supports the earlier research and adds the importance of hedonic motives as a potential moderator that increases the strength of the association between e-IB and CS to literature.

6.1 Theoretical contributions

The conceptual model in this work offers a definitive framework of antecedents of consumer's intention to continue e-IB. First, this research is likely to enrich the existing knowledge on impulsive online buying. While most of the earlier studies have used several

psychological theories such as social network theory, social influence theory, latent state-trait theory, the SOR, and CIEF model was predominantly used for explaining the e-IB behavior of consumers. It was argued that SOR explains the mechanism of how stimulus triggers a response in consumers based on the internal evaluation of the organism and respond to the environmental stimulus. The response, however, depends on the effectiveness of the environmental stimulus. In addition, CIEF acts as a complementary to explain the consumer e-IB behavior. As suggested, marketing stimuli (example, website characteristics), impulsivity traits, and situational factors act as antecedents to the origination of consumption impulse. Second, consistent with past research, the current work established that e-IBT leads positively to IB and thus provides support to the literature. Also, the effect of the three-way interaction between IBT, website characteristics and stimulants, and promotions on the IB decision is a significant contribution to the literature on e-IB. Third, previous studies have focused on the antecedents of IBT and the association between IBT and IB decision of consumers. This study adds to the literature on impulse buying by demonstrating the e-IB mediates the relationship between e-IBT and consumer satisfaction. Though consumers enjoy psychological satisfaction by visiting various websites and note what they are interested in purchasing yet this may not convert their e-buying tendency into the purchase decision. This way what they get is only intrinsic satisfaction, which is self-explanatory. By providing strong evidence that IB decision precedes CS, with e-IBT as an antecedent, this study adds to the scant literature on e-IB. Fourth, the major contribution of the present research is the effectiveness of websites as the first moderator and stimulants and promotions as a second moderator, in this moderated moderated-mediation model in the relationship between e-IBT and e-IB decision. This three-way interaction provides novelty to the study, as this kind of relationship has not been studied earlier.

Fifth, a notable contribution of the study stems from the role of hedonic motives that increases the strength of the relationship between e-IB and CS. Previous researchers have documented a positive association between hedonic motives and online purchase intentions (Childers et al., 2001; Lim, 2017). The results from the present study extend past research on hedonic motives and CS (Koch et al., 2020). Lastly, the research adds to the existing literature by providing a link between CS and the intention to continue to engage in e-impulse buying, which has not been studied by previous research. To sum, from consumer impulsive tendency to their repurchase intentions through e-shopping, the conceptual model presented in this study is a new idea that has not been explored. In addition to linear relationships between the variables, the interrelationships between website quality, promotional measures, and hedonic motivation are imperative to understand the dynamics of e-IB.

6.2 Implications for practice

The outcomes from the current research have several implications for marketing managers interested in capturing the attention of potential customers engaging in e-IB. First, e-marketers should not underestimate the importance of website characteristics in attracting customers. The study shows that the website characteristics act as external stimuli and consumers shy away from the companies that have websites that are not user-friendly and effective. Second, as the previous researchers documented the positive association of web effectiveness to e-IB behavior, this work corroborate those suggestions (Dawson & Kim, 2010; Lee & Kozar, 2012; Tandon et al., 2016).

In addition to suggesting updating the websites frequently and make them attractive, the present study goes a step forward and suggests promotions and stimulants to the websites to fascinate and keep the customers. E-retailers need to understand the importance of website effectiveness and stimulants and promotions in inducing the consumers for making decisions

of IB. e-IBT does need to result in e-impulse purchases. However, when e-retailers make the websites user-friendly and safe for financial transactions, customers feel comfortable converting their buying tendency into the action of making purchases.

Third, it was found that hedonic motives are significant in strengthening the relationship between IB and CS. E-retailers, therefore, are required to be cognizant of satisfying the customers who have hedonic motives. CS also depends on how seriously the e-retailers consider the hedonic motives of customers and provide them what they want. E-retailers integrate with social networking sites to understand the changing tastes and preferences of customers and make goods and services available to them as and when they want. The repurchase intentions of customers largely depend on how effectively the marketing managers strategize to provide incentives, promotions, and high-quality e-service. As COVID-19 is continuing to loom, the importance of e-IB is increasing as more customers prefer to engage in e-shopping.

Increasing competition among the e-retailers for capturing major market share is providing an opportunity to customers to choose the e-retailers who provide benefits. Therefore, e-retailers need to strategize by identifying what types of promotional offers they can make for products. In addition to cash discounts and coupons, marketers' may offer supplementary goods or products as an incentive to attract customers. For example, in electronic goods and laptops, companies may come with a promotional offer of a free Microsoft office package or increase in the size of the hard drive, etc. As the customers who have less self-control over purchases engage in e-impulse buying, the marketers attempt to tap these customers by providing products that have hedonic effects. In a recent study, it was found that mobile coupons play a major role in repeat user behavior (Nayal et al., 2021).

Finally, e-retailers, in addition to making the website attractive and effective, should develop in-built easy transaction capabilities for making digital purchases (Mas-Verdú et al., 2015).

With increasing cases of cybercrime, it is necessary to maintain secretive data storing and saving policies to protect from fraud and secure the customers' data (Bossler & Berenblum, 2019). As trust on the websites is very important for attracting and retaining customers, e-retailers should be mindful of protecting the privacy of the information provided by customers in digital payments and transactions. Thus, as online shopping has been increasing rapidly due to social distancing norms, more customers tend to prefer visiting various websites to purchase goods and services they want. The results of this study imply that web characteristics of the e-retailers and stimulants and promotional offers made will have a profound impact on e-IB decisions.

