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Online Impulsive Buying Behaviour: A Systematic Review

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Abstract

The study aims to identify influential factors affecting online impulsive buying behaviour through a systematic review following PRISMA guidelines. A total of 29 studies addressing online impulsive buying behaviour were included. The findings indicate that the majority of studies on online impulsive buying have originated in the Asian region. The influential factors identified were categorised as external (including Web Atmospherics, Online promotions, Electronic Word of Mouth, Advertisements, and CSR activities) and internal factors (comprising Cognitive and Emotional aspects). Additionally, certain moderating factors, such as Demographics and Personality, were also identified. The study suggested directions for future research, encompassing a greater focus on internal factors, including the role of negative emotions in impulsive buying and the impact of scarcity promotional tactics and gamification. These avenues offer valuable pathways for forthcoming research endeavours in this domain.

Keywords: Online Impulsive Buying, E-commerce, Literature Review, PRISMA

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Introduction

In the past decade, we have seen substantial changes in the process of information management and distribution. This change has given prominence to the concept of digitalisation, and e-commerce is one of its key aspects (Tirpude, 2022). Electronic commerce refers to a wide range of online business activities, which involves buying and selling products over the Internet or conducting any transaction involving transfer of ownership of goods or the rights to use a service through a computer-enabled network (Gupta, 2014). The global sales figure in e-commerce sales, as reported by e-marketers from e-retail in 2020, amounts to a collective sale of US \$ 3.914 trillion (Cramer-Flood, 2020). Although this figure has declined (down by 20.2% from the previous year) from the sales during the pandemic, it is a significant figure. The above data clearly shows the importance of e-commerce in the retail industry. One of the important areas of research in the e-commerce and retail industry is the concept of impulsive buying.

Impulsive buying refers to immediate purchases without any pre-shopping objective, either to acquire the product or fulfil a specific need (Beatty & Ferrell, 1998). Impulsive buying can happen in both the traditional brick-and-mortar setup and the online setup. A prior study by Liu et al. (2013) stated that 40% of online purchases are made impulsively. They also argued that the online shopping environment is more favourable to induce impulsive buying compared to the traditional shopping environment. Thus, it is important to study the existing work done on online impulsive buying and identify areas that need more attention.

Whether offline or online, impulse buying persists. The Internet serves as an efficient and low-cost marketing channel, capable of stimulating consumer impulsiveness in purchasing (Sun & Wu, 2011). The increasing significance of e-commerce, coupled with the accessibility and convenience of online shopping, alongside the heightened utilisation of digital marketing tactics, underscores the importance of studying impulse buying within an online context. The concept of impulse buying has predominantly been investigated and found attractive in offline contexts (Aragoncillo & Orús, 2018). However, as times evolve, a shift in consumer behaviour is observed, with online purchases gaining momentum. Consequently, there remains a significant gap in understanding impulse buying within the online domain, given the differing dynamics between online and offline sales influenced by various factors. Through this study, our aim is to address this gap in the existing literature and contribute to a deeper understanding of impulse buying in online contexts.

A large body of literature is available to understand and evaluate the work done on online impulsive buying behaviour. The Stimulus organism Response Framework is widely used as a primary tool to establish relationships between impulsive buying and different variables such as website information quality, online promotions, perceived enjoyment, and utilitarian value (Hayu et al., 2020; Lee et al., 2021; Liu et al., 2020; Moreno et al., 2022).

Shopping online involves human-computer interaction, which decreases the extent of external stimuli to induce impulsive buying. Chih et al. (2012) argued that internal stimuli are more important in the case of online impulsive buying. They laid more emphasis on Internal factors like hedonic consumption needs, impulsive buying tendencies and normative evaluations which have more impact on online impulsive buying behaviour. However, website design, promotions, and online reviews are also key factors in online impulsive buying (Moreno et al., 2022; Wu et al., 2016). For example, Wadera and Sharma (2019) studied the internal (impulsiveness and shopping enjoyment) and external factors (website design, content, price and promotion) and found that both factors have a positive influence on consumers' online impulsive buying behaviour. Thus, we can say that Online Impulsive buying can be triggered by either environment-related stimuli or factors internal to the consumer or through a combination of both factors (Chih et al., 2012; Liu et al., 2013; Moreno et al., 2022; Wu et al., 2016). However, there can be many more internal and external factors that can influence online impulsive buying.

In this study, we hope to map the existing literature systematically, taking the influencing factors of online impulsive buying as the central focus point, which would help academicians better understand consumer buying behaviour. Secondly, we wish to find new and under-researched avenues or approaches to understanding impulsive buying behaviour:

RQ1. What are the factors influencing online impulsive buying behaviour?

RQ2. What are the gaps and limitations in the existing research literature addressing online impulsive buying behaviour?

Methods

We use the Systematic Literature Review (SLR) method to identify and review the literature as it improves the project's reliability and reproducibility (Tranfield et al., 2003). Also, the implementation of the SLR method helps in the identification of study gaps and can assist in carrying out future research (Sharma et al., 2020). To systematically review the drivers of online impulsive buying behaviour, the Preferred

Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework was used. To comprehensively cover the systematic literature search, the search keyword was kept short and literature having no relation with the central theme of the study was later screened out. The use of PRISMA guidelines leads to more complete, bias-free, and accurate reporting of data, which will result in better decision-making (Page et al., 2021).

