



أكاديمية السادات للعلوم الإدارية

# مجلة السادات للبحوث الإدارية والمالية

Sadat Journal of Administrative and Financial Research

المجلد الأول - العدد الثاني - يوليو 2023

Volume 1 | Issue 2 | Jul. 2023



[sjsaf.journals.ekb.eg](http://sjsaf.journals.ekb.eg)

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24426

الترقيم الدولي الإلكتروني Online ISSN  
2974-3389

الترقيم الدولي ISSN  
2974-3370

The impact of the online store environment on Impulse  
Buying Behavior: Urge to Buy Impulsively as a  
mediator.

Complementary Research submitted in partial  
fulfillment of the requirements for the Degree

of

*Master of Philosophy in Marketing*

Under the supervision

Of

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2023

## Abstract

Impulse buying behavior is determined by several factors, accordingly, it is considered complex and difficult to predict. Therefore, this study has merely focused on the store environment to study its impact on impulse buying behavior. Although such behavior occurs during both online and offline buying, this study is an attempt to explore it in the online context only because prior literature has provided that this context is much more complex than the offline one. Also, this study has contributed to distinguishing the urge to buy impulsively from impulse buying behavior and combined them in one model to examine its mediating effect on the relationship between the online store environment and impulse buying behavior.

Originally, the study model explaining the four hypotheses was proposed based on the S-O-R theory, then important literature was reviewed. This study adopted the quantitative method to collect its primary data using the questionnaire tool. The questionnaire has been distributed directly to Amazon users after contacting Amazon.eg which directed the researcher to get the authorization from (Amazon U.S.). So, the questionnaire's link was shared with them to verify its origin and make sure that this will not invade their customers' privacy or confidential information, and it is for a learning purpose. Then, a total of 206 responses have been collected for analyzing them using Structural Equation Modelling approach, and it has also been used to test the proposed study model which suggests that the online store environment affects impulse buying behavior by influencing consumers' urge to buy impulsively. Moreover, a Confirmatory Factor Analysis was adopted to assess the model's suitability for the study. The results of the mediating test show that the urge to buy impulsively fully mediates the relationship between the online store environment and impulse buying behavior.

Key Words: online store environment, website characteristics, E-commerce, E-retailing, Amazon website, impulse buying behavior, urge to buy impulsively.

## المستخلص

يعتبر سلوك السراء الاندفاعي من السلوكيات التي تحددتها العديد من العوامل المتشابهة؛ لذا فإن التنبؤ به يعد صعبًا وشائغًا. نتيجة لذلك، ركزت هذه الدراسة على بيئة المتجر فقط من بين العديد من العوامل المؤثرة لدراسة تأثيرها على سلوك السراء الاندفاعي. وعلى الرغم من أن هذا السلوك يحدث أثناء السراء سواء من المتاجر التقليدية أو من المتاجر الإلكترونية، إلا أن هذه الدراسة حاولت إلقاء الضوء على حدوثه أثناء السراء من المتاجر الإلكترونية فقط؛ استنادًا إلى ما تقدمت به الدراسات السابقة من نتائج مفادها أن دراسة بيئة المتجر الإلكتروني تعد أكثر تعقيدًا من بيئة المتجر التقليدي. كما تناولت هذه الدراسة أيضًا الفرق بين الرغبة في السراء باندفاع وسلوك السراء الاندفاعي وجمعت كلا المفهومين في الإطار النظري الخاص بها لدراسة دور الرغبة في السراء باندفاع كمتغير وسيط يتوسط العلاقة بين بيئة المتجر الإلكتروني وسلوك السراء الاندفاعي.

اقتُرحت هذه الدراسة نموذجًا يستند إلى S-O-R theory لتفسير الفروض الأربعة، كما تمت مراجعة أهم الأدبيات التي تناولت الموضوع محل الدراسة. تبنت هذه الدراسة الطريقة الكمية لجمع البيانات الأولية باستخدام أداة الاستبيان. تم توزيع الاستبيان عن طريق شركة أمازون مباشرة بعد التواصل مع فرع أمازون في مصر الذي أشار إلى ضرورة التواصل مع الفرع الرئيسي لأمازون في أمريكا حيث تمت مشاركة اللينك الخاص بالاستبيان على صفحات التواصل الاجتماعي الخاصة بأمازون بعد التأكد من أنه آمن ولم يصمم لاختراق الموقع أو الحصول على بيانات العملاء السرية، وأنه لغرض بحثي فقط. بعد ذلك، تم تحليل 206 استجابة باستخدام نمذجة المعادلات البنائية (SEM approach)، كما تم استخدامه أيضًا في اختبار نموذج الدراسة الذي يقترح الباحث من خلاله أن بيئة المتجر الإلكتروني تؤثر على سلوك الشراء الاندفاعي من خلال الرغبة في الشراء باندفاع كمتغير وسيط بينهما. علاوة على ذلك، تم تبني التحليل العاملي التوكيدي (CFA) لتقييم مدى ملائمة النموذج المستخدم في الدراسة. وقد توصلت نتائج اختبار نموذج الدراسة إلى أن الرغبة في الشراء تتوسط كليًا العلاقة بين بيئة المتجر الإلكتروني وسلوك الشراء الاندفاعي.

الكلمات المفتاحية: بيئة المتجر الإلكتروني، خصائص موقع الويب، التجارة الإلكترونية، تجارة التجزئة الإلكترونية، موقع أمازون، سلوك الشراء الاندفاعي، الرغبة في الشراء باندفاع.

## 1. Introduction

Consumer behavior research has many important aspects such as purchasing behaviors and more specifically purchasing outcomes. Based on that, efforts have been devoted to a better understanding of impulse purchasing (Piron, 1990; Rook, 1987; Rook & Hoch, 1985), unplanned purchasing, and planned purchasing (Iyer, 1989). Since 1950 marketing and consumer behavior researchers have sought to examine a prevalent phenomenon denoted as “impulse buying” (Clover, 1950; West, 1951). During the 1980s, researchers conceptualized impulse buying based on the consumer’s emotional and psychological reactions (Rook, 1987; Rook & Hoch, 1985). However, in the 1990s, the revision of impulse buying definitions revealed that impulse purchases can be defined as unplanned purchases caused by exposing consumers to a stimulus that leads to making the impulse purchase decision on the spot (Piron, 1990). In sum, an unplanned purchase is different from impulse buying because the latter happens on the spot when the consumer first sees the product, whereas the former is decided later and probably away from any product stimulus. For over 70 years, researchers have strived to comprehend impulse buying behavior, but the main causes of it were not clear as they are today.

Therefore, the previous literature on this behavior revealed that a better understanding of it is stemmed from identifying the factors affecting it. Thus, many researchers endeavored to introduce three primary categories for these factors: emotions and internal states; the personal attributes of consumers; and environmental factors (Dawson & Kim, 2009; Chang et al., 2011; Turkyilmaz et al., 2015; Sultan et al., 2018). But, in this research, the researcher narrowed the scope of these factors like Wahyu et al. (2017) who studied the online store environment and how it increases the emotions of a website visitor, transforms them into a more positive direction, and triggers the buying decision process during online shopping because these cues constitute a significant aspect of shoppers’ experiences and create a favorable effect on the buyers. Thus, this drives them to conduct impulse buying by

stimulating their urge to buy impulsively (Le, 2018). As a result, the researcher differentiated between the Urge to Buy Impulsively and actual Impulse Buying Behavior because the former happens when the consumer encounters a strong desire to buy things suddenly, but it ends at this stage without any actual purchase, whereas the latter goes beyond the mere desire to buy and drives the shopper to buy from the store because it fulfills his impulsive desire.

## 2. Theoretical Framework

### 2.1 The S-O-R model:

The first part of the S-O-R model is the “Stimulus”, which refers to the stimuli that encourage consumers to buy a product or service, and they can be internal as well as external stimuli (Iftikhar & Iqbal, 2020). The characteristics of consumers represent the internal stimuli (Amarnath & Jaidev, 2020) whereas situational, marketing, and website factors refer to the external stimuli (Lee & Gan, 2020). The second part is the “Organism”, which is associated with the consumers’ internal evaluations and refers to their affective and cognitive reactions (Mehrabian & Russell, 1974). The emotional responses stimulated by the consumer’s interactions with the environment represent the affective reaction, whereas the mental process that is derived from the consumer’s thinking or evaluation of the environmental stimuli refers to the cognitive reaction (Chan et al., 2017). In sum, the organism refers to the internal states that intervene between the external stimuli and the actual responses to them. The last part is the “Response”, which represents the undertaken activities such as the decision to buy (Demangeot & Broderick, 2016) and impulse buying (Chang et al., 2013).

### The study model:



Figure 1 (The illustrative figure of the study model)

In the above part, the S-O-R model was explained through its main three components. The S-O-R model focuses on how the consumers’ cognitive systems process inputs from the environment and how that processing leads to a final reaction (Wang & Chang, 2013). Prior research has applied the S-O-R model to the e-retail environment and found that the online environmental cues influence consumers’ internal states and which consequently affects their behaviors toward the e-retail platform (Eroglu et al., 2003). Also, many studies analyzed consumer behavior in an e-commerce environment by employing the same model (Ismail, 2017; Yadav & Rahman, 2018). Therefore, previous research has recognized the significance and relevance of the S-O-R model in delineating consumers’ internal states and behavioral responses to environmental stimuli in the online context. As a result, this model provides a systematic framework for assessing the impact of the e-retail website characteristics (external

environmental stimuli) on the Urge to Buy Impulsively (Organism), which acts as a mediator between them and the consumers' impulse buying behavior.