6.3 Limitations and future research directions

The outcomes of this research have some strictures. First, the social desirability bias is inherent in survey research as the respondents may answer the questions in a biased way to reflect positive behavior. Though it is impossible to eliminate the social desirability bias, adequate care was taken by ensuring the respondents that surveys will be anonymous and not revealed. Second, generalizability is a problem as the present study focused on respondents from the Union Territory of Delhi. The results are likely to be generalizable in metropolitan and cosmopolitan locations because e-tailers can readily approach customers for delivering products. In remote villages, the present conceptual model may not work as the customers are not used to e-shopping. People in rural areas may engage in in-store IB rather than online IB.

The current research offers many avenues for future research. First, future researchers may examine the role of personality traits as moderators in the relationship between e-IBT and e-IB. Earlier researchers have shown direct relationships between personality traits and e-IBT but have not examined the moderating role of personality traits (Badgaiyan & Verma, 2014).

Second, scholars can further compare the e-IB behavior between rural and urban customers. Third, the role of social media and social networking customers in influencing e-IB would help identify changing customer preferences during the post-pandemic period. As no one has any idea when the pandemic ends, it is likely that customers continue to engage in e-shopping and e-IB. Though during the pandemic, consumers engage in 'panic buying' especially about necessities like groceries (Ahmed et al., 2020) that contributed to an increase in e-impulse buying, the motivation from internal stimuli rather than external conditions drive the consumers to e-impulse buying.

Since marketers are aware that e-shoppers are target-oriented and focus on what they need, the e-retailers need to provide the customers what they want and also incorporate innovative features in their websites. In this connection, website customization and security are very important to gain the trust of customers. So, another important variable that can be studied by future researchers is the trust and trustworthiness of various websites in attracting and retaining e-shoppers and engage in e-IB. As some researchers documented that building trust with online consumers is an essential component for increasing the sales, it would be interesting for the future researchers to study the impact of trust on e-IB (Donna et al. 1999; Hidayat et al., 2021). Furthermore, as social media networking platforms are increasingly becoming popular, during the pandemic consumers may rely on user-generated content and the reviews posted and communicated through eWOM before making purchase decisions (Abubakar & Ilkan, 2016; Nuria, 2017; Yang, 2017). The future researchers, therefore, may study the impact of eWOM e-IB, particularly during the post-pandemic phase. Researchers also can throw light on differences between 'compulsive' and 'impulsive buying' (He et al., 2018). It is very important to note that the global pandemic caused a significant change in consumer e-buying behavior. The research conducted during the pandemic about consumer behavior reveals that panic and compulsive buying dominated e-impulsive buying (Yuen et

al., 2020; Kshatriya and Shah, 2021; Tarka et al., 2022). Recent studies also reported that during the pandemic consumers resorted to compulsive buying (Japutra & Song 2020). Furthermore, a multi-country examination by Islam et al. (2021) revealed that panic buying has been rampant in various countries. However, that trend is only temporary. As soon as the pandemic ends, the consumers return to the motivation caused by internal factors rather than external, extraneous situations such as a pandemic.

The results from the study also should be interpreted in light of two delimitations. One is that the research was conducted during the global pandemic, and hence a part of the e-impulse buying may also be attributed to panic and compulsive buying. However, to the extent the e-impulsive buying depends on the website characteristics, hedonic motives, stimulants, and promotions, the results from the study are generalizable. The second delimitation is the focus on a survey of the respondents who are regular e-shoppers. The consumer behavior about the new e-shoppers may be different from the experienced e-shoppers. Future studies may dwell on the differences in the consumer e-impulse buying habits of new versus experienced e-shoppers.

7. Conclusion

The present study provides insights into e-retailers about the factors that contribute to CS and re-purchase behavior. Since most e-retailers (such as Amazon, Flipkart) are established in the market offering a wide array of products, it is very important to consider the stimulants and promotions that attract and retain customers. Though not covered in this study, it is very important to provide security to avoid cybercrime so that customers would trust the websites while making electronic payments. In this study, some of the consumers mentioned that they chose the option of making payment at the time of delivery to avoid the cyber risk. E-retailers invest substantial amounts in providing security and gaining the trust of potential customers. As the shopping lifestyle of consumers has undergone a paradigmatic change it is expected

that the wave of e-shopping and e-IB continues, and e-retailers need to understand the key factors that result in CS and retention.

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Table 1: Measurement Model Properties