Search Procedure

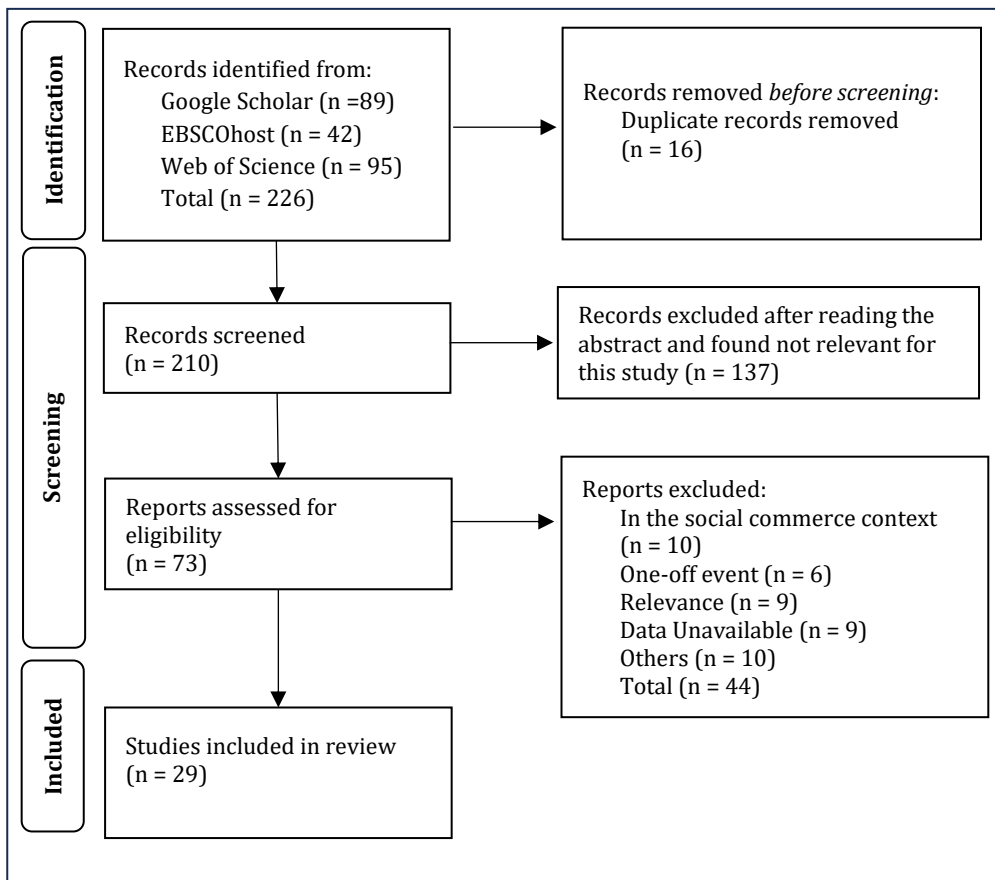
The primary source of information for the review was published journals relating to Online Impulsive Buying. The search for relevant literature was done on Google Scholar, Web of Science, and EBSCO. Google Scholar is known to be widely used as it covers a wide range of literature from different disciplines (Halevi et al., 2017). Web of Science has been proven to be substantial in the field of social science (Zhu & Liu, 2020). The search was carried out using the following keywords across the above databases: “online impuls* buying behaviour”, “online unplanned buying” and “online unplanned purchase”. The above combination of keywords was searched across titles and abstracts in the databases. Furthermore, this study aimed to capture the emergence of online impulsive buying behaviour from 2009 to mid-2022. Apple introduced the iPhone in 2007, and Google launched the Android operating system in 2008 (Arthur, 2012). This increased to online reach of customers substantially and made online shopping largely possible. Also, Flipkart was launched during this time, with other e-commerce sites like Snapdeal and Jabong in the pipeline. Due to the growth of e-commerce, this period offers an opportunity to examine consumer behaviour and technological advancements (Patel, 2015). The growth of e-commerce and digitalisation was more evidently seen in the latter half of the selected period, which is reflected by the increased number of studies. The search results along with relevant fields like title, Abstract, Author, and Publication Date, were exported to Mendeley and MS Excel for further screening of relevant data.

Selection Procedure

The search resulted in 226 records. After removing 16 duplicates, the records were further assessed, and 137 records were excluded as they did not show any relevance to the study in focus. The next round of screening was done by careful re-examination of the title and abstract, and studies in which Online impulsive buying was the dependent variable were selected for the study. This resulted in the exclusion of 44 more records. All the processes of inclusion and exclusion are presented in Figure 1.

The exclusion criteria were (a) relevance, articles not addressing the central theme, i.e., online impulsive buying behaviour. (b) studies that were done under the context of social commerce. The reason being that social commerce has different dimensions of study like social interaction, etc. (c) one-time events, like covid 19 - a study with COVID-19 as one of the main themes would influence the results, and these findings would not be appropriate in normal times. (d) insufficient data or unable to access the full article and (e) Others (showing reverse relationship, theory building).