## 2.2 Store environment

### 2.2.1 The store environment in both contexts (offline and online)

Prior studies have revealed that the dimensions of the online store environment are based on the main constituents of the store environment in traditional stores. For example, Aragoncillo (2018) revealed that individuals cannot engage in impulse purchasing behavior without noticing the product. As a result, the product display is evenly significant in online stores and physical retail stores. Therefore, prior research has considered the website's ease of use and attractiveness to be equivalent to the physical store's layout and product display (Kacen & Lee, 2002; Verplanken & Sato, 2011; Chung, 2017). Also, during online shopping, consumers cannot have answers to their queries by asking salespeople because the sales team cannot recommend or suggest an extra product or aid them immediately when needed (Xing et al., 2016). Thus, it becomes more essential than before for online retail stores to have a website interface that is derived from effortless navigation and intuitive operations to conquer the absence of personalized communication in physical retail stores besides the website's ease of use, visual appeal, and attractiveness (Hussain, 2018).

Generally, the functional layout and speed have been proven to be significant for the website's success or failure in the e-retail environment, but they do not apply to the store environment in physical retailing (Roggeveen et al., 2020). Also, the website's aesthetics is crucial in the online shopping environment compared to the aesthetics of offline stores, which are governed by a different set of rules (Dittmar et al., 1996; Tuyet et al., 2003; Xisng et al., 2016). Similarly, the speed and ease of transition from one step to another are also significant factors, which enhance the consumers' moods and cause impulse buying behavior (Hussain, 2018). Furthermore, introducing an easy-to-navigate website to consumers indicates that this website is easy to use as effortless navigation represents a virtual walk for them. So, online retailers are competing to provide intuitive, convenient, and logical steps to diminish the individuals' mental efforts while navigating the website (Hussain, 2018). Also, a reasonable level of satisfaction is provided to consumers making them feel more familiar with the store, and this will consequently facilitate their decision-making (Ata, 2021). Whereas introducing a complicated website requires an extra mental effort to navigate it, and this will lead to a negative mood and deter the consumer's quick purchase decision (Chein et al., 2020). In sum, analyzing the prior research on impulse buying behavior in traditional retail stores has differentiated this research from the others because it helped the researcher prioritize the most crucial factors in the offline store environment such as the product display, store layout, colors, and the existence of sales staff, which enhanced introducing their equivalent factors in the online store environment that include the website characteristics like the ease of use, visual appeal, and effortless navigation. The above literature on the store environment enabled the researcher to choose the main three website characteristics that are significant in

creating it in the online context (i.e., ease of use, visual appeal, and perceived enjoyment). The main three website characteristics in this research are as follows:

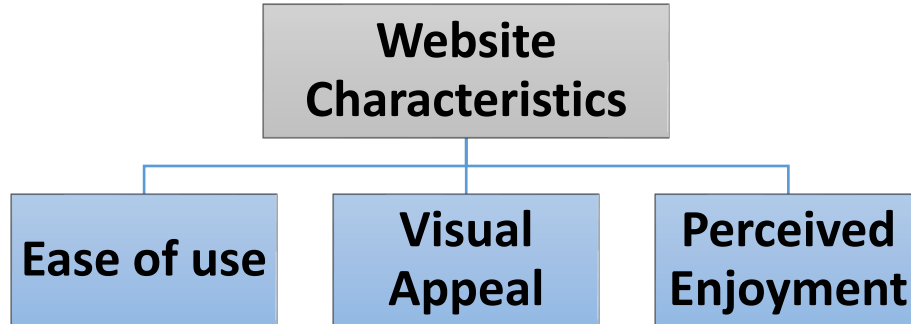


Figure 2 (The main website characteristics)

## 2.2.2 The online store environment

### Ease Of Use

During online shopping, customers tend to make unplanned or immediate purchases because their intention might be associated with the complexity or simplicity of the website (Rezaei et al., 2016). Therefore, Castaneda et al. (2009) referred to the term “ease of use” as the extent to which a potential customer expects a website to be effortless for them, in other words, this notion is closely related to the overall structure of the system. Also, Parasuraman et al. (2005) indicated that fulfilment, efficiency, and goodness of the website’s organization are the most important aspects of the website’s ease of use which reflects on its service quality. As a result, lowering the system’s ease of use results in having many obstacles, which most of the time require a specific level of skill and learning to use or operate the systems, and this influences the users’ attitude and most of the time has a negative impact, whereas enhancing the website’s ease-of-use can contribute to efficiency augmentation (Venkatesh et al., 2003). Several researchers have also indicated that ease of use can affect the observed website usefulness but not vice versa, accordingly, introducing an easier website for individuals to use will augment the consumers’ exploration of the website, and this will allow the users to utilize their saved time and effort in a different task. Hence, this can encourage them to complete more tasks with the same amount of effort (Castaneda et al., 2009).

### Visual Appeal

Visual appeal has become highly significant in many fields such as marketing, thus, many marketing researchers have employed it successfully like Veryzer and Hutchinson (1998) who applied this concept (i.e., visual appearance) to consumer research and development of new products. The online store design serves as a substitute for visual appearance because the researchers utilize various terms to define the aforesaid phenomenon. Gulas and Block (1995) defined online store design as the extent to which the website aesthetics are considered attractive by individuals, while Parboteeah et al. (2009) concluded that visual appeal includes some elements that aid in improving the entire presentation of a website such as display, fonts

and visual graphics. The literature pointed out that visual appeal is considered one of the website's quality factors and it has a direct impact on the customers' impulsive buying behavior, therefore, it is employed to make customers engage in such behavior (Loiacono et al., 2002). Accordingly, Parboteeah et al. (2009) revealed that interacting with a visually appealing website provokes customers' buying intentions and improves their satisfaction with online impulse buying. A visually appealing website includes displaying various fetching pictures with charming colors, and this will probably produce more satisfaction when the customers get involved in purchasing a product (Liu et al., 2013).

### **Perceived enjoyment**

Perceived enjoyment has been used by several researchers like Eroglu et al. (2001) to understand the emotional reactions exhibited by consumers during browsing specific websites. Perceived enjoyment was first described by Davis (1989) as the extent to which utilizing a website store for buying is regarded as a joyful place due to its capacities without any performance worries that might be anticipated. Likewise, Teo and Noyes (2011) described perceived enjoyment as the satisfaction level that individuals feel during their online shopping on a particular website, in terms of its capability of making them happy, while excluding the performance that individuals will face. Similarly, Childers et al. (2002) proposed that individuals will buy from a website that makes their online shopping more enjoyable on it. The perceived enjoyment concept focuses on the degree to which online shoppers perceive that using a specific technology is enjoyable or exciting, rather than focusing on the technology itself (Rouibah et al., 2016). Accordingly, Padilla-Melendez et al. (2013) proposed that individuals consider perceived enjoyment an experience while utilizing different websites during their online shopping, and this is a key determinant of information systems' acceptance. Additionally, many researchers considered perceived enjoyment as the main determinant of expecting website utilization for hedonic reasons. For example, individuals consider browsing specific websites for personal reasons such as to increase their state of pleasure, amusement, and playfulness; therefore, web browsing is perceived as a new way of leisure (Hasan, 2016). Moreover, Sanchez-Franco and Roldan (2005) theorized that the individual's attitude toward utilizing a website, and their intent to utilize a website and return to that distinct website are influenced by perceived enjoyment.

## **2.3 Online Impulse Buying Behavior**

The OIBB is defined as a "spur-of-the-moment" which refers to feeling a slight or no intention to buy a product online without a rationale, and this happens without an analysis of the buying need (Bellini et al., 2017; Chan et al., 2017). Online impulse buying behavior refers to the buyer's purchasing action not only the urge to buy impulsively (Hoa, 2021). In analyzing the OIBB, some researchers revealed that the decision-making process of purchasing impulsively differs from the traditional one because consumers do not follow the primary phases of information search and evaluation of alternatives (Iftikhar & Iqbal, 2020; Karim et al., 2021). However, Browsing the e-retail website gives the consumer an initial



awareness of a product and this enabled the online shoppers to search for information about the product before purchasing it, but in some cases, in the impulsive buying process, consumers consider this initial awareness sufficient to make the purchase decision since the online store stimuli evoked their urge to buy impulsively (Awolaja, 2020).

