

Online Impulse Buying: Typology and Theory

Snehashis Khan

Doctoral Scholar, Indian Institute of Management, Sambalpur

Dr. Poonam Kumar

Assistant Professor, Indian Institute of Management, Sambalpur

Email: phd20snehashikk@iimsambalpur.ac.in

ABSTRACT

The phenomenon of impulse behavior has been extensively studied by social studies researchers over the last century. An extension of this, impulse buying behavior has also been well-researched at least within the brick-and-mortar context. However, impulse buying behavior within the online context has been relatively unstudied compared to the offline equivalent. In this systematic literature review the authors attempt to synthesize literature on this topic, provide clarity of concept regarding the various forms of impulse shopping behavior, propose a theoretical framework that encapsulates both impulsive and compulsive buying behaviors within the online context, and discuss the underlying theoretical foundations, characteristics, contexts, and methodologies that define the literature within this domain. This review is the first within the online impulse buying behavior domain which provides a distinction between the various forms of impulse buying behavior, such as consumer impulsivity, the buying impulse, impulsive, compulsive, and panic buying behaviors. It is also the first to propose a comprehensive framework that incorporates both impulsive and compulsive buying behaviors within the online context. The theoretical framework proposed within this review would be of managerial relevance to practitioners within the e-commerce or social commerce domain since this is the first paper that discusses both online impulsive and compulsive buying behaviors within the same theoretical model. Policyholders in the field of addictive behavior and disaster management would benefit from the discussion of online compulsive and panic buying, along with the theoretical underpinnings of these phenomena. Lastly, this review would provide a fundamental but holistic view of online impulse shopping behavior to academicians within this domain.

Keywords- Online Impulse Buying, Online Impulse Shopping, Online Impulsive Buying, Online Compulsive Buying

1. INTRODUCTION

In the area of consumer behavior, an impulse purchase refers to an unplanned buying decision made by a consumer, just before the act of purchase. (Amos, Holmes, & Keneson, 2013) observes that over 87% of all consumers engage in impulse buys, at least 50% of groceries are purchased impulsively, and impulse buying accounts for 40-80% of all purchases across a variety of sectors. Thus, this phenomenon is of great interest to both academicians and practitioners. With increased internet adoption, increased accessibility through online channels, and rising online shopping acceptance, retailing has experienced a shift away from offline towards the online context in recent times. (Chiu, Lo, Hsieh, & Hwang, 2019) notes that differences in perceived search costs and increased price sensitivity within an online marketplace are some of the factors influencing consumers to spend more time shopping online rather than offline. We observe that while the phenomenon of impulse buying within the brick-and-mortar context has been studied extensively, the corresponding body of literature within the online context is not as substantial. Thus, we undertake the current work wherein we attempt to synthesize the current body of academic literature on online impulse buying following a systematic literature review approach.

2. METHODOLOGY

a. Topic Selection

We have elected to undertake a systematic review of the existing literature on online impulse buying. As per the guidance of (Paul & Criado, 2020), we undertake a preliminary review of five recent review articles published since 2021 that

explicitly discuss online impulse buying behavior (Table 1) We observed that of them, one study was bibliometric, three integrative by the same authors, and one systematic. The bibliometric review (Bashar, Singh, & Pathak, 2022) identified dominant themes studied within the academic literature on online impulse buying, namely: the characteristics of online stores, modeling of online impulse buying behavior, and study of the factors associated with online impulse buying behavior. The three integrative reviews (Pacheco, de Serpa Arruda Moniz, Caldeira, & Silva, 2021), (Pacheco, de Serpa Arruda Moniz, Caldeira, & Silva, 2022) and (Pacheco, de Serpa Arruda Moniz, Caldeira, & Silva, 2022) emerging from the same body of authors, review the influence of certain factors towards online impulse buying behavior. The systematic review (Hussain, Ali, Ullah, & Rasool, 2021) reviews the academic literature on impulse buying and compares the findings between the studies of offline and online contexts. We observed these reviews did not undertake a comprehensive study of online impulse buying as a concept and its associated theoretical frameworks. Thus, we undertake a theory-based systematic review of online impulse buying behavior with a focus on this research gap.

b. Search Strategy

The database of Scopus was first used to identify relevant articles. The keywords used to search were: (“online” OR “app” OR “virtual” OR “social” OR “mobile”) AND (“impulse buying” OR “impulse shopping” OR “impulse purchase” OR “unplanned buying” OR “unplanned shopping” OR “unplanned purchase” OR “impulsivity” OR “compulsivity” OR “compulsive buying”). A total of 1,184 peer-reviewed articles in the areas of Business Management and Accounting, Social Sciences and Psychology, and published in the English language were retrieved. Through abstract screening, we identified 231 articles for further screening. Of these, we further identified 38 articles as being ABDC A and A* indexed, which we then reviewed comprehensively. This analysis identified 20 articles that comprehensively discussed impulse buying behavior in any form and associated theoretical constructs.