Figure 1: Flow of Information through Systematic Review



The current review had the following inclusion rules. An article was included in the study if (a) The article was related to online impulsive buying behaviour in some context. (b) Only journal articles were included. (c) The articles were written in the English language.

Publication Trend

After analysing the country context in our selected sample, we found that the majority of the study was conducted in the Asian region. This indicates that online impulsive buying is widely studied and investigated in this region. In Figure 2, countries with more than 2 studies are shown. The sample covered a total of 13 countries.

Figure 2: Country-wise Visualisation

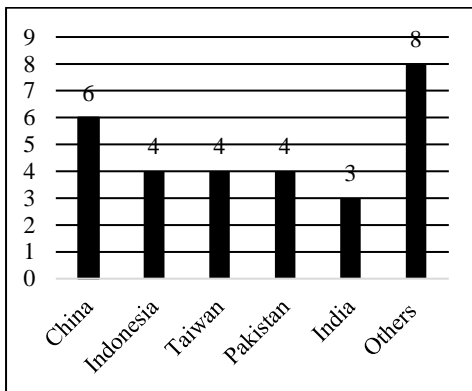
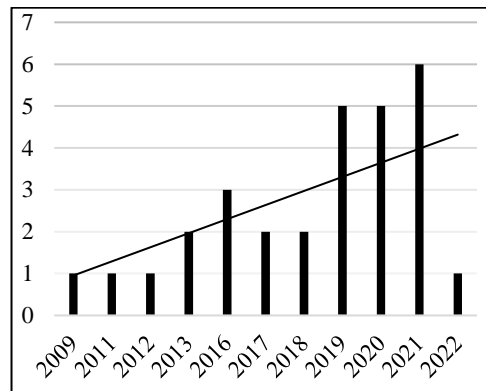


Figure 3: Year-wise Publication



The majority of work done on online impulsive buying was carried out between 2019 and 2021. Also, the number of studies being done yearly has increased indicating that online impulsive buying is an evolving concept and is yet to reach its saturation. In 2009, the first study was recorded from our sample, and it was during this period that digitalisation kicked off. Figure 3 shows the year-wise publications of articles. Regarding the sources of publication, it was observed that the articles were published in a number of journals, and it was evenly spread.

The selected studies were carefully examined, and all quantitative studies are presented in a tabular format in the upcoming section. The extracted Table 1 consists of all the predictor variables, outcome variables, mediators, moderators, sample size and a brief explanation of the findings of the study.

Findings and Discussion

Several key insights are explored and discussed in this systematic review, which includes the theories used by the different researchers in the studies (Table 2) along with the triggering factors and moderators of online impulse buying (Figure. 4). These factors are also extracted, organised and presented in Table 1.

Table 1: Exraction Table for All the Quantitative Studies

Author	Sample	Predictor variable	Outcome variable	Mediators	Moderators	Findings
Parboteeah et al. (2009)	264 undergraduate students from a university in the US	1. Task relevant cues 2. Mood relevant cues	Urge to buy impulsively	1. Usefulness 2. Enjoyment	None	The study reveals that the likelihood and magnitude of respondents' urge to buy impulsively were directly influenced by varying the quality of task and mood-relevant cues.
Liu et al. (2020)	333 respondents from China	Information quality 1. Richness 2. Vividness 3. Reliability	Impulse buying behaviour	Emotional response 1. Pleasure 2. Arousal	None	Both dimensions of emotional response significantly influence impulse buying behaviour. However, all three aspects of information quality positively influence pleasurable emotion alone with insignificant relation to arousal emotion.
Muruganantham and Bhakat (2013)	238 online book purchaser respondents from India	1. Hedonic motivation 2. Website quality 3. Trust 4. Situational variables 5. Variety seeking	Impulse Buying	None	None	This study shows that the majority of the respondents enjoy online book shopping, spend about 200-500 rupees per visit, and are influenced by interest, offers, and reviews. Young adults prefer fiction and Flipkart is popular among the respondents. Impulse buying is influenced by Hedonic motivation, situational factors like time and payment options, and variety-seeking behaviour.
Chen et al. (2019)	402 responses from travellers	1. Website design quality 2. Website service quality	Impulse buying	Functional benefit	Perceived hedonic value	Website design and service quality significantly influence functional benefits. Also, perceived hedonic value moderates the positive relationship between functional benefit and impulse buying.

Author	Sample	Predictor variable	Outcome variable	Mediators	Moderators	Findings
Zheng et al. (2019)	252 through the Wenjuanxing platform from China	1. Interpersonal Influence 2. Visual Appeal 3. Portability	Urge to Buy Impulsively	1. Hedonic Browsing 2. Utilitarian Browsing	None	The study revealed things like feeling rushed, being influenced by friends, and special deals make people shop more. However, thinking about difficulties and feeling overburdened causes people to purchase less. The study suggests that the Indonesian government should adopt website verification for online shopping sites, and online firms should build interactive and verified websites to compete in the E-commerce market.
Hayu et al. (2020)	175 undergraduate students from Brawijaya University, Malang.	1. Website Quality 2. Government Regulation	Online Impulse Buying	Consumer Interpretation	None	The study found that promotions positively influence behaviour, with perceived value and positive emotion playing mediating roles. This impact was unaffected by online reviews, and Businesses can use promotions to boost impulsive purchases.
Tu et al. (2017)	330 individuals in China through a combination of online and on-site surveys	Online Promotions 1. Price Discounts 2. Buy More Save More	Online Impulsive Buying Behaviour	Perceived Value	Online Reviews	The study found that promotions positively influence behaviour, with perceived value and positive emotion playing mediating roles. This impact was unaffected by online reviews, and Businesses can use promotions to boost impulsive purchases.
Prawira and Sihombing (2021)	A sample of 330 respondents had e-commerce transactions experience.	1. Social shopping 2. Adventure shopping 3. Value shopping 4. Relaxation shopping 5. Idea shopping	Online impulse buying behaviour	None	1. Scarcity 2. Serendipity information	The findings indicate a link between hedonic shopping value, scarcity, and serendipity information, influencing impulsive online buying. Thus, addressing customer needs, enhancing satisfaction, improving website quality, and ensuring user-friendly e-commerce experiences are crucial today.