Variable and the source of measures	Alp	Standardi Loading (λ_{yi})	Reliabili (λ^2_{yi})	Varian ($Var(\varepsilon_i$	Variance-Extracted Estimate $\Sigma (\lambda^2_{yi})/ [(\lambda^2_{yi}) + (Var(\varepsilon_i))]$
e-Impulse Buying Tendency（Kacen and Lee; 2002; Rook and Fisher, 1995)	0.7				0.55
I generally buy things instinctively.		0.68	0.47	0.53	
I frequently make purchases without giving it much thought.		0.76	0.58	0.42	
When I see something, I like, I buy it. describes my purchasing habits.		0.76	0.57	0.43	
Now is the time to buy; later will be the time to ponder about it. This is how I shop.		0.77	0.59	0.41	
I occasionally feel compelled to purchase something on the heat of a moment.		0.75	0.56	0.44	
e-Impulse Buying（Jeon, 1990; Badgaiyan and Verma, 2015).	0.7				0.66
When I bought (the item), I felt unprompted urge to buy it.		0.77	0.59	0.41	
I couldn't help myself when I saw (the item).		0.79	0.62	0.38	
Without intended to I ended up purchasing the thing.		0.79	0.62	0.38	
I bought the item on the heat of the moment.		0.87	0.76	0.24	
I bought the thing rashly.		0.85	0.73	0.27	
Customer Satisfaction (Devaraj et al., 2002; Hernandez et al, 2009; Maditinos and Theodoridis, 2010)	0.8				0.66
I'm satisfied with the product selection provided by online sellers.		0.78	0.61	0.39	
I’m satisfied with the quality of the products available on the internet.		0.79	0.63	0.37	
I’d keep buying things from the internet.		0.84	0.71	0.29	
I tell other folks about internet purchasing websites.		0.84	0.71	0.29	
Online purchasing is a pleasurable experience because it allows me to get a personalized product at my leisure.		0.79	0.63	0.37	
Stimulants （Dawson and Kim, 2010)	0.8				0.59
Fair prices induce our impulsive buying behavior.		0.71	0.51	0.49	
Gifts and promotional offers.		0.80	0.64	0.36	
Coupons and percentage off after spending beyond a limit.		0.83	0.70	0.30	
Free shipping induces me to buy.		0.73	0.54	0.46	
Membership discounts stimulate me to buy.		0.76	0.58	0.42	
Hedonic Motives （Voss et al., 2003; Arnold and Reynolds, 2003)	0.8				0.70
It gives great pleasure to purchase this online.		0.84	0.71	0.29	
Buying this is like buying a present for myself.		0.82	0.67	0.33	
Buying online gives pleasure to me.		0.89	0.79	0.21	
Online buying excites me.		0.82	0.68	0.32	
I find online shopping stimulating.		0.81	0.66	0.34	

Effectiveness of Websites (Luo et al., 2012)	0.8				0.65
Websites are effective in ensuring that product is delivered within expected time,		0.80	0.64	0.36	
Websites allow us to track orders		0.83	0.69	0.31	
I get product arrived as expected		0.85	0.72	0.28	
exact product was delivered		0.74	0.55	0.45	
Websites provide customer support		0.83	0.68	0.32	
Intention to Continue (Rahi and Ghani, 2019)	0.8				0.67
I intend to continue buying online.		0.75	0.57	0.43	
I will always try to shop online.		0.84	0.70	0.30	
I plan to buy online frequently.		0.85	0.72	0.28	
In long term, I will buy routinely online.		0.82	0.67	0.33	
In long term, I'll think about shopping online.		0.83	0.69	0.31	

Table 2. Comparison of Measurement Models

Model	Factors	χ^2	df	$\Delta\chi^2$	RMSEA	RMR	Standardized RMR	CFI	TLI=NNFI	GFI
Null		12272.55	595							
Baseline model	Seven factors	1799.62	539		0.064	0.121	0.059	0.903	0.896	0.860
Model 1	Six factor model: IMPTEND + IMBU; STIM, HEDO, SAT, EFFWEB, CONT	1898.40	545	98.78**	0.065	0.121	0.059	0.895	0.885	0.842
Model 2	Five factor model: IMPTEND + IMBU + STIM; HEDO, SAT, EFFWEB, CONT	2666.87	550	867.25**	0.081	0.192	0.087	0.820	0.806	0.756
Model 3	Four factor model: IMPTEND + IMBU + STIM + HEDO; SAT, EFFWEB, CONT	3836.12	554	203.5**	0.101	0.241	0.110	0.721	0.701	0.630
Model 4	Three factor model: IMPTEND + IMBU + STIM + HEDO+ SAT; EFFWEB, CONT	5252.67	557	3453.05**	0.121	0.286	0.145	0.601	0.574	0.512
Model 5	Two factor model: IMPTEND + IMBU + STIM + HEDO+ SAT+ EFFWEB; CONT	6231.30	559	4431.68**	0.133	0.329	0.152	0.511	0.479	0.419
Model 6	One factor model: IMPTEND + IMBU + STIM + HEDO+ SAT+ EFFWEB + CONT	6737.21	560	4937.59**	0.138	0.365	0.151	0.476	0.435	0.404

[Legend: IMPTEND = Impulse Buying Tendency; IMBU= Impulse Buying ; STIM = Stimulants; HEDO = Hedonic motives; SAT = Customer Satisfaction; EFFWEB = Effectiveness of Websites; CONT = Intention to Continue, ** p < .01]

Table 3. Descriptive Statistics: Means, standard deviations and zero-order correlations

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10
1.Age	28.80	75.57	1									
2.Gender	1.52	0.46	-0.054	1								
3.Income	2.62	1.09	0.008	-0.032	1							
4.e-Impulse buying tendency	3.12	1.19	0.037	0.060	0.006	1						
5.e-Impulse buying	3.34	1.33	0.041	-0.036	-0.031	0.739**	1					
6.Effectiveness of websites	5.59	0.99	0.014	-0.060	0.091*	-0.049	0.048	1				
7.Stimulants	4.67	1.22	-0.010	-0.131**	-0.030	0.343**	0.451**	0.239**	1			
8.Hedonic motives	4.37	1.29	0.010	-0.089*	0.001	0.356**	0.437**	0.328**	0.525**	1		
9. Customer satisfaction	5.15	1.03	0.028	0.061	0.088*	0.130**	0.172**	0.687**	0.285**	0.506**	1	
10. Intention to continue	4.93	1.11	0.015	0.022	0.100**	0.216**	0.243**	0.576**	0.309**	0.551**	0.704**	1