## **2.4 Urge to Buy Impulsively**

### **2.4.1 Urge to Buy Impulsively definition:**

The urge to buy impulsively serves as the desire to make an unexpected purchase, and this desire comes after triggering the consumers' thoughts, afterwards, the urge possibly becomes so strong and persistent that it requires immediate action (Hirschman, 1985). Previously, many researchers endeavored to analyze the factors affecting the Urge to Buy Impulsively such as Beatty and Ferrell (1998) who proposed that consumers feel a state of desire after observing something in the environment surrounding them. This desire is sudden and spontaneous, and it precedes actual impulse buying. Also, the UBI has been defined as a state of desire driven by external and internal factors that create a favorable effect on the buyers and stimulate their impulse buying behavior based on their urges (Chein et al., 2020). However, The UBI is not only related to external and internal factors but also the product's nature because some product categories are directly associated with emotions such as sentiments of joy, affection, and fancy for purchasing a product on a whim, thus, these emotions encourage the shoppers to buy impulsively (Shahpasandi et al., 2020).

### **2.4.2 The mediation effect of UBI**

The urge to buy impulsively acts as a mediator between the stimulus and the response (Rook, 1987). Accordingly, Beatty and Ferrell (1998) proposed that UBI occurs due to experiencing a state of desire which results from noticing an item in the retail environment, furthermore, it is hedonically complicated, abrupt, sometimes uncontrollable, and persistent (Piron, 1991). Then, the individual decides whether to act on this urge by buying the desired item or not, for instance, Rook (1987) stated that making the impulsive purchase decision happens only after encountering the UBI. In other words, not all urges are followed by taking the purchase decision, however, the possibility of impulsive buying occurrence increases when the customers experience more urges to buy impulsively (Beatty & Ferrell, 1998).

## **3. Literature Review and Hypotheses Development**

Several researchers indicated that impulse buying behavior includes the strong desire or urge to buy impulsively, so when the online store atmospheric cues affect consumers' emotional states, this represents a direct impact on their purchasing outcomes such as impulse buying behavior (Madhavaram & Laverie, 2004; Floh & Madlberger, 2013; Chan et al., 2017). As a result, many researchers have suggested that online atmospheric cues such as web design and navigation can affect online impulse buying behavior using the S-O-R model (Well et al., 2011; Floh & Madlberger, 2013; Li et al., 2016; Sarah et al., 2021). Accordingly, Sari and Laksmidewi (2021) proposed that the web environment significantly affects impulse buying

in the online context. Also, Kimiagari and Malafe (2021) have implied that some website quality dimensions such as effortless navigation are the direct predictors of online impulse buying. Similarly, based on the same viewpoint which implies that impulse buying behavior is not separated from the positive states that the customers feel after being exposed to the web environment, some researchers have proved that good web atmospherics like navigation, organization, informativeness, and entertainment can lead to the occurrence of impulse buying behavior due to formulating positive attitudes toward the website (Gao and Bai 2014; Hsieh et al. 2014). Based on that, the first hypothesis will be as follows:

**H1: The online store environment affects OIBB.**

Many studies considered the urge to buy impulsively the main predictor of impulse buying behavior (Zafar et al., 2020; Herzallah et al., 2021; Bao et al., 2022), but this desire to buy is also affected by other stimuli such as website browsing which stimulates the shoppers' urge to purchase more, and frequently they find themselves unable to resist this urge or desire (Habib & Qayyum, 2018; Zhang et al., 2018; Zheng et al., 2019). Thus, prior studies postulated the positive relationship between the urge to buy impulsively and impulse buying behavior (Xu et al. 2020; Chein et al., 2020; Mattia et al., 2021). Previously, some researchers like Rook and Fisher (1995) illustrated that UBI refers to a powerful or irresistible desire to buy an item impulsively, but most customers may encounter UBI without converting this desire into an actual impulsive purchasing behavior. Accordingly, the second hypothesis will be as follows:

**H2: The urge to buy impulsively affects OIBB:**

Several studies indicated a positive relationship between store atmosphere and the urge to buy impulsively because the store environment stimulates consumers' positive emotions, which in turn influences their urge to buy impulsively (Rook & Fisher, 1995; Youn & Faber, 2000; Wells et al., 2011; Floh & Madlberger, 2013; Xiang et al., 2016; Akram et al., 2017; Herzallah et al., 2021). These studies based their results on the findings of Beatty and Ferrell (1998, p.172) who indicated that the urge to buy impulsively is derived from encountering an object in the surrounding environment, therefore, they referred to consumers' urge to buy impulsively as a defining characteristic of impulse buying. Accordingly, recent studies specified some online environmental factors such as the website's visual appeal and perceived enjoyment that can affect consumers' urge to buy impulsively, and this results in impulse buying behavior (Xiang et al., 2016; Akram et al., 2018). That was compatible with the results of Parboteeah et al., (2009) who put the website's visual appeal, enjoyment, information fit-to-task, and the urge to buy impulsively into the same model to propose that the website's usefulness was considered as an antecedent of enjoyment, while the enjoyment was hypothesized as the direct determinant of the urge to buy impulsively. Also, online environmental cues like perceived enjoyment are related to the hedonic dimension because they are considered the intrinsic value of an e-commerce website that stimulates consumers' feelings of excitement; thus, several researchers have indicated that perceived enjoyment has

a positive relationship with consumers' urge to buy impulsively (Salehi et al., 2013; Karim et al., 2021). As a result, the third hypothesis will be as follows:

**H3: The online store environment affects UBI in the online context:**

As mentioned above, many studies used consumers' urge to buy impulsively to predict impulse buying behavior (Rook & Fisher, 1995; Youn & Faber, 2000; Wells et al., 2011; Floh & Madlberger, 2013; Xiang et al., 2016; Akram et al., 2017; Herzallah et al., 2021), but many factors stimulate their urge and cause impulse buying behavior to happen among them, one of them is the online store environment (Floh & Madlberger, 2013; Lin & Lo, 2016; Yi & Jai, 2020; Cavazos-Arroyo & Máynez-Guaderrama, 2022). In the online context, many researchers have investigated the characteristics of the online environment and suggested that they can positively affect customers' shopping behaviors like impulse buying by stimulating their urge to buy impulsively (Adelaar et al., 2003; Loiacono et al., 2007; Kukar-Kinney et al., 2009; Parboteeah et al., 2009). Other researchers added to the literature by categorizing the major dimensions of an online environment that causes impulse buying behavior by arousing consumers' urge to buy impulsively into effortless navigation (Palmer, 2002), visual appeal (Tractinsky et al., 2000; Van der Heijden & Verhagen, 2004; Loiacono et al., 2007), website's ease of use (Loiacono et al., 2007; Liu et al., 2013; Turkyilmaz et al., 2015; Prihantoro et al. 2018), and perceived enjoyment (Xiang et al., 2016; Akram et al., 2017). So, the fourth hypothesis will be as follows:

**H4: UBI mediates the relationship between the online store environment and OIBB:**

## 4. Research problem

In this research, the website's quality dimensions such as ease of use have been demonstrated in detail because they are the main determinants of it (Suryani et al., 2020), in addition to that, these dimensions are emerging and may differ depending on the context whether they are studied in hospitality services (Ali, 2016), or the travel industry (Jiménez-Barreto & Campo-Martínez, 2018), or e-retailing (Micu et al., 2019). However, regardless of which industry the website quality is measured, all previous studies have proven that website's ease of use is one of the critical key elements of online business development and success (Thelwall, 2000; Loiacono et al., 2002; Hernandez et al., 2009; Loureiro, 2015; Ali, 2016; Jiménez-Barreto & Campo-Martínez, 2018). Furthermore, other researchers in mobile commerce have indicated that ease of use is one of the main indicators of the system's quality (Tsao et al., 2016; Mohammad Salameh & Abubakar, 2018).

The twelve dimensions of website quality have not included only the website's ease of use but also its visual appeal because it is one of the major determinants of the website's entertainment and can positively affect users' emotional states (Loiacono et al., 2002; Kim & Kim, 2020). Therefore, previous studies have revealed that website developers and customers consider visual appeal a significant dimension of website quality (Garcia-Madariaga et al.,

2019; Suryani et al., 2019) because the visually appealing interface can attract customers, in addition to that, it plays a crucial role in how they judge service quality (Lee & Lin, 2005; Hongxiu et al., 2009; Khushdil, 2018; Paulo, Tiago & Almira, 2019). Furthermore, individuals' interactions with a visually appealing website elicit their buying intentions and improve the sensation of satisfaction (Parboteeah et al., 2009), and this may finally lead consumers to be involved in purchasing products from certain e-retailing websites (Liu et al., 2013).

In some prior studies, the researchers have denoted that perceived enjoyment is a subjective experience because it differs due to various personal feelings in the same environment and it refers to the degree to which the individuals feel happy, good, and enthusiastic during their search, collection, and browsing for details and buying goods (Shiau et al., 2013; Xu et al., 2014; Nguyen, 2015). Therefore, the managers of e-commerce websites are always confirming that consumers' interactions with these websites or mobile shopping apps and their navigation through the app to search for their desired products quickly will result in consumers' perceived enjoyment (Kumar et al., 2018; Chen et al., 2018). Similarly, Hussain (2018) has indicated that perceived enjoyment is positively related to the website's visual appeal, thus, he suggested that consumers' reactions to an e-commerce website can be developed by making the website more creative, innovative, and visually appealing.