Author	Sample	Predictor variable	Outcome variable	Mediators	Moderators	Findings
Sarah et al. (2020)	335 young consumers from the South Asian market.	1. E-store content 2. E-store design 3. E-store navigation	Impulse buying behaviour	None	Product category	When assessing the atmospheric cues and their influence on online impulse buying behaviour, the study reports that e-store design and e-store navigation have a significant positive influence on millennials' online impulse buying behaviour. Also, the influence of atmospheric cues varies across different product types.
Zhang et al. (2018)	315 participants who had experience using shopping websites in China.	1. Utilitarian value 2. Hedonic value	Impulse buying behaviour	1. Browsing 2. Urge to buy impulsively	None	The study's results demonstrate that consumers' perceived utilitarian and hedonic value from online reviews boost their browsing activity. Browsing, in turn, positively influences impulsive buying urges and behaviours.
Moreno et al. (2022)	363 millennial generation respondents with online experience.	1. e-Content 2. e-Design 3. e-reviews 4. e-promotion	Impulse Buying	1. Online Trust 2. Perceived Enjoyment	None	The findings report that online trust has a positive impact on impulsive buying. Store design, content, and reviews also affect trust. Perceived enjoyment is linked to online trust and impulsive buying. Retailers should improve store elements for trust and enjoyment, while consumers should comprehend trust components.

Author	Sample	Predictor variable	Outcome variable	Mediators	Moderators	Findings
Li et al. (2021)	188 Chinese recruited from a university in Wuhan city.	1. Product involvement 2. Anticipated regret	Online impulsive buying behaviour	None	None	The study finds that consumers who experienced downward anticipated regret showed more online impulsive buying behaviour. Also, anticipated regret moderates the relationship between product involvement and online impulsive buying behaviour.
Habib and Qayyum (2017)	372 online shoppers	1. Web communication style 2. Informativeness 3. Ease of use 4. Merchandise attractiveness 5. Entertainment	Impulsive buying behaviour	Web browsing	None	The outcomes aligned with the claims that variables related to website usage contribute to web browsing, which in turn fosters the development of impulsive buying behaviours.
Wu et al. (2016)	496 through Facebook, Mobile01, Eyny, Pixnet, and Youthwan platforms.	1. Web skills and challenges 2. Website design 3. Trust	Online impulse buying	1. Flow experience 2. Perceived usefulness	None	The study found Flow experience, which is driven by online skills and challenges, has a beneficial impact on impulse purchases. Trust in e-vendors influences both perceived utility (PU) and impulsive purchasing. Website design influences PU, and PU influences impulsive buying indirectly via flow experience.
Hashmi et al. (2019)	300 respondents working in Rawalpindi and Islamabad.	1. Service quality 2. System quality 3. Information quality	Online impulsive buying behaviour	1. Hedonic value 2. Utilitarian value	None	The study finds that improved website quality (information, service, system) increases impulsive online buying. Hedonic and utilitarian values mediate this. Improved websites should be engaging, secure, and informative.

Author	Sample	Predictor variable	Outcome variable	Mediators	Moderators	Findings
Lo et al. (2016)	239 online shoppers from Taiwan.	1. Design elements of online stores 2. Sales promotion stimuli	Online impulse buying	None	None	The study revealed there are two sorts of triggers: hygiene (store design) and motivation (promotion advantages). There were 31 distinct characteristics connected to shop design and marketing discovered.
Verhagen and Van Dolen (2011)	532 customers of a Dutch online store.	1. Merchandise attractiveness 2. Ease of use 3. Enjoyment 4. Website communication style	Impulse buy	1. Positive affect 2. Negative affect 3. Browsing 4. Urge to buy impulsively	None	The outcomes revealed noteworthy impacts of merchandise appeal, enjoyment, and communication style of the online store, all mediated by consumer emotions.
Hayat et al. (2020)	301 responses were collected through a Chinese online survey website Wen juanxing.com	1. Environmental well-being 2. Social well-being 3. Economic well-being	Impulse buying	Trust		The findings reveal that environmental well-being positively relates to trust, subsequently influencing impulse buying. Additionally, economic well-being directly correlates significantly with impulse buying. However, social well-being doesn't appear to impact consumer impulse buying behaviour. When considering gender as a moderator, environmental well-being has a positive influence, while social well-being shows no effect.
Chih et al. (2012)	364 samples taken through Yahoo Kimo from Taiwan	1. Hedonic consumption needs 2. Impulsive buying tendency	Buying impulsiveness	1. Normative evaluations 2. Positive affect	None	The study looked at online impulsive purchasing behaviour for travel products. Impulsive purchasing is influenced by factors such as hedonic needs, impulsive characteristics, positive affect, and normative assessments. Travel websites