[Note: ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed)]

Table 4: Testing of Mediation Hypothesis 1 (The mediation model in Figure 1), Hypothesis 2, and Hypothesis 3

		Step 1: DV= Satisfaction				Step 2: DV = Impulse Purchase **(H2)**				Step 3: DV = Satisfaction			
		Coeff	se	t	p	Coeff	se	t	p	Coeff	se	t	p
Age		0.000	0.001	0.670	0.503	0.000	0.000	0.382	0.703	0.000	0.001	0.627	0.531
Income		0.084	0.036	2.331	0.020	-0.047	0.031	-1.503	0.133	0.090	0.036	2.535	0.011
Gender		0.130	0.033	1.528	0.127	-0.234	0.074	-3.156	0.002	0.164	0.085	1.926	0.054
e-Impulse Buying Tendency	**H3**	**0.113**	**0.033**	**3.418**	**0.0007**	**0.826**	**0.029**	**28.903**	**0.000**	-0.012	0.049	-0.239	0.811
e-Impulse Buying										**0.129**	**0.044**	**2.931**	**0.001**
R-square		0.546				0.554				0.564			
F		4.920				210.320				6.970			
df1		4				4				5			
df2		676				676				675			
p		0.000				0.000				.000			
Direct Effect													

	Direct Effect	se	t	p	LLCI	ULCI
Impulse Buying Tendency → Customer Satisfaction	0.0061	0.048	0.1247	0.9908	0.0089	0.1205

Bootstrapping Indirect Effect: H1

	Indirect Effect	BOOT se	BOOT LLCI	BOOT ULCI
Impulse Buying Tendency → Impulse Purchase → Customer Satisfaction	0.1066 (0.826 x 0.129 =0.1066)	0.0402	**0.0274**	**0.1853**

[Notes: N = 681. "Boot LLCI refers to the lower bound bootstrapping confidence intervals. Boot ULCL refers to the upper bound bootstrapping confidence intervals. Number of bootstrapping samples for this bias corrected bootstrapping confidence intervals are 20,000. The level of confidence for all confidence intervals in output was 0.95. We have four decimal digits for bootstrap results because some values may be very close to zero".]

Table 5: Testing of Hypothesis 2a (three-way interaction)

	DV= Impulse Purchase											
	STEP 1				STEP 2				STEP 3			
	Coeff	se	t	p	Coeff	se	t	p	Coeff	se	t	p
Age	0.000	0.000	0.639	0.523	0.000	0.000	0.610	0.542	0.000	0.000	0.606	0.545
Income	-0.041	0.030	-1.371	0.171	-0.041	0.030	-1.358	0.175	-0.035	0.030	-1.157	0.248
Gender	-0.137	0.072	-1.914	0.056	-0.133	0.072	-1.843	0.066	-0.120	0.072	-1.663	0.097
Impulse Buying Tendency	**0.748**	**0.030**	**25.316**	**0.000**	0.829	0.162	5.109	0.000	-0.159	0.432	-0.368	0.713
Stimulants	0.223	0.030	7.463	0.000	0.316	0.142	2.222	0.027	-0.305	0.289	-1.055	0.292
Effectiveness of Websites	0.043	0.035	1.248	0.212	0.023	0.110	0.212	0.832	-0.417	0.210	-1.988	0.047
Impulse Buying Tendency x Stimulants					-0.031	0.020	-1.497	0.135	0.200	0.096	2.086	0.037
Impulse Buying Tendency x Effectiveness of Websites					0.012	0.028	0.440	0.660	0.183	0.075	2.449	0.015
Stimulants x Effectiveness of					-0.002	0.023	-0.097	0.923	0.104	0.049	2.130	.034

Websites					
Impulse Buying Tendency x Stimulants x Effectiveness of Websites **H2a**			**-0.039**	**0.016**	**-2.462**	**0.014**
R-square	0.592	0.593	0.600			
F	164.98***	110.12***	100.46***			
R-square change		0.001	0.007			
df1	6	9	10			
df2	674	671	670			
p	0.000	0.000	0.000			
F-Change		0.755	6.06*			
p		0.519	0.014			

Index of moderated moderated-mediation

Index	BOOT se	BOOT LLCI	BOOT ULCI
-0.0055	0.0031	-0.0122	-0.0004

Conditional effects of the focal predictor (Impulse Buying Tendency) at values of moderators (Effectiveness of Websites x Stimulants)

Effectiveness of Websites	Stimulants	Effect	se	t	p	LLCI	ULCI
Low	**Low**	0.7539	0.0427	17.6496	0.0000	0.6700	0.8377
Low	Medium	0.7676	0.0395	19.4533	0.0000	0.6901	0.8450
Low	High	0.7821	0.0551	14.2034	0.0000	0.6740	0.8902
Medium	**Low**	0.7917	0.0395	20.0175	0.0000	0.7140	0.8693
Medium	Medium	0.7692	0.0307	25.0439	0.0000	0.7089	0.8295
Medium	High	0.7453	0.0370	20.1497	0.0000	0.6727	0.8180
High	**Low**	0.8396	0.0537	15.6232	0.0000	0.7341	0.9451
High	Medium	0.7713	0.0402	19.1716	0.0000	0.6923	0.8503
High	High	0.6988	0.0405	17.2689	0.0000	0.6193	0.7782