In conclusion, this research has focused on the aforesaid website characteristics because many prior studies affirmed their significant role in creating a successful e-retail website. Also, analyzing the previous studies on consumer behavior has indicated that providing consumers with a successful e-retail website that contains these three dimensions creates the appropriate online environment. Furthermore, the online store atmosphere has been examined by many researchers who indicated its positive relationship with consumers' impulse buying behavior, but this did not shock them because many researchers had previously introduced similar results while analyzing the relationship between store environment and impulse buying behavior in traditional retailing where they found it also positive. Additionally, this research sought to differentiate between consumers' urge to buy impulsively and impulse buying behavior based on prior studies which have proposed that the former represents only the desire to buy impulsively without taking any spontaneous action whereas the latter reflects the actual impulse buying behavior.

## 5. Aim of the study

The main aim of this research is to study the impact of employing the main three dimensions of the online store environment (i.e., visual appeal, ease of use, and perceived enjoyment) on enhancing impulsive buying behavior in the e-retailing context through achieving the following objectives:

- Analyzing the influence of the online store environment (website characteristics) on online impulsive buying behavior.

- Analyzing the mediation effect of the UBI on the relationship between the online store environment (website characteristics) and online impulsive buying behavior.

## 6. Research Methodology

### 6.1 Research Design

In this research, the researcher selected a quantitative research design to accomplish the research purpose, in addition to acquiring a better understanding of the research problem, furthermore, previous studies denoted that the reason behind employing a certain research design is to acquire reliable, valid, and replicable data (Bryman & Bell, 2007; Osuagwu, 2020). So, the researcher should develop the research design before choosing data collection methods and collecting the actual data. The quantitative research design was employed because it can produce discrete and quantifiable values (Kothari, 2007; Bloomfield & Fisher, 2019), and it is also considered an analytical approach to research, where the researchers examine an objective reality that is independent of any observations (Rovai et al., 2014; Al-Ababneh, 2020). Additionally, this objective reality can be broken down into tiny controllable pieces that constitute the research hypotheses or objectives to be understood. As a result, the researchers can produce data and test hypotheses using various data collection methods thanks to relationships among research variables. Afterward, the researchers can embark on the process of data collection and analysis where they use mathematical and statistical methods to get the study conclusions (Phillips & Burbules, 2000). In this research, the descriptive research design was employed, and it is a quantitative research that does not include experiments during the process of data collection, therefore, it is also called a “non-experimental design”. Moreover, descriptive research is classified into three categories: causal-comparative design, correlational design, and survey design (Castillo et al., 2019).

### 6.2 Research Method

This study aims to follow the quantitative approach (Rezigalla,2020) in studying the influence of the online store environment on impulse buying behavior in e-retailing. Therefore, the survey method was employed because it helps the researcher examine his study population by providing a numeric description of opinions, trends, attitudes, and opinions of a sample population (Siedlecki, 2020). Additionally, this method supports the researcher in gathering the required amount of data from many people typically in a statistical form within a relatively short period using closed-ended questions (McNeill & Chapman, 2005). Furthermore, several studies have relied on the survey method because using it enables the researchers to gather data from the study sample, then decide on that sample’s status regarding one or more variables within a specific period (Mugenda & Mugenda, 2003). As a result, this method is useful for researchers when they are examining numerous variables by considerable sample size and rigorous statistical analysis (Sjøberg et al, 2007).

### 6.3 Data collection procedure and instrument used

The researcher designed a self-administrated questionnaire via Google Forms and distributed it by communicating with Amazon and asking them to post the questionnaire link on Amazon's official pages (i.e., Facebook and Instagram) in exchange for the results of the research. The questionnaire tool was adopted because it aids in measuring the observed variables and collecting data from respondents by providing them with structured questions for which answers are needed (Garson, 2002). Furthermore, the questionnaire is a cost-effective tool, and less time-consuming, besides having a little chance of bias. Also, this tool is considered one of the preferred procedures in quantitative research because using it helps the researcher analyze consumer behavior which may not be possible to analyze directly (Bryman, 1984; Sommer & Sommer, 1997).

**Table 1 (Measurement of the research variables)**

Construct	Scale items	Source	References
Ease of use	5 items	(Ahn et al., 2007)	(Wiranata & Hananto, 2020). (Habib & Qayyum, 2018). (Fitri, 2018). (Akram et al., 2017). (Prawira & Sihombing, 2021).
Visual appeal	5 items	(Loiacono et al., 2002)	(Longstree et al., 2021). (Karim et al., 2021) (Hoa, 2021) (Anindita & Perdana, 2022) (Tugulea & Maha, 2020).
Perceived enjoyment	5 items	Castaneda et al., 2009)	(Hussain, 2018). (Karim et al., 2021). (Herzallah et al., 2021). (Tugulea & Maha, 2020). (Lin et al., 2022).
Urge to Buy Impulsively	4 items	(Beatty and Ferrell, 1998) (Rook and Fisher, 1985)	(Habib & Qayyum, 2018). (Alavijeh et al., 2018). (Herzallah et al., 2021). (Xu et al., 2017). (Iftikhar & Iqbal, 2020). (Iftikhar, 2020).
Impulse Buying Behavior	3 items	(Beatty and Ferrell, 1998)	(Fitri, 2018). (Hussain, 2018). (Karim et al., 2021). (Akram et al., 2018). (Akram et al., 2017). (Alavijeh et al., 2018).

## 6.4 Research population and sample

In this research, the researcher adopted a convenience sampling approach like Albarq (2021) who suggested its appropriateness due to the dispersion of data among survey respondents who have experienced buying online, especially the ones who had transacted online three times or more. Also, Prashar et al. (2017) used a convenience sampling technique to collect primary data, but before distributing the final version of their questionnaire, it was piloted among a sample of 42, then it was finalized for the survey after adjusting its language. Similarly, Fitri (2018) chose a convenience sampling approach for the selection of a sample because he was studying the impulse buying behavior of Shopee customers, so, he designed a questionnaire for the customers of this website. As a result of choosing that sampling technique, this study may have a lack of generalizability to the customers of Shopee because obtaining data and full details about the population using this website was difficult for the researcher due to several limitations such as time and money constraints. Likewise, this study has the same constraints, therefore; it used the same sampling technique to explore the impact of the online store environment created by Amazon through its adoption of the website characteristics on impulse buying behavior of its customers. Also, the researcher employed the sampling guidelines of Krejcie and Morgan (1970) who suggested taking a sample size of 384 which is considered enough for the unknown population. However, the researcher employed the oversampling method as suggested by Miller and Salkind (2002) and Keyton (2015) who recommended increasing the sample size by 40 to 50% to deal with the low response rate problem. Hence, the researcher increased the total sample size of 384 by 50%. Thus, the questionnaire was distributed to 576.

## 7. Statistical Analysis (Structural Equation Modeling)

### 7.1 Data preliminary examination

#### 7.1.1 Normality Test

For measuring normality, many researchers recommended using two values to measure the shape of data distribution: Skewness and kurtosis. (Hair et al., 2017; Kline, 2016; Hair et al., 2014). Skewness refers to measuring the symmetry of the data distribution, while kurtosis refers to the height of the distribution (Field, 2013).

Table 2: Normality Diagnostics

Construct	Symbol	N	Skewness	Kurtosis
The website's ease of use	X1	206	-0.583	0.904
The visual appeal	X2	206	0.225	-0.139
The perceived enjoyment	X3	206	-0.206	-0.495
The online store environment	X	206	-0.129	0.049
The Urge to Buy Impulsively	M	206	-0.011	-0.345
The Impulse Buying Behaviour	Y	206	0.14	-0.371

Remark: Normality assumption attained

#### 7.1.2 Common Method Bias

Table 3 presents the results of the test, which indicate that the common method bias does not affect the data since the total variance of the first factor is about 30.9%, and this value is less than the threshold (50%).

**Table 3: Results of Harman's Single-Factor Test**

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.638	30.852	30.852	8.638	30.852	30.852
2	2.127	7.596	38.448			
3	2.045	7.302	45.750			
4	1.550	5.535	51.285			
5	1.334	4.764	56.049			
6	1.156	4.129	60.179			
7	1.002	3.577	63.756			
Extraction Method: Principal Component Analysis.						
Remark: No problem exists						

## 7.2 Confirmatory Factor Analysis

### 7.2.1 CFA for the measurement model

The model fit indices are shown on the top of figure 3, where the Chi-square value divided by its degrees of freedom (df) is less than 5, SRMR is less than 0.1, RMSEA is less than 0.08, PClose greater than 0.01, and the other indices are above 0.9. Therefore, the CFA for the measurement model underlying this study in figure (3) has an excellent level of fit.