Author	Sample	Predictor variable	Outcome variable	Mediators	Moderators	Findings
Aslam et al. (2021)	250 students through Google Forms from Pakistan	Perceived ad Personalization	Online Impulse Buying Behaviour	1. Perceived Novelty 2. Perceived Relevance 3. Online Payment Facility	Privacy Concerns	should prioritise meeting hedonic demands and boosting positive evaluations. The study discovered that personalised adverts had a positive impact on online impulsive buying. Most hypotheses were validated by correlation and regression analysis, which confirmed the relationship between variables. The hypothesis addressing privacy issues, on the other hand, was not established.
Lee et al. (2021)	446 responses were collected with the help of Google Forms distributed through social media platforms.	1. Price Attribute 2. Convenience 3. Visual appeal 4. Social Influence 5. Vendor Creativity 6. Impulse Buying Tendency	Urge to Buy Impulsively	1. Perceived Usefulness 2. Perceived Enjoyment	1. Gender 2. Age	The study reports that preferential pricing and convenience impact perceived enjoyment and usefulness. Both elements are affected by visual appeal, social influence, and vendor creativity. Impulsive tendencies and perceived enjoyment motivate the desire to urge to buy impulsively. Younger consumers are more prone to impulsive buying. This underscores the importance of affordability, convenience, visual appeal, and emotional elements in online impulse purchase behaviour.
Floh and Madlberger (2013)	508 respondents with online buying experience	1. e-store content 2. e-store design 3. e-store navigation	1. Impulse buying behaviour 2. Impulse buying expenditure	1. Shopping enjoyment 2. Impulsiveness 3. Browsing	None	The two dimensions of virtual atmospheric cues (design and navigation) show a significant positive effect on impulsive buying behaviour

Author	Sample	Predictor variable	Outcome variable	Mediators	Moderators	Findings
Husnain et al. (2016)	266 Chinese and Pakistani students from Islamabad, Pakistan	Electronic word-of-mouth	Impulsive buying	None	1. Extraversion 2. Agreeableness 3. Openness 4. Neuroticism 5. Conscientiousness	The findings reveal that electronic word of mouth influences impulsive buying and the big 5 personality traits moderated the relationship.
James et al. (2019)	250 frequent online buyers across India.	1. Satisfaction 2. Facilities 3. Affordability 4. Sales 5. Promotional Practices 6. Trust	online impulsive buyers	1. Generations 2. Gender 3. Marital Status 4. Preferred Online Site for Purchases 5. Frequency of Purchases	1. Product's discounted price 2. Income 3. financial situation 4. family influence.	The study examined the influence of numerous aspects on online impulse buying behaviour and discovered that satisfaction, facilities, affordability, sales, and trust all had a major impact on impulsive purchasing. This study also discovered that Generation Z, are more prone to impulsive internet purchases. Female consumers show more impulsiveness than male shoppers, and single people are more prone to impulse purchases than married people.
Utama et al. (2021)	206 respondents from several mall customers in Yogyakarta.	Impulse buying tendencies	Impulse buying	Urge to buy	Gender	The study's findings indicate that impulsive buying tendency and the urge to buy have a substantial impact on impulse buying behaviour among retail customers. It was also discovered that gender has a moderating effect on the relationship between impulsive buying tendency, urge to buy, and impulse buying behaviour. The study also found that female buyers are more likely to participate in impulsive shopping than male shoppers.

Author	Sample	Predictor variable	Outcome variable	Mediators	Moderators	Findings
Wadera and Sharma (2019)	122 online shoppers from India in the age category of 18-45 years.	<ol style="list-style-type: none"> 1. Content and Variety 2. Design and navigation 3. Price 4. Impulsiveness 5. Shopping enjoyment 	Urge to buy	Browsing activity	None	The findings reveal that all of the environmental factors and impulsiveness of online shoppers influenced their urge to buy from online stores in India.

Theories Used in Online Impulsive Buying

The stimulus organism response (SOR) framework has been widely utilised in numerous studies, as depicted in Table 2. This framework posits that an individual's cognitive and affective reactions are influenced or driven by environmental stimuli beyond their control (Mehrabian & Russell, 1974). External stimuli such as visual appeal, social influence, website design and service quality, and convenience, among others, have been extensively studied in existing literature, as shown in Table 1. The organism component pertains to an individual's internal state, represented by their cognitive and affective states. Cognitive reactions involve mental processes, whereas affective aspects relate to emotional responses (Eroglu et al., 2001). Perceived usefulness, enjoyment, and hedonic and utilitarian browsing are internal factors that influence impulse buying behaviour. The final element of the SOR framework deals with an individual's responses and reactions to online impulse-buying stimuli and their internal evaluations (Chan et al., 2017).