Moderator value(s) defining Johnson-Neyman significance region(s)

Value	% below	% above
3.1811	10.7195	89.2805

Conditional X*W interaction (e-Impulse Buying Tendency x Effectiveness of Websites) at values of the moderator Z (Stimulants)

Stimulants	Effect	se	t	p	LLCI	ULCI
1.0000	0.1587	0.0599	2.6483	0.0083	0.0410	0.2763
1.3000	0.1459	0.0557	2.6169	0.0091	0.0364	0.2553
1.6000	0.1330	0.0517	2.5752	0.0102	0.0316	0.2345
1.9000	0.1202	0.0477	2.5197	0.0120	0.0265	0.2139
2.2000	0.1074	0.0439	2.4450	0.0147	0.0212	0.1937
2.5000	0.0946	0.0404	2.3441	0.0194	0.0154	0.1739
2.8000	0.0818	0.0371	2.2074	0.0276	0.0090	0.1546
3.1000	0.0690	0.0341	2.0232	0.0435	0.0020	0.1359
3.1811	**0.0655**	**0.0334**	**1.9635**	**0.0500**	**0.0000**	**0.1311**
3.4000	0.0562	0.0316	1.7785	0.0758	-0.0058	0.1182
3.7000	0.0434	0.0296	1.4635	0.1438	0.0148	0.1016
4.0000	0.0306	0.0284	1.0777	0.2815	-0.0251	0.0862
4.3000	0.0178	0.0278	0.6375	0.5240	-0.0369	0.0724
4.6000	0.0049	0.0281	0.1756	0.8606	-0.0503	0.0602
4.9000	-0.0079	0.0292	-0.2692	0.7879	-0.0653	0.0495
5.2000	-0.0207	0.0310	-0.6667	0.5052	-0.0816	0.0402
5.5000	-0.0335	0.0334	-1.0030	0.3162	-0.0990	0.0321
5.8000	-0.0463	0.0362	-1.2777	0.2018	-0.1174	0.0248
6.1000	-0.0591	0.0395	-1.4981	0.1346	-0.1366	0.0184
6.4000	-0.0719	0.0430	-1.6739	0.0946	-0.1563	0.0124
6.7000	-0.0847	0.0467	-1.6145	0.0700	-0.1764	0.0070
7.0000	-0.0975	0.0506	-1.9276	0.0543	-0.1969	0.0018

Table 6: Testing of Hypothesis 4a (two-way interaction), Hypothesis 4, and Hypothesis 5

		DV = Intention to Continue Column 1				DV = Satisfaction Column 2 (step 1)				DV = Satisfaction Column 3 (step 3)			
		Coeff	SE	t	p	Coeff	SE	t	p	Coeff	SE	t	p
Age		-0.008	0.000	-0.222	0.824	0.000	0.000	0.919	0.359	0.000	0.000	0.921	0.357
Income		0.038	0.028	1.375	0.170	0.084	0.031	2.699	0.007	0.082	0.031	2.673	0.008
Gender		-0.049	0.066	-0.753	0.452	0.251	0.074	3.404	0.001	0.259	0.073	3.525	0.000
Customer	Satisfaction	**0.751**	**0.029**	**25.603**	**0.000**								
H5													
e-Impulse Buying	**H4**					**0.107**	**0.023**	**4.678**	**0.000**	-0.256	.085	-3.008	0.003
Hedonic motives						0.435	0.029	14.867	0.000	0.298	.060	4.974	0.000
e-Impulse Buying x Hedonic motives										**0.045**	**.017**	**2.612**	**0.009**
H4a													
R-square		0.490				0.280				0.287			
F		167.510				52.38				45.17			
R-square change										0.007			
df1		4				5				6			
df2		676				675				674			
P		0.000				0.000				0.000			
F-Change										6.82**			
P										0.009			

Conditional effects of the focal predictor (Impulse Purchase) at values of moderator (Hedonic motives)

Hedonic motives	Effect	SE	t	p	LLCI	ULCI
Low	-.1093	.0379	-2.8870	.0040	-.1836	-.0350
Medium	-.0585	.0289	-2.0254	.0432	-.1151	-.0018
High	-.0046	.0334	-.1370	.8911	-.0701	.0610

Moderator value(s) defining Johnson-Neyman significance region(s)