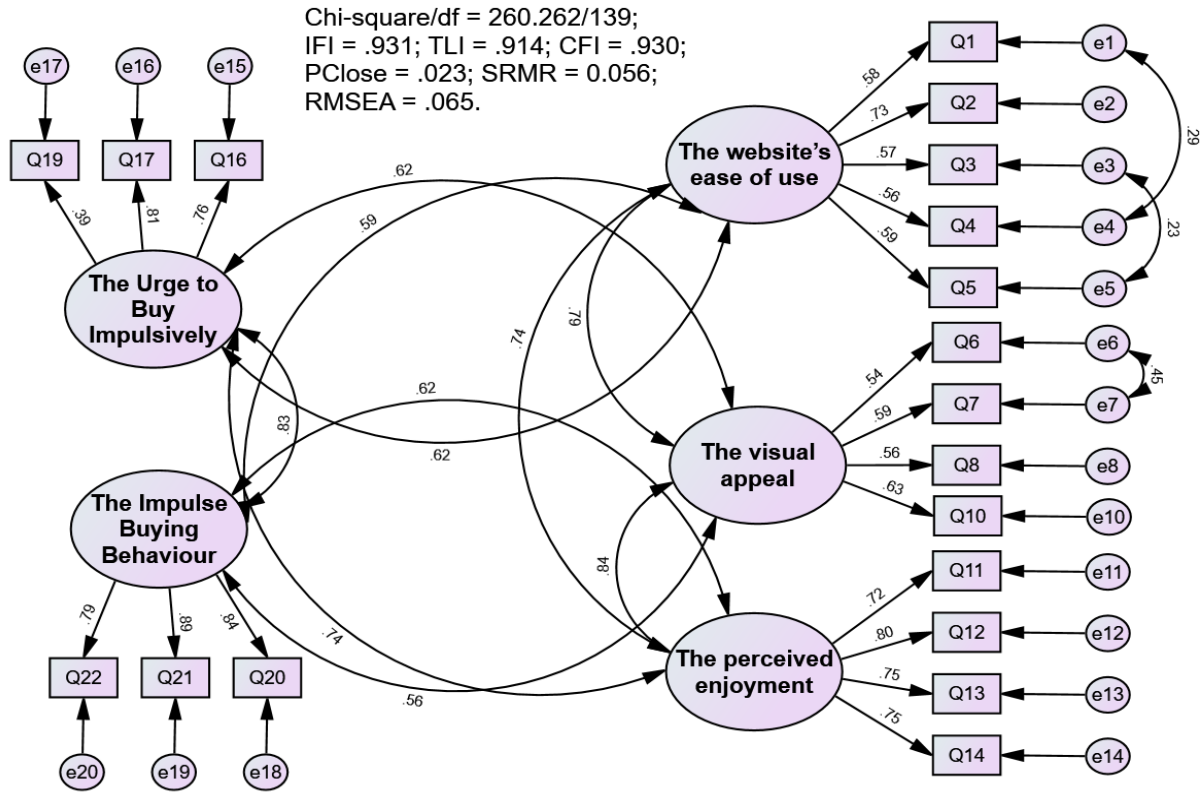


Figure 3: CFA for the measurement model

Table 4: Results of model fit indices

Measure	Estimate	Remark
CMIN	265.553	--
DF	143	--
CMIN/DF	1.857	Excellent
CFI	0.929	Acceptable
TLI	0.915	Acceptable
IFI	0.93	Acceptable
SRMR	0.057	Excellent
RMSEA	0.065	Acceptable
PClose	0.026	Acceptable

## 7.2.2 Reliability and validity testing

Table 5: Reliability and Validity Analysis

Construct	Cronbach's Alpha		CR		AVE	
	MLE	PLS	MLE	PLS	MLE	PLS
The website's ease of use	0.764	0.765	0.744	0.766	0.37	0.516
The visual appeal	0.724	0.726	0.672	0.728	0.34	0.552
The perceived enjoyment	0.84	0.84	0.842	0.841	0.572	0.677
The Urge to Buy Impulsively	0.694	0.688	0.708	0.78	0.466	0.616
The Impulse Buying Behaviour	0.875	0.875	0.878	0.876	0.706	0.801

**Remark: Internal Consistency Reliability and convergent validity attained**

MLE=Maximum Likelihood method; PLS=Partial Least squares method

Due to the limitations of Cronbach's alpha, researchers become more dependent on using other measures of internal consistency such as composite reliability (CR). CR measures the internal consistency while considering that each indicator has a different outer loading. The results in Table 5 show that all constructs had a reliability score of more than 0.70. Figure 4 presents the results of the internal consistency reliability. Those findings provide evidence of the high reliability and sufficient internal consistency of the constructs.

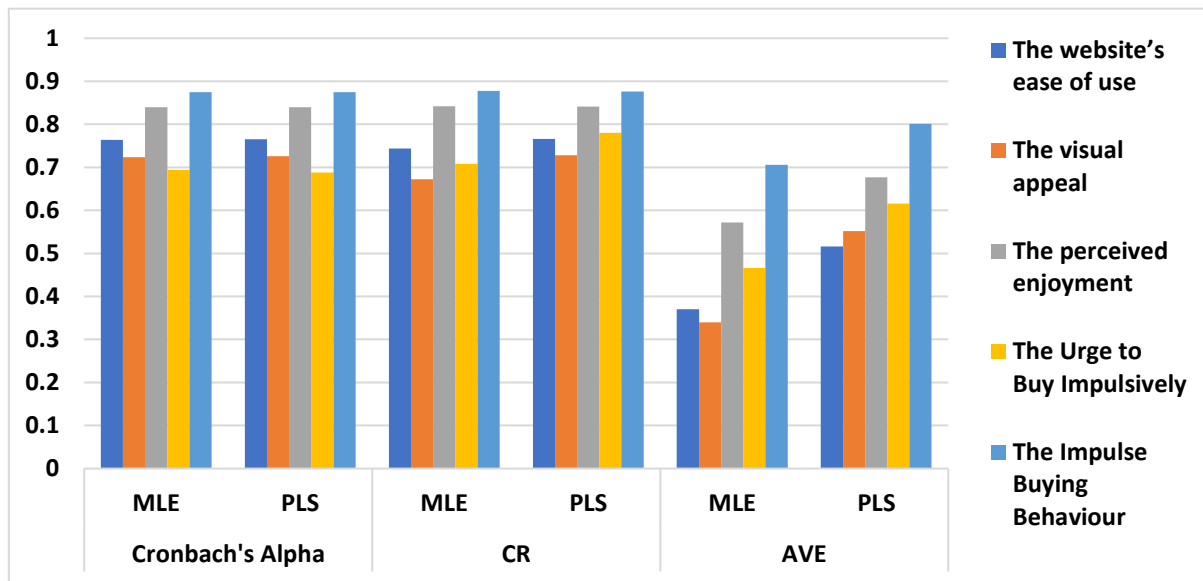


Figure 4 : Summary of reliability and validity indices

### 7.3 Descriptive statistics

From table 6, the descriptive statistics of the independent variable " The online store environment" are as follows ( $M = 3.396, SD = 0.635, CV = 8.69\%$ ), and for the mediator variable " The Urge to Buy Impulsively" as follows ( $M = 3.155, SD = 0.801, CV = 25.38\%$ ), and for the dependent variable, "The Impulse Buying Behavior" as follows ( $M = 2.819, SD = 0.909, CV = 32.25\%$ ).

Table 6: Descriptive Statistic for the Selected Variables

Construct	Notation	N	Mean	SD	CV
The website's ease of use	WEU	206	3.552	0.673	18.95%
The visual appeal	VA	206	3.164	0.747	23.63%
The perceived enjoyment	PE	206	3.471	0.821	23.65%
The online store environment	OSE	206	3.396	0.635	18.69%
The Urge to Buy Impulsively	UBI	206	3.155	0.801	25.38%
The Impulse Buying Behaviour	IBB	206	2.819	0.909	32.25%

### 7.4 Correlation analysis

The Pearson product-moment correlation coefficient was calculated to determine the strength and the direction of the relationship between the online store environment (independent variable), the UBI (mediator), and the IBB (dependent variable). The correlation analysis suggests that all the relationships were statistically significant at 0.001 (i.e., 95% confidence level).

Table 7: Correlation between the main variables

Construct		WEU	VA	PE	OSE	UBI	IBB
The website's ease of use	Pearson Correlation	--					
	P-value	<.001					
The visual appeal	Pearson Correlation	.554**	--				
	P-value	<.001					
The perceived enjoyment	Pearson Correlation	.600**	.586**	--			
	P-value	<.001	<.001				
The online store environment	Pearson Correlation	.830**	.841**	.873**	--		
	P-value	<.001	<.001	<.001			
The Urge to Buy Impulsively	Pearson Correlation	.423**	.420**	.590**	.569**	--	
	P-value	<.001	<.001	<.001	<.001		
The Impulse Buying Behavior	Pearson Correlation	.445**	.432**	.533**	.557**	.657**	--
	P-value	<.001	<.001	<.001	<.001	<.001	

## 7.5 Hypotheses Testing

### 7.5.1 Testing the direct effect

The demonstrated results in Table 8 revealed that there is no direct significant effect of the online store environment on impulse buying behavior ( $\beta = 0.072$ ,  $CR = 0.579$ ,  $P > 0.05$ ) because the significance value is greater than 0.05; therefore, we accept the null hypothesis that states "there is no statistically significant positive effect of the online store environment on impulsive buying behavior".