The Service-Dominant Logic (SDL) framework emphasises the importance of interactive service environments which lead to enhancing consumer engagement, high-quality services, and visually appealing designs enhancing value co-creation, which lead to impulse buying decisions (Chen et al., 2019). Regret Theory posits that perceived scarcity and promotions intensify the anticipation of future regret, which drives impulse purchases (Li et al., 2021). The Theory of Reasoned Action (TRA) emphasises the impact of attitudes and subjective norms on impulsive buying, highlighting how positive attitudes and approval from others drive such behaviour (Chih et al., 2012). The Theory of Planned Behaviour (TPB) examines how in addition to attitudes and subjective norms, perceived behavioural control affects online impulsive purchase intentions, (Wu et al., 2016). Cognitive Emotion Theory (CET) reveals how emotional responses triggered by online shopping environments, such as website aesthetics and product information, contribute to impulsive buying (Habib & Qayyum, 2017; Verhagen & Van Dolen, 2011). The Big 5 Personality Theory links traits like extraversion and neuroticism with higher impulsive buying tendencies, suggesting personality traits play a role in impulse buying (Husnain et al., 2016). The Two-Factor Theory identifies motivators, such as discounts, and hygiene factors, like website security, influencing impulse buying in online contexts (Lo et al., 2016). Lastly, Uses and Gratification Theory (UGT) explores the motivations for using online platforms, such as seeking entertainment, social interaction, and information, which lead to impulse buying, underscoring the role of psychological gratifications (Chen et al., 2019; Habib & Qayyum, 2017).

Table 2: Theories Used in Online Impulsive Buying Research

<i>Theory</i>	<i>No. of Articles</i>	<i>Author</i>
Stimulus- Organism- Response framework (SOR)	10	Moreno et al. (2022), Li et al. (2021), Lee et al. (2021), Hayat et al. (2020), Hayu et al. (2020), Liu et al. (2020), Zheng et al. (2019), Hashmi et al. (2019), Wadera and Sharma (2019), Floh and Madlberger (2013)
Service- dominant logic framework	1	Chen et al. (2019)
Regret theory	1	Li et al. (2021)
Theory of planned behaviour	1	Wu et al. (2016)
Cognitive emotion theory (CET)	2	Habib and Qayyum (2017), Verhagen and Van Dolen (2011)
Big 5 personality theory	1	Husnain et al. (2016)
Two-factor theory	1	Lo et al. (2016)
Theory of reasoned action	1	Chih et al. (2012)
Uses and gratification theory	2	Chen et al. (2019), Habib and Qayyum (2017)

Note. This table includes only the studies in which the researchers identified the theory used.

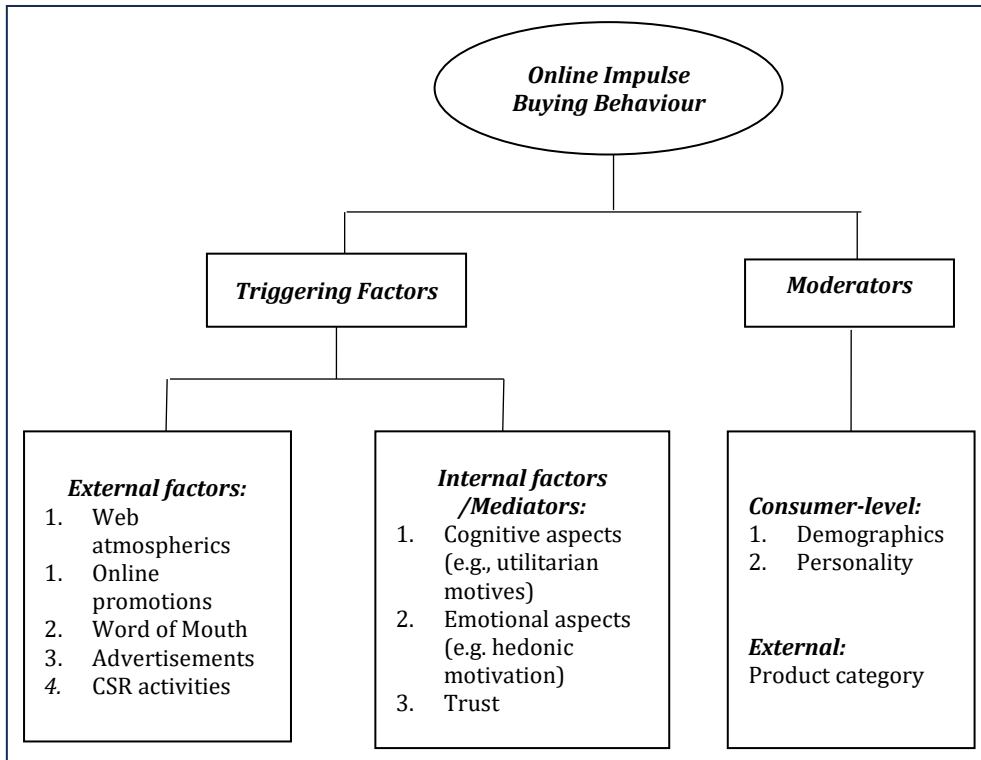
Factors Affecting Buying Behaviour

To enhance understanding, the findings are grouped into two broad categories: triggering factors and moderators. The identified triggering factors were further categorised into two groups: external factors (e.g., Web atmospherics and online promotions) and internal factors (e.g., cognitive and emotional aspects). The internal factors act as both triggering factors and mediators. Finally, the identified moderating factors are grouped into consumer-level and external factors.