Value	% below	% above
4.4110	59.0308	40.9692

Conditional effect of focal predictor **(e-Impulse Buying)** at values of the moderator Z (**Hedonic motives**)						
Hedonic motives	Effect	se	t	p	LLCI	ULCI
1.0000	-0.2053	0.0697	-2.9446	0.0033	-0.3421	-0.0684
1.3000	-0.1922	0.0649	-2.9599	0.0032	-0.3197	-0.0647
1.6000	-0.1791	0.0602	-2.9735	0.0030	-0.2973	-0.0608
1.9000	-0.1660	0.0556	-2.9838	0.0029	-0.2752	-0.0568
2.2000	-0.1529	0.0512	-2.9882	0.0029	-0.2534	-0.0524
2.5000	-0.1398	0.0469	-2.9825	0.0030	-0.2319	-0.0478
2.8000	-0.1267	0.0428	-2.9603	0.0032	-0.2108	-0.0427
3.1000	-0.1136	0.0390	-2.9115	0.0037	-0.1903	-0.0370
3.4000	-0.1006	0.0356	-2.8216	0.0049	-0.1705	-0.0306
3.7000	-0.0875	0.0327	-2.6710	0.0077	-0.1518	-0.0232
4.0000	-0.0744	0.0305	-2.4384	0.0150	-0.1343	-0.0145
4.3000	-0.0613	0.0291	-2.1094	0.0353	-0.1183	-0.0042
4.4110	**-0.0564**	**0.0287**	**-1.9635**	**0.0500**	**-0.1129**	**0.0000**
4.6000	-0.0482	0.0285	-1.6897	0.0915	-0.1042	0.0078
4.9000	-0.0351	0.0290	-1.2122	0.2259	-0.0920	0.0218
5.2000	-0.0220	0.0303	-0.7261	0.4680	-0.0816	0.0375
5.5000	-0.0089	0.0325	-0.2749	0.7835	-0.0728	0.0549
5.8000	0.0042	0.0354	0.1174	0.9066	-0.0653	0.0736
6.1000	0.0172	0.0387	0.4454	0.6562	-0.0588	0.0932
6.4000	0.0303	0.0425	0.7144	0.4752	-0.0530	0.1137
6.7000	0.0434	0.0465	0.9337	0.3508	-0.0479	0.1347
7.0000	0.0565	0.0508	1.1129	0.2661	-0.0432	0.1562

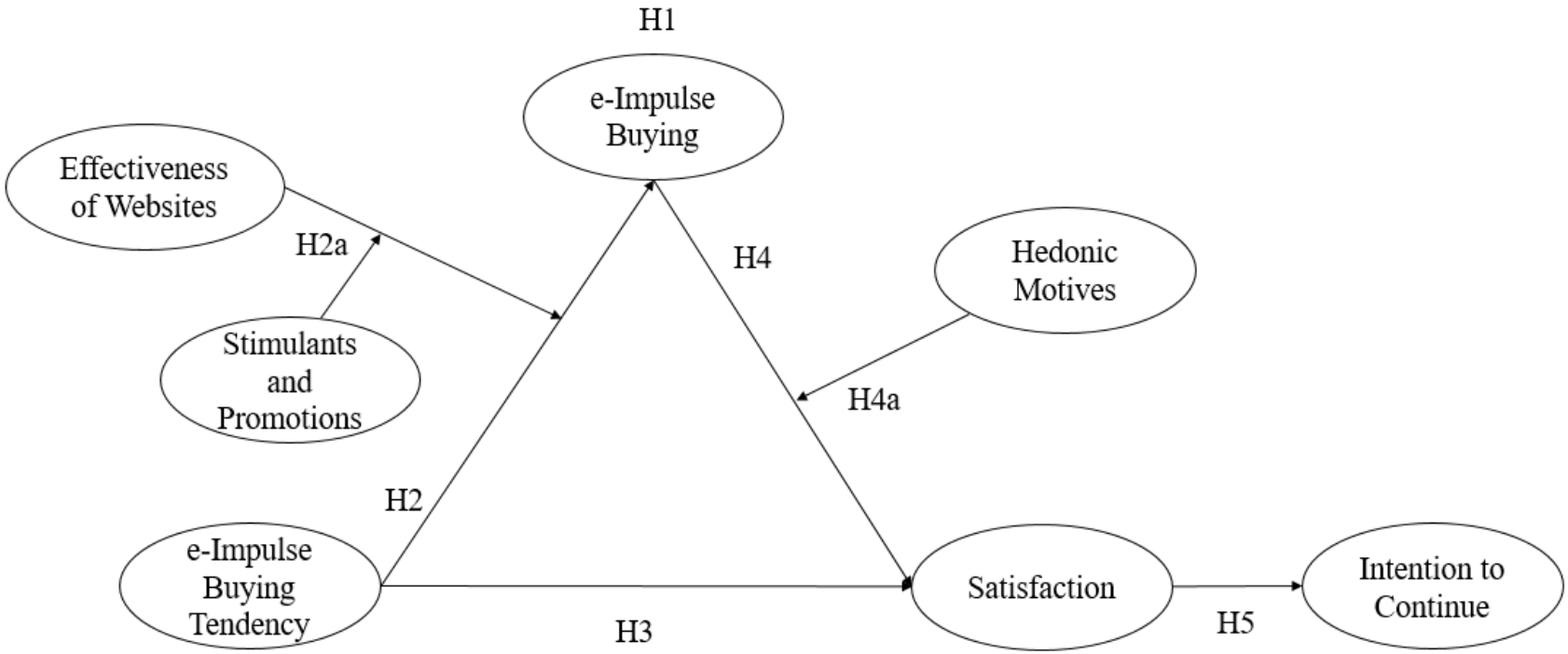
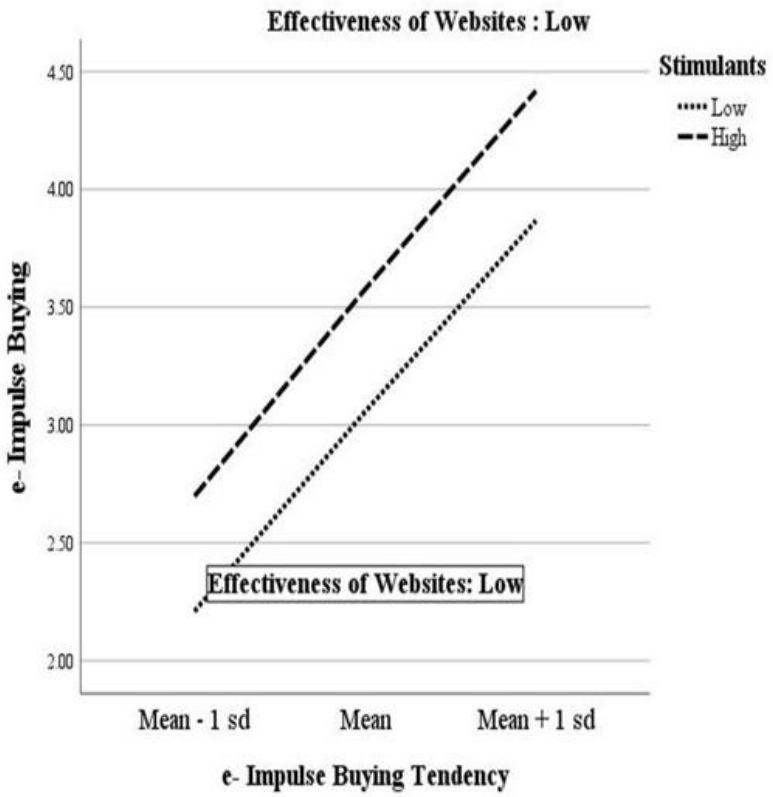