Table 8: Hypothesis Testing (Direct Effect)

Hypothesis		Estimate	S.E.	C.R.	P-value	Decision
First	The online store environment → The Impulse Buying Behavior	0.072	0.149	0.579	0.562	Rejected
Second	The Urge to Buy Impulsively → The Impulse Buying Behavior	0.78	0.143	5.568	<.001	Accepted
Third	The online store environment → The Urge to Buy Impulsively	0.761	0.109	8.226	<.001	Accepted

The results shown in Table 8 suggested that there is a positive, statistically significant effect of the urge to buy impulsively on impulse buying behavior ( $\beta = 0.78$ ,  $CR = 5.568$ ,  $P < 0.001$ ) because the significance value is less than 0.001; therefore, we reject the null hypothesis and accept the alternative hypothesis that states "there is a statistically significant positive effect of the desire to buy impulsively on impulse buying behavior.". Also, the results shown in Table 8 proposed that there is a positive and statistically significant effect of the online store environment on the desire to buy impulsively ( $\beta = 0.761$ ,  $CR = 8.226$ ,  $P < 0.001$ ) because the significance value is less than 0.001. Accordingly, we reject the null hypothesis and accept the alternative hypothesis that "there is a statistically significant positive effect of the online store environment on the desire to buy impulsively.

### 7.5.2 Testing the indirect effect (Mediating Role)

The results displayed in Table 9 revealed that the UBI significantly mediates the relationship between the online store environment and IBB ( $\beta = 0.594$ ,  $P = 0.002$ ) because the significance value is less than 0.05, Accordingly, we reject the null hypothesis and accept the alternative hypothesis that states "there is a statistically significant effect of the online store environment on impulse buying behavior through the urge to buy impulsively. While the direct effect of the online store environment on impulsive buying behavior is statistically insignificant, the indirect effect is statistically significant; therefore, we are facing full mediation where the desire to buy impulsively fully mediates the relationship between the online store environment and impulse buying behavior.

Table 9: Hypothesis Testing (Indirect Effect)

	Hypothesis	Estimate	S.E.	P-value	Decision
Fourth	The online store environment → The Urge to Buy Impulsively → The Impulse Buying Behavior	0.594	0.137	0.002	Accepted

## 8. Conclusions and implications

During online buying, website characteristics have a crucial role in facilitating the impulse buying process because they constitute a convenient web environment for consumers. Although this study is applied to Amazon.com, the results can benefit other multi-departmental e-retail websites that also need to consider the main website characteristics to increase their sales by stimulating consumers' UBI to make more impulse purchases. The research findings confirm this because 83% of the respondents felt the UBI due to Amazon's ease of use, perceived enjoyment, and visual appeal, but their highest priority was the website's ease of use (51%), then the perceived enjoyment (19.4%) and both are followed by visual appeal (12.6%). However, only 79% of the respondents make impulse purchases from the website because of its ease of use (44.7%), perceived enjoyment (21.8%), and visual

appeal (12.6%). These findings show the difference between consumers' UBI and IBB because the online store environment can easily stimulate their UBI, but it is much more complex to convert this urge into actual impulse buying.

This research has contributed to enriching the knowledge of impulse buying behavior. Initially, impulse buying behavior has become prevalent in both offline and online contexts, and this has generated the curiosity of many researchers to study this phenomenon, but most of the studies introduced it either in the online context or the offline one. Both contexts have some dimensions that constitute the store environment for consumers, so, this study has thoroughly examined them to introduce the main website characteristics in the online context that have equivalents in the offline one; thus, this link between both has developed a better understanding of the online store environment and allowed the researcher to measure it based on a comprehensive comparison between them. Also, the results of this research are consistent with current literature on impulse buying behavior, but it has contributed to a better understanding of such behavior during online shopping as the research findings show that ease of use, visual appeal, and perceived enjoyment increase its likelihood because these aforesaid website characteristics can directly affect consumers' UBI. Furthermore, this research has made a foremost contribution to differentiating between the urge to buy impulsively and impulse buying behavior through the proposed study model, which is a theoretically grounded and tested one, in addition to that, it has demonstrated the full mediating effect of UBI on the relationship between the online store environment and IBB. The results of this research can help e-retailers develop their websites to make them convenient places for shoppers, and this has been achieved by examining the foremost website characteristics creating an enjoyable environment for them. Accordingly, such an environment will make customers feel appreciated and relaxed, and such an environment will encourage them to make more impulse purchases. Therefore, from a practical viewpoint, the researcher suggests that e-retailers should invest in enhancing their websites to encourage impulse buying, especially in making them easy to use and more enjoyable than their competitors. Also, the findings indicate that e-retail store managers should design the web environment carefully for customers who will get highly involved in it to make impulse purchases.

## 9. References

- Adelaar, T., S. Chang, K. M. Lancendorfer, B. Lee, and M. Morimoto. 2003. Effects of media formats on emotions and impulse buying intent. *Journal of Information Technology* 18 (4):247–266.
- Akram, U., Hui, P., Khan, M. K., Tanveer, Y., Mehmood, K., & Ahmad, W. (2018). How website quality affects online impulse buying: Moderating effects of sales promotion and credit card use. *Asia Pacific Journal of Marketing and Logistics*.
- Akram, U., Hui, P., Khan, M.K., Saduzai, S.K., Akram, Z. and Bhati, M.H. (2017), “The plight of humanity: online impulse shopping in China”, *Human Systems Management*, Vol. 36 No. 1, pp. 73-90.
- Al-Ababneh, M. M. (2020). Linking ontology, epistemology and research methodology. *Science & Philosophy*, 8(1), 75-91.
- Alavijeh, M. R. K., Abad, F. G. H., & Akbari, M. (2018). The effect of atmosphere and layout design of online stores on online impulse buying behavior of customers. *Asian Journal of Research in Marketing*, 7(2), 1-14.
- Albarq, A. N. (2021). Effect of Web atmospherics and satisfaction on purchase behavior: stimulus–organism–response model. *Future Business Journal*, 7(1), 1-8.
- Ali, F. (2016). Hotel website quality, perceived flow, customer satisfaction and purchase intention. *Journal of Hospitality and Tourism Technology*,
- Amarnath, D. D., & Jaidev, U. P. (2020). Toward an integrated model of consumer reactance: a literature analysis. *Management Review Quarterly*, 1-50.
- Anindita, R., & Perdana, D. P. (2022). Website Aesthetic in Millennial’s Customer Experience on Satisfaction and Impulse Buying: EWOM as Moderator. *Media Ekonomi dan Manajemen*, 37(2), 210-225.
- Aragoncillo, L., & Orus, C. (2018). Impulse buying behaviour: an online-offline comparative and the impact of social media. *Spanish Journal of Marketing-ESIC*.
- Ata, S. (2021). Evaluating the effects of life satisfaction on impulse buying behavior in terms of online buying. 684080133.
- Awolaja, A. M. (2020). Entrepreneurial Opportunity and Collaborative Research Efforts As Panaceas For Improving Academic Entrepreneurship Among Ekiti State University Staff. *Archives of Business Research*, 8(3), 42-52.
- Bao, Z., & Yang, J. (2022). Why online consumers have the urge to buy impulsively: roles of serendipity, trust and flow experience. *Management Decision*.

Beatty, S. E., & Ferrell, M. E. (1998). Impulse buying: Modeling its precursors. *Journal of Retailing*, 74(2), 169-191.

Bellini, S. and Aiolfi, S. (2020), "Impulse buying behavior: the mobile revolution", *International Journal of Retail & Distribution Management*, Vol. 48 No. 1, pp. 1-17.

Bryman, A. & Bell, E. (2007). *Business Research Methods*, New York, Oxford University Press.

Bryman, A. (1984). The Debate About Quantitative and Qualitative Research: A Question of Method or Epistemology? *British Journal of Sociology*, 35 (1), 75-92.

Castaneda, J. A., Frías, D. M. & Rodríguez, M. A. (2009). Antecedents of Internet Acceptance and Use as an Information Source by Tourists. *Online information review*, 33 (3), 548- 567.

Castillo, A. E., Pacheco, G. V., Hernández-Fernández, L., Manotas, E. N., Borrero, T. C., & Silva, J. (2019). Factorial Analysis in the Intellectual capital's dimensions on micro, small, and medium-sized export enterprises. *Procedia Computer Science*, 160, 567-572.

Cavazos-Arroyo, J., & Máñez-Guaderrama, A. I. (2022). Antecedents of Online Impulse Buying: An Analysis of Gender and Centennials' and Millennials' Perspectives. *Journal of theoretical and applied electronic commerce research*, 17(1), 122-137.

Chan, T. K., Cheung, C. M., & Lee, Z. W. (2017). The state of online impulse-buying research: A literature analysis. *Information & Management*, 54(2), 204-217.

Chang, H. J., Eckman, M., & Yan, R. N. (2011). Application of the Stimulus-Organism-Response model to the retail environment: the role of hedonic motivation in impulse buying behavior. *The International Review of Retail, Distribution and Consumer Research*, 21(3), 233-249.

Chein, T. S., Hui, O. T., & Lee, C. J. (2020). Factors Affecting Impulsive Buying Behaviour—Evidence from Malaysia. *Global Business & Management Research*, 12(2).

Chen, C. C., & Yao, J. Y. (2018). What drives impulse buying behaviors in a mobile auction? The perspective of the Stimulus-Organism-Response model. *Telematics and Informatics*, 35(5), 1249-1262.