Triggering Factors

External Factors. External triggering factors encompass a range of environmental and marketing stimuli that are designed to promote consumers' impulsive buying behaviour. Web Atmospherics (e.g., website design, content layout, and navigation) play a significant role in influencing impulsive purchasing decisions. Studies by

Figure 4: Findings from the Extraction Table in a Simplified Form



Sarah et al. (2020), Zhang et al. (2018), and Floh and Madlberger (2013) demonstrate that visually appealing websites and user-friendly navigation encourage longer browsing sessions, increasing the likelihood of impulsive online purchases by fostering a pleasurable shopping environment. Online Promotions, such as discounts, limited-time offers, and "buy-more-save-more" deals, enhance perceived value and trigger impulsive buying as consumers feel compelled to take advantage of perceived savings or to avoid missing out (Tu et al., 2017). Electronic Word of Mouth (eWOM) and Advertisements also play significant roles by leveraging social influence and personalised marketing techniques to influence consumer perceptions and their behaviours. Research by Husnain et al. (2016) and Aslam et al. (2021) illustrates how positive online reviews, recommendations, and targeted ads raise emotional arousal and the perceived desirability of the products, thereby promoting the tendency to buy impulsively. In addition to this, CSR Activities (including ethical practices and environmental sustainability efforts) and website verification practices (like security seals and certifications) contribute to building an internal factor that is trust (Hayu et al., 2020). This trust can reduce the perceived risks and lower the psychological barriers related to transactions, security, etc., and encourage consumers to engage in

online buying when they feel assured about the credibility, security and about social responsibility of the online retailer. Here, the internal factor of trust acts as a mediator in the relationship between external factors such as CSR activities, website verification practices, and online impulsive buying.

Internal Factors. Internal triggering factors are primarily consumer-driven and reflect individual cognitive and emotional states that drive impulsive buying. Emotional Aspects, including feelings of pleasure, arousal, and mood, have been shown to impact impulsive buying behaviour directly. Parboteeah et al. (2009) and Liu et al. (2020) highlight those positive emotional states, such as excitement and happiness, that increase susceptibility to impulsive purchases by enhancing the immediate satisfaction derived from buying. Hedonic Motivation, characterised by the pursuit of enjoyment, fun, or novel experiences, is a potent internal driver of impulsive buying, as consumers are drawn to the thrill or pleasure associated with impulsive shopping experiences (Zheng et al., 2019; Moreno et al., 2022).

Utilitarian Motivations (a category of cognitive factors), such as the perceived usefulness and practicality of a product, can also trigger impulsive buying by justifying the need and urgency for the purchase with a rational benefit, thereby reducing post-purchase regret (Lee et al., 2021; Li et al., 2021). Lastly, Trust is one of the fundamental internal factors that mitigates perceived risks associated with online purchases. Studies by Chen et al. (2019) and Hayat et al. (2020) reveal that higher levels of trust in an online platform led to positive emotional responses, reducing hesitation and encouraging impulsive buying decisions. Thus, Trust serves as a critical factor, reducing the perceived risk associated with impulsive buying and promoting positive emotional responses (Chen et al., 2019; Hayat et al., 2020; James et al., 2019).

As previously noted, several internal factors act as mediators in influencing impulsive buying. Liu et al. (2020) observed that emotional factors like pleasure and arousal act as mediators, influencing the impact of information quality on impulse buying. Furthermore, Moreno et al. (2022) also identified perceived enjoyment as a key mediator in the effect of website features on impulse buying.

Several studies have highlighted that cognitive factors like perceived usefulness also play a significant role. Wu et al. (2016) discovered that website design influences impulsive buying through perceived usefulness. Chen et al. (2019) highlighted the role of functional benefits as a mediator between website quality and impulse buying.

Interestingly, cognitive factors often impact impulse buying indirectly through emotional factors. For example, perceived usefulness affects impulse buying behaviour through the flow experience (Wu et al., 2016), and utilitarian browsing influences the urge to buy impulsively via hedonic browsing (Zheng et al., 2019).

Studies by Parboteeah et al. (2009), Wu et al. (2016), and Zhang et al. (2018) explain and reinforce the significant influence of the combined role of cognitive and emotional mediators on impulsive buying. For example, as noted above, Zheng et al. (2019) found that hedonic and utilitarian browsing mediate the influence of situational factors, like interpersonal influence and visual appeal, on Impulsive buying. Parboteeah et al. (2009) demonstrated that mood-relevant cues enhance impulsive buying through enjoyment.

These studies suggest that cognitive and emotional factors play a significant role in impulsive buying behaviour both as triggering factors and mediators, emphasising the complexity of consumer decision-making processes in impulse buying.

Moderators

A moderator is a third variable that affects the strength of the relationship or the direction of the relationship between two variables (King, 2013). In this study, we identified several such factors and grouped them into two categories at the consumer level: demographics (e.g., age and gender) and personality traits (Hayat et al., 2020; Husnain et al., 2016; Lee et al., 2021; Utama et al., 2021). A third external variable, namely, product category (Sarah et al., 2020), was also identified.