Figure 1. Conceptual Model



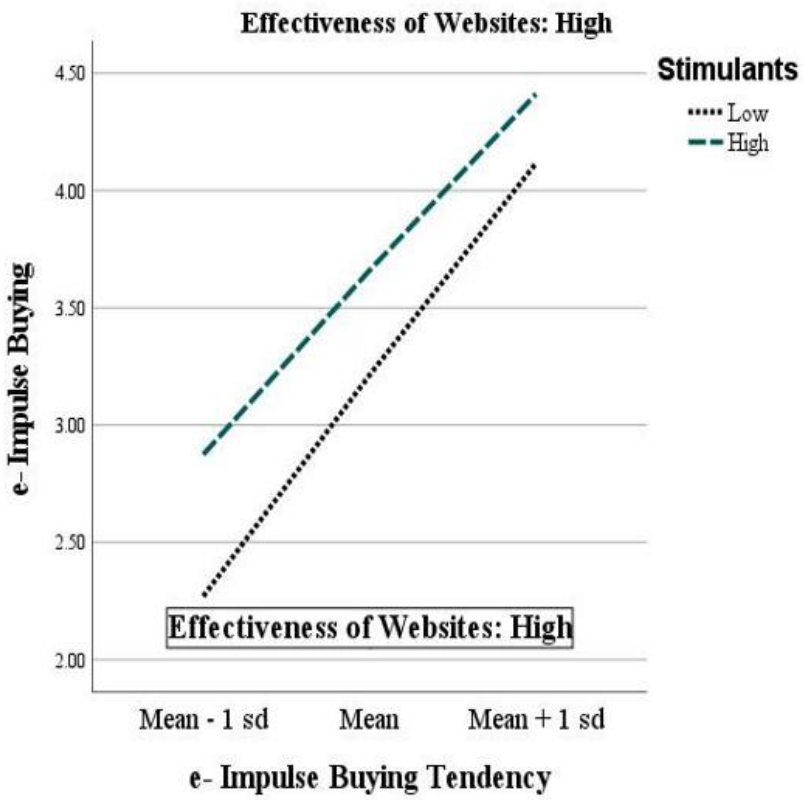


Figure 2(a) Moderation effects of e-Impulse Buying Tendency, Stimulants, and Effectiveness of Websites (Low) on e-Impulse Buying
Figure 2(b) Moderation effects of e-Impulse Buying Tendency, Stimulants, and Effectiveness of Websites (High) on e-Impulse Buying