Childers, T. L., Carr, C. L., Peck, J. & Carson, S. (2002). Hedonic and Utilitarian Motivations for Online Retail Shopping Behavior. *Journal of Retailing*, 77 (4), 511-535.

Chung, N., Song, H. G., & Lee, H. (2017). Consumers' impulsive buying behavior of restaurant products in social commerce. *International Journal of Contemporary Hospitality Management*.

- Clover, V. T. (1950). Relative Importance of Impulse-Buying in Retail Stores. *The Journal of Marketing*, 15 (1), 66-70.
- Davis, F. D., Bagozzi, R. P. & Warshaw, P. R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science*, 35 (8), 982-1003.
- Dawson, S. & Kim, M. (2010). Cues on Apparel Web Sites That Trigger Impulse Purchases. *Journal of Fashion Marketing and Management: An International Journal*, 14 (2), 230-246.
- Demangeot, C. and Broderick, J.A. (2016), "Engaging customers during a website visit: a model of website customer engagement", *International Journal of Retail & Distribution Management*, Vol. 44 No. 8, pp. 814-839.
- Dittmar, H., Beattie, J. & Friese, S. (1996). Objects, Decision Considerations and Self-Image in Men's and Women's Impulse Purchases. *Acta Psychologica*, 93 (1), 187-206.
- Eroglu, S. A., Machleit, K. A. & Davis, L. M. (2001). Atmospheric Qualities of Online Retailing: A Conceptual Model and Implications. *Journal of Business Research*, 54 (2), 177-184.
- Eroglu, S. A., Machleit, K. A. & Davis, L. M. (2003). Empirical Testing of a Model of Online Store Atmospherics and Shopper Responses. *Psychology & Marketing*, 20 (2), 139-150
- Fitri, F. R. (2018). The influence of web quality and sales promotion toward impulse buying behavior with openness personality as moderating variable. *Jurnal Akuntansi, Manajemen dan Ekonomi*, 20(1), 48-55.
- Floh, A. & Madlberger, M. (2013). The Role of Atmospheric Cues in Online Impulse-Buying Behavior. *Electronic Commerce Research and Applications*, 12 (6), 425-439.
- Gao, L., and Bai, X. 2014. "Online Consumer Behaviour and its Relationship to Website Atmospheric Induced Flow: Insights into Online Travel Agencies in China," *Journal of Retailing and Consumer Services* (21:4), pp. 653–665.
- Garcia-Madariaga, J., Virto, N. R., López, M. F. B., & Manzano, J. A.(2019). Optimizing website quality: The case of two superstar museum websites. *International Journal of Culture, Tourism and Hospitality Research*, 13(1), 16–36.
- Garson, G. D. (2002). *Guide to Writing Empirical Papers, Theses, and Dissertations*, New York, Marcel Dekker.
- Gulas, C. S. & Bloch, P. H. (1995). Right under Our Noses: Ambient Scent and Consumer Responses. *Journal of Business and Psychology*, 10 (1), 87-98.



Habib, M. D., & Qayyum, A. (2018). Cognitive emotion theory and emotion-action tendency in online impulsive buying behavior. *Journal of Management Sciences*, 5(1), 86-99.

Hasan, B. (2016). Perceived Irritation in Online Shopping: The Impact of Website Design Characteristics. *Computers in Human Behavior*, 54 224-230.

Hernandez, B., Jimenez, J., & Martin, M. J. (2009). Key website factors in e-business strategy. *International Journal of Information Management*, 29, 362–371.

Herzallah, D., Leiva, F. M., & Liébana-Cabanillas, F. (2021). To buy or not to buy, that is the question: understanding the determinants of the urge to buy impulsively on Instagram Commerce. *Journal of Research in Interactive Marketing*.

Hirschman, E. C. (1986). Humanistic Inquiry in Marketing Research: Philosophy, Method, and Criteria. *Journal of Marketing Research*, 23 (3), 237-249.

Hoa, N. L. T. (2021). The impact of e-retailer personality and website quality on online impulse buying. *HO CHI MINH CITY OPEN UNIVERSITY JOURNAL OF SCIENCE-ECONOMICS AND BUSINESS ADMINISTRATION*, 11(2), 97-113.

Hsieh, J. K., Hsieh, Y. C., Chiu, H. C., and Yang, Y. R. 2014. “Customer Response to Web Site Atmospherics: Task-Relevant Cues, Situational Involvement and PAD,” *Journal of Interactive Marketing* (28:3), pp. 225–236.

Hussain, A. (2018). Effect of store environment and website characteristics on impulse buying behaviour of university students.

Iftikhar, M. (2020). Investigating Online Impulse Buying Behavior: A Moderated Mediation Model (Doctoral dissertation).

Iftikhar, M., & Iqbal, J. (2020). Analyzing the Influence of Situational Factors on online Impulse Buying.

Ismail A. R. (2017). The influence of perceived social media marketing activities on brand loyalty. *Asia Pac. J. Mark. Logist*.

Karim, M. W., Chowdhury, M. A. M., Al Masud, M. A., & Arifuzzaman, M. (2021). Analysis of Factors influencing Impulse Buying behavior towards e-tailing sites: An application of SOR model. *Contemporary Management Research*, 17(2), 97-126.

Kim, J. H., & Kim, M. (2020). Conceptualization and assessment of e-service quality for luxury brands. *The Service Industries Journal*, 40(5-6), 436–470.

Kimiagari, S., & Malafe, N. S. A. (2021). The role of cognitive and affective responses in the relationship between internal and external stimuli on online impulse buying behavior. *Journal of Retailing and Consumer Services*, 61, 102567.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.

Kukar-Kinney, M., N. M. Ridgway, and K. B. Monroe (2009) "The Relationship between Consumers' Tendencies to Buy Compulsively and their Motivations to Shop and Buy on the Internet," *Journal of Retailing* (85) 3, pp. 298-307.

Kumar, D.S., Purani, K., Viswanathan, S.A., 2018. Influences of 'appscape' on mobile app adoption and m-loyalty. *J. Retail. Consum. Serv.* 45, 132–141

Le, P. (2018). The Influence of Online Visual Merchandising on Impulse Purchasing.

Lee, Y. Y., & Gan, C. L. (2020). Applications of SOR and para-social interactions (PSI) towards impulse buying: the Malaysian perspective. *Journal of Marketing Analytics*, 8(2), 85-98.

Li, Wei, Huayu Cui, and Yan Cheng. "The impact of atmospherics in virtual community on online impulse buying intention: The moderating effect of product types." In 2016 13th International Conference on Service Systems and Service Management (ICSSSM), pp. 1-5. IEEE, 2016.

Lin, S. C., Tseng, H. T., Shirazi, F., Hajli, N., & Tsai, P. T. (2022). Exploring factors influencing impulse buying in live streaming shopping: a stimulus-organism-response (SOR) perspective. *Asia Pacific Journal of Marketing and Logistics*, (ahead-of-print).

Lin, S.-W., & Lo, L. Y.-S. (2016). Evoking online consumer impulse buying through virtual layout schemes. *Behaviour & Information Technology*, 35(1), 38–56.

Liu, Y., Li, H. & Hu, F. (2013). Website Attributes in Urging Online Impulse Purchase: An Empirical Investigation on Consumer Perceptions. *Jornal of Decision Support Systems*, 55 (3), 829-837.

Loiacono, E. T., R. T. Watson, and D. L. Goodhue (2007) "WebQual: An Instrument for Consumer Evaluation of Web Sites," *International Journal of Electronic Commerce* (11) 3, pp. 51-87.

Loiacono, E. T., Watson, R. T. & Goodhue, D. L. (2002). Webqual: A Measure of Website Quality. *Marketing theory and applications*, 13 (3), 432-438.

Longstreet, P., Brooks, S., Featherman, M., & Loiacono, E. (2021). Evaluating website quality: which decision criteria do consumers use to evaluate website quality?. *Information Technology & People*.

Loureiro, S. M. C. (2015). The role of website quality on PAD, attitude and intentions to visit and recommend island destination. *International Journal of Tourism Research*, 17(6), 545–554.

Madhavaram, S. R., & Laverie, D. A. (2004). Exploring impulse purchasing on the internet. *ACR North American Advances*.