To understand these moderators in terms of their impact on impulse buying, it is important to describe the relationships they modify (Iyer et al., 2019; Yigit & Tıgli, 2018). Demographic factors such as age and gender can affect the impact of internet-based stimuli on the tendency to purchase impulsively. Younger consumers are likely to be more favourable to a pleasing online environment than the old consumers; thus, age reduces the influence of web atmospheric clues on the propensity to impulsive buying (Moreno et al., 2022; Nadzimi & Hadi, 2024). In terms of personality, the big five personality traits have been found to moderate the impact of electronic word of mouth on impulse buying (Husnain et al., 2016).

When examining the influence of web atmospheric cues on impulsive buying behaviour, product category was found to moderate this relationship. Sarah et al. (2020) noted that consumers showed a greater tendency for impulsive buying in

categories like clothing and cosmetics compared to electronics. This indicates that the product type can amplify or weaken the effect of online stimuli on impulse buying, providing insight into why certain categories see higher impulsive purchase rates (Zhang et al., 2018; Parboteeah et al., 2009).

Thus, knowing how these moderators influence the connections between various factors and impulsive buying provides a better insight into the forces that underlie this kind of behaviour.

Future Research Directions

Through this literature review concerning the driving factors of online impulsive buying behaviour, several key areas have been identified that require further investigation.

Firstly, there is an over-emphasis on external variables in the existing research. Of the literature reviewed, 23 studies have focused on factors such as website attributes and promotional strategies. In comparison, only 12 studies have examined internal factors, including those that use internal factors as mediators. External factors like website design and promotions are undoubtedly important (Parboteeah et al., 2009; Zhang et al., 2018), but understanding internal factors is crucial for a deeper comprehension of impulsive buying behaviour. Internal factors delve into the psychological and emotional aspects of individuals, offering insights into cognitive processes, emotional responses, and individual motivations that drive impulsive behaviour (Verhagen & Van Dolen, 2011; Hayu et al., 2020). By focusing more on these internal factors, researchers can uncover the underlying mechanisms of impulsive buying, which can help marketers and policymakers develop more targeted strategies and interventions, respectively (Beatty & Ferrell, 1998).

Exploring further into internal factors indicates that the existing literature has shown little interest in the influence of negative emotions on impulsive buying, it has heavily focused on the role of positive emotions in highlighting the feelings of excitement, joy, and pleasure that make consumers purchase impulsively to enhance these positive emotions (Moreno et al., 2022; Sarah et al., 2020; Zhang et al., 2018; Zheng et al., 2019). However, research also suggests that stress, anxiety, and other emotional biases can lead to impulsive buying and inappropriate decision-making (Kumar & Chaurasia, 2024; Verplanken et al., 2005). When individuals are stressed or anxious, they may seek retail therapy to temporarily alleviate negative feelings, resulting in unplanned purchases. Understanding how negative emotions drive

impulsive buying can help develop strategies to mitigate this behaviour, especially in the context of online shopping, where emotional triggers are prevalent (Chaurasia & Murari, 2024; Verhagen & van Dolen, 2011; Silvera et al., 2008).

Secondly, insufficient attention is paid to one external factor, e-WOM, particularly its varying impact across different social media platforms and cultural contexts, as well as the role of different types of e-WOM such as reviews, recommendations, and ratings on these platforms (Husnain et al., 2016).

Thirdly, insufficient attention is given to one of the promotional techniques, namely, scarcity promotional tactics like personalised discounts or dynamic pricing tactics (Aslam et al., 2021; Li et al., 2021). Lastly, there is a need to evaluate the role of gamification in websites and online communities, which may result in impulsive buying. Gamification, the integration of game mechanics into non-game contexts, has been shown to increase user engagement and participation (Hamari et al., 2014). However, its impact on impulsive buying behaviour remains underexplored. Investigating how gamification influences consumer behaviour can provide insights into the potential for digital platforms to manipulate purchasing decisions.

Conclusion

This study was conducted to systematically review the existing literature on online impulsive buying behaviour. The first research question addressed the identification of triggering factors for online impulsive buying. The identified influential factors were broadly categorised into two groups: External factors, such as web atmospherics, online promotions, electronic word of mouth, advertisements, and CSR activities, that are external to an individual and Internal factors, including cognitive (e.g., utilitarian motives) and emotional aspects (e.g., hedonic motivation) within an individual. Additionally, certain mediating and moderating factors were also identified. In answering the second research question aimed to identify gaps and suggest future research areas in the field of online impulsive buying, domains such as internal triggering factors, including the need for studies related to negative emotions, e-WOM, scarcity promotional tactics in impulse buying, and gamification marketing were identified. These directions would provide a pathway for future researchers in the field of online impulsive buying.

There are several limitations to acknowledge in this research. Firstly, the search for existing literature was restricted to only three databases due to factors like accessibility and time limitations, which may have resulted in overlooking relevant

studies from other sources. Secondly, the focus of this study leaned more towards research utilising quantitative methods to effectively address its objectives, although some qualitative studies were also considered based on predefined inclusion and exclusion criteria. Thirdly, the scope of this study was constrained by the specific time frame within which the research was conducted, potentially limiting the comprehensiveness and timeliness of the findings.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

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