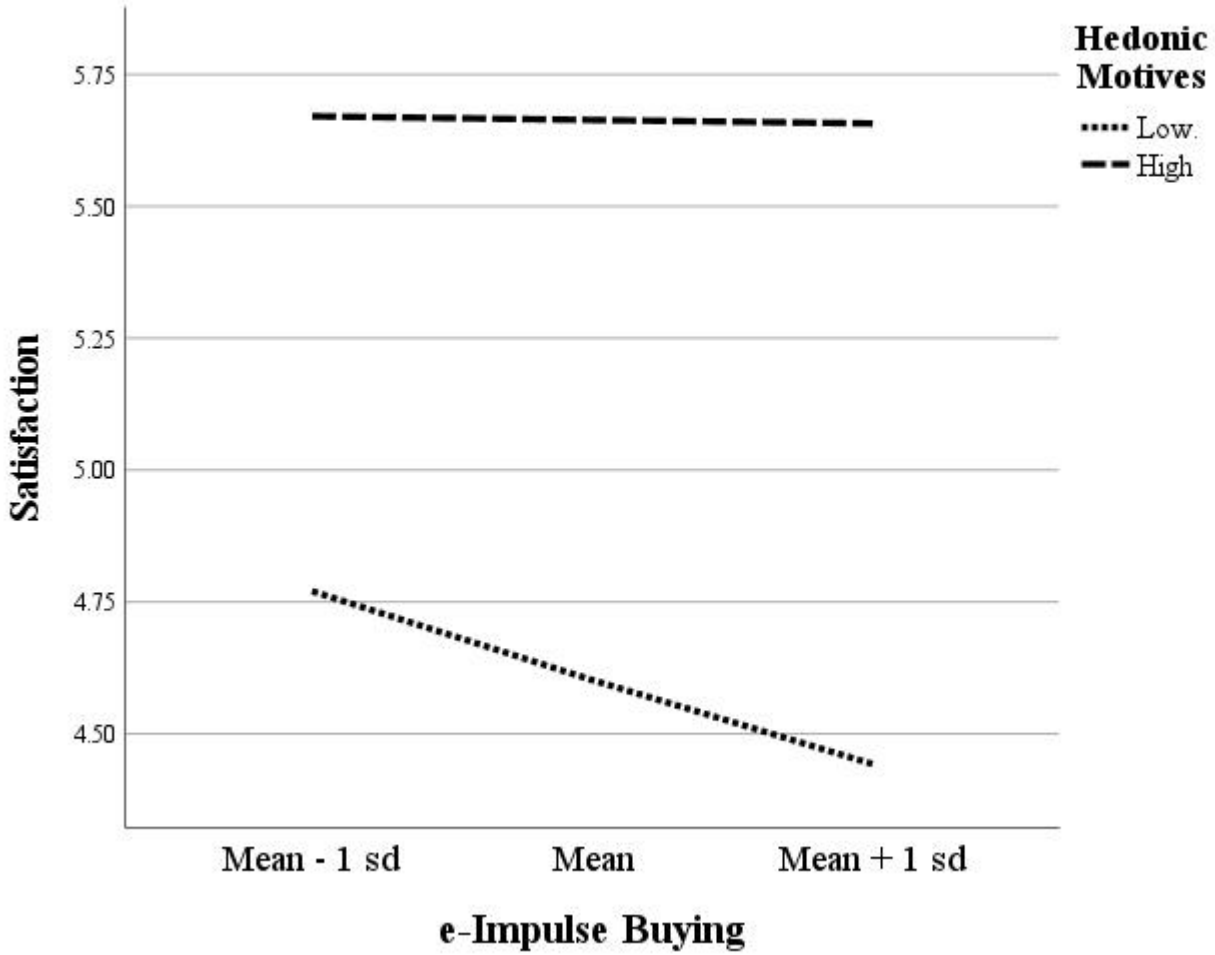


Figure 3 Moderating effect of hedonic motives on the relationship between e-Impulse Buying and customer satisfaction

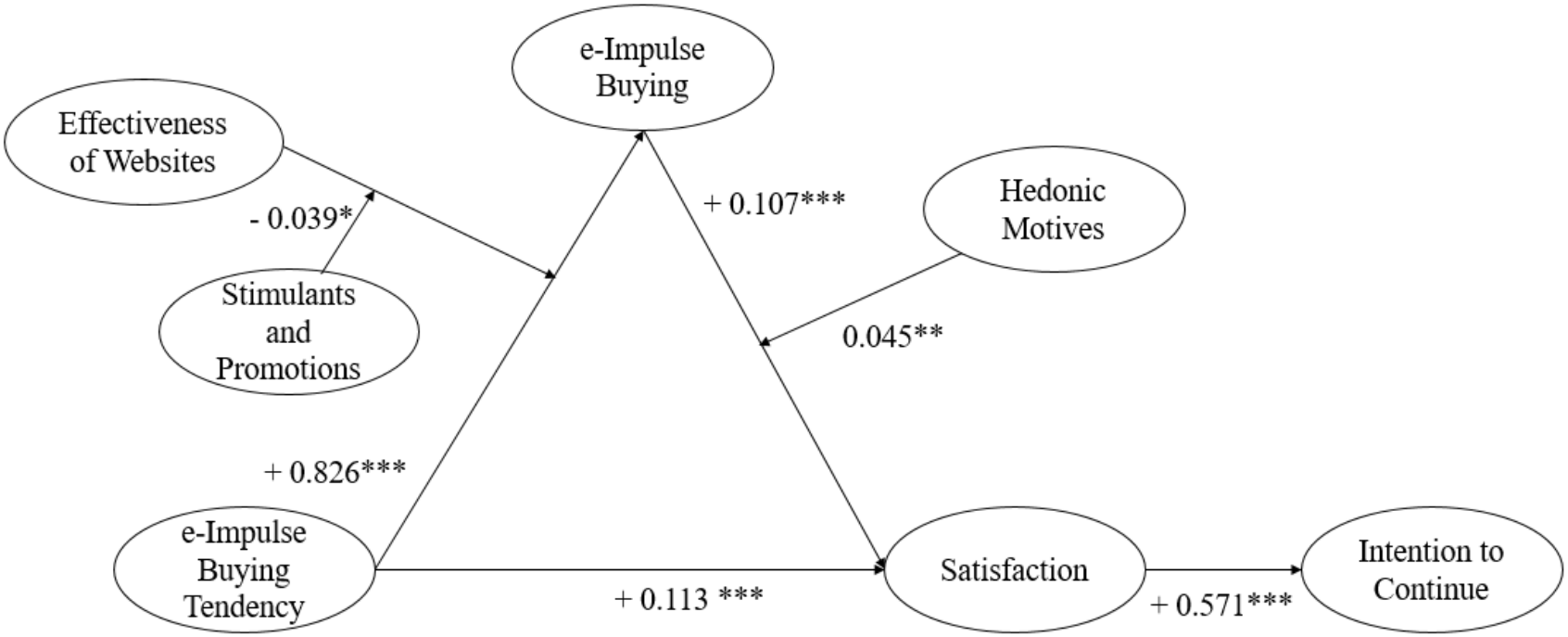


Figure 4 Empirical Model [Significance level: ***p<0.001; **p<0.01; *p<0.05]