- Mattia, G., Di Leo, A., & Principato, L. (2021). The Impulse Buying. In Online Impulse Buying and Cognitive Dissonance (pp. 5-12). Palgrave Macmillan, Cham.
- McNeill, P., & Chapman, S. (2005). Research Methods. New York: Taylor & Francis e-Library
- Micu, A. E., Bouzaabia, O., Bouzaabia, R., Micu, A., & Capatina, A. (2019). Online customer experience in e-retailing: implications for web entrepreneurship. International Entrepreneurship and Management Journal, 15(2), 651-675.
- Miller, D. C., & Salkind, N. J. (2002). Handbook of research design and social measurement. Sage. Muratore, I. (2016). Teen's impulsive buyers: what is the role of price. International Journal of Retail & Distribution Management, 44(11), 1166–1180.
- Mohammad Salameh, A. A., Ahmad, H., Zulhumadi, F., & Abubakar, F. M. (2018). Relationships between system quality, service quality, and customer small businesses. Total Quality management & Business Excellence, 23 (7/8), 931–947
- Mugenda, O., & Mugenda, A. (2003). Research methods: Quantitative & Qualitative approaches. Nairobi: African Centre for Technology Studies press.
- Nguyen, D. (2015), "Understanding perceived enjoyment and continuance intention in mobile games", Doctoral dissertation, Aalto University, Finland.
- Osuagwu, L. (2020). Research methods: Issues and research direction. Business and Management Research, 9(3), 46-55.
- Padilla-Meléndez, A., Del Aguila-Obra, A. R. & Garrido-Moreno, A. (2013). Perceived Playfulness, Gender Differences and Technology Acceptance Model in a Blended Learning Scenario. Computers & Education, 63 306-317.
- Palmer, J. W. (2002) "Web Site Usability, Design, and Performance Metrics," Information Systems Research (13) 2, pp. 151-167
- Parboteeah, D. V., J. S. Valacich, and J. D. Wells (2009) "The Influence of Website Characteristics on a Consumer's Urge to Buy Impulsively," Information Systems Research (20) 1, pp. 60-78.
- Phillips, D. C., & Burbules, N. C. (2000). Postpositivism and educational research. Lanham, MD: Rowman & Littlefield.
- Piron, F. (1993). A Comparison of Emotional Reactions Experienced by Planned, Unplanned and Impulse Purchasers. Advances in Consumer Research, 20 (1), 341-344.
- Prashar, S., Sai Vijay, T., & Parsad, C. (2017). Effects of online shopping values and website cues on purchase behaviour: A study using S–O–R framework. Vikalpa, 42(1), 1-18.
- Prawira, N. A., & Sihombing, S. O. (2021). PREDICTING THE RELATIONSHIP BETWEEN SCARCITY AND SERENDIPITY INFORMATION TOWARD IMPULSE

BUYING BEHAVIOR: HEDONIC SHOPPING VALUES AS MODERATOR VARIABLES. ASEAN Marketing Journal.

Prihantoro, W. P., Satria, A., & Hartoyo, H. (2018). The Determinant Factors of Behavior in M-Commerce Application Usage for Online Purchasing. Indonesian Journal of Business and Entrepreneurship, 4(2).

Rezaei, S., Ali, F., Amin, M. & Jayashree, S. (2016). Online Impulse Buying of Tourism Products: The Role of Web Site Personality, Utilitarian and Hedonic Web Browsing. Journal of Hospitality and Tourism Technology, 7 (1), 60-83.

Rezigalla, A. A. (2020). Observational study designs: synopsis for selecting an appropriate study design. Cureus, 12(1).

Roggeveen, A. L., Grewal, D., & Schweiger, E. B. (2020). The DAST framework for retail atmospherics: The impact of in-and out-of-store retail journey touchpoints on the customer experience. Journal of Retailing, 96(1), 128-137.

Rook, D. W. & Fisher, R. J. (1995). Normative Influences on Impulsive Buying Behavior. Journal of Consumer Research, 22 (3), 305-313.

Rook, D. W. & Hoch, S. J. (1985). Consuming Impulses. Advances in Consumer Research, 12 (1).

Rook, D. W. (1987). The Buying Impulse. Journal of Consumer Research, 14 (2), 189-199.

Rouibah, K., Lowry, P. B. & Hwang, Y. (2016). The Effects of Perceived Enjoyment and Perceived Risks on Trust Formation and Intentions to Use Online Payment Systems: New Perspectives from an Arab Country. Electronic Commerce Research and Applications, 19 33-43

Rovai, A. P., Baker, J. D., & Ponton, M. K. (2014). Social Science Research Design and Statistics. Chesapeake, VA: Watertree Press LLC.

Sarah, F. H., Goi, C. L., Chieng, F., & Taufique, K. M. R. (2021). Examining the influence of atmospheric cues on online impulse buying behavior across product categories: Insights from an emerging e-market. Journal of Internet Commerce, 20(1), 25-45.

Sari, K., & Laksmidewi, D. (2021). FACTORS AFFECTING IMPULSIVE BUYING IN MOBILE COMMERCE WITH STIMULUS-ORGANISM-RESPONSE (SOR) PERSPECTIVE. Journal of Business Studies and Management Review, 5(1), 40-48.

Shahpasandi, F., Zarei, A., & Nikabadi, M. S. (2020). Consumers' impulse buying behavior on Instagram: Examining the influence of flow experiences and hedonic browsing on impulse buying. Journal of Internet Commerce, 19(4), 437-465

Shiau, W.-L. and Luo, M.M. (2013), "Continuance intention of blog users: the impact of perceived enjoyment, habit, user involvement and blogging time", Behaviour Information Technology, Vol. 32, pp. 570-583.

Siedlecki, S. L. (2020). Understanding descriptive research designs and methods. Clinical Nurse Specialist, 34(1), 8-12.

Sjøberg, D. I., Dybå, T., & Jørgensen, M. (2007). The future of Empirical Methods in Software Engineering Research. Future of Software Engineering, IEEE-CS Press 2007.

Sommer, B. & Sommer, R. (1997). A Practical Guide to Behavioral Research: Tools and Techniques, New York, Oxford University Press.

Sultan, S., Jan, F. A., Basit, A., & Rafiq, A. (2018). Impact of environmental factors on impulse buying: Mediating role of consumers positive emotions. Contemporary Issues in Business & Economics (ICCIBE), 528-535.

Suryani, T., Fauzi, A. A., & Nurhadi, M. (2019). Determinan kualitas website pada perusahaan skala kecil dan menengah. Proceeding Seminar Nasional Ilmu Terapan (SNITER) 2019, Universitas Widya Kartika, E1-8.

Teo, T. & Noyes, J. (2011). An Assessment of the Influence of Perceived Enjoyment and Attitude on the Intention to Use Technology among Pre-Service Teachers: A Structural Equation Modeling Approach. Computers & Education, 57 (2), 1645-1653.

Thelwall, M. (2000). Effective websites for small and medium-sized enterprises. Journal of Small Business and Enterprise Development, 7(2), 149-159.

Tractinsky, N., A. S. Katz, and D. Ikar (2000) "What is Beautiful is Usable," Interacting with Computers (13) 2, pp. 127-145.

Tsao, W. C., Hsieh, M. T., & Lin, T. M. (2016). Intensifying online loyalty! The power of website quality and the perceived value of consumer/seller relationship. Industrial Management & Data Systems, 116(9), 1987-2010.

Turkyilmaz, C.A., Erdem, S. and Uslu, A. (2015), "The effects of personality traits and website quality on online impulse buying", Procedia-Social and Behavioral Sciences, Vol. 175, pp. 98-105.

Van der Heijden, H. and T. Verhagen (2004) "Online Store Image: Conceptual Foundations and Empirical Measurement," Information & Management (41) 5, pp. 609-617.

Venkatesh, V., Morris, M. G., Davis, G. B. & Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. MIS Quarterly, 425-478.

Verplanken, B. & Sato, A. (2011). The Psychology of Impulse Buying: An Integrative SelfRegulation Approach. Journal of Consumer Policy, 34 (2), 197-210.

- Veryzer, R. W. & Hutchinson, J. W. (1998). The Influence of Unity and Prototypicality on Aesthetic Responses to New Product Designs. *Journal of Consumer Research*, 24 (4), 374-394
- Wahyu, W. D., Achmad, F., & Zainul, A. (2017). The effect of online store atmosphere towards emotion and its impact on purchase decision. *Russian Journal of Agricultural and Socio-Economic Sciences*, 64(4), 82-93.
- Wang J.-C., Chang C.-H. (2013). How online social ties and product-related risks influence purchase intentions: a facebook experiment. *Electron*.
- Wells, J. D., Parboteeah, V., & Valacich, J. S. (2011). Online impulse buying: understanding the interplay between consumer impulsiveness and website quality. *Journal of the Association for Information Systems*, 12(1), 3.
- Wiranata, A. T., & Hananto, A. (2020). Do website quality, fashion consciousness, and sales promotion increase impulse buying behavior of e-commerce buyers?. *Indonesian Journal of Business and Entrepreneurship (IJBE)*, 6(1), 74-74.
- Xu, H., Zhang, K. Z., & Zhao, S. J. (2020). A dual systems model of online impulse buying. *Industrial Management & Data Systems*, 120(5), 845-861.
- Xu, J., Benbasat, I. and Cenfetelli, R.T. (2014), "The nature and consequences of trade-off transparency in the context of recommendation agents", *MIS Quarterly*, Vol. 38 No. 2, pp. 379-406.
- Yadav M., Rahman Z. (2018). The influence of social media marketing activities on customer loyalty.
- Yi, S., & Jai, T. (2020). Impacts of consumers' beliefs, desires and emotions on their impulse buying behavior: application of an integrated model of belief-desire theory of emotion. *Journal of Hospitality Marketing & Management*, 29(6), 662-681.
- Youn, S. and R. J. Faber (2000) "Impulse Buying: Its Relation to Personality Traits and Cues," *Advances in Consumer Research* (27) 1, pp. 179-185.
- Zhang, K. Z., Xu, H., Zhao, S., & Yu, Y. (2018). Online reviews and impulse buying behavior: the role of browsing and impulsiveness. *Internet Research*.