Table 1: Recent literature reviews on online impulse buying (2021 onwards)

Authors and Year	Title	Journal / Conference	Review Type	Review Focus	Type of Papers Reviewed	Number of Papers Reviewed	Year Range
(Bashar, Singh, & Pathak, 2022)	A bibliometric review of online impulse buying behavior	International Journal of Electronic Business	Bibliometric	Identification of major trends in OIB research: online store characteristics, modeling of OIB behavior, factors influencing OIB behavior.	Journal Articles indexed by Scopus	482	2000-2020
(Pacheco, de Serpa Arruda Moniz, Caldeira, & Silva, 2022)	Online Impulse Buying— Integrative Review on Self-Regulation, Risks, and Self-Regulatory Strategies	Advances in Tourism, Technology, and Systems	Integrative	Reviews the influence of self-regulation and emotional self-regulation, perceived risks when shopping online, and self-regulatory strategies on OIB behavior.	Not Discussed	47	1982-2020

(Pacheco, de Serpa Arruda Moniz, Caldeira, & Silva, 2022)	Online Impulse Buying— Integrative Review of Psychological Factors	Perspectives and Trends in Education and Technology	Integrative	Reviews the influence of stress reaction, self-esteem, materialism, boredom, positive affect, absorption, shopping pleasure, hedonism and utilitarianism, and habits on OIB behavior.	Not Discussed	48	1953-2020
(Pacheco, de Serpa Arruda Moniz, Caldeira, & Silva, 2021)	Online Impulse Buying – Integrative Review of Social Factors and Marketing Stimuli	International Conference on Advanced Research in Technologies, Information, Innovation, and Sustainability	Integrative	Reviews the influence of social factors: individualism and collectivism, power distance, parasocial interaction, social identity, and symbols, need for uniqueness, and marketing stimuli: sales promotion, product diversity, product attractiveness, hedonism and brand, and credit card usage on OIB behavior.	Not Discussed	64	1944-2020
(Hussain, Ali, Ullah, & Rasool, 2021)	A Structured Literature Review on Impulse Buying: Online Jitters and Offline Jeepers	Humanities & social sciences reviews	Systematic	Reviews the academic literature on impulse buying, and compares research findings from both the online and offline contexts.	Open-access journal articles retrieved from EBSCO, Emerald, and Scopus databases	93	1962-2021

Table 2: List of articles reviewed

Publisher	Journal	Year	Title	Authors	
Elsevier	Journal of Retailing	2009	The Relationship Between Consumers' Tendencies to Buy Compulsively and Their Motivations to Shop and Buy on the Internet	Kukar-Kinney M., Ridgway N.M., Monroe K.B.	
	Journal of Business Research	2022	Why do consumers buy impulsively during live streaming? A deep learning-based dual-stage SEM-ANN analysis	Lo P.-S., Dwivedi Y.K., Wei-Han Tan G., Ooi K.-B., Cheng-Xi Aw E., Metri B.	
		2021	Sneaking the dark side of brand engagement into Instagram: The dual theory of passion	Okazaki S., Schuberth F., Tagashira T., Andrade V.	
		2020	Does online retail coupons and memberships create favourable psychological disposition?	Balakrishnan J., Foroudi P., Dwivedi Y.K.	
		2018	Compulsive buying in China: Measurement, prevalence, and online drivers	He H., Kukar-Kinney M., Ridgway N.M.	
		2016	Compulsive buying in online daily deal settings: An investigation of motivations and contextual elements	Kukar-Kinney M., Scheinbaum A.C., Schaefer T.	
		Computers in Human Behavior	2022	Glued to your phone? Generation Z's smartphone addiction and online compulsive buying	Mason M.C., Zamparo G., Marini A., Ameen N.
	2017		Tell me what they are like and I will tell you where they buy. An analysis of omnichannel consumer behavior	Rodríguez-Torrico P., San José Cabezudo R., San-Martín S.	
	Journal of Retailing and Consumer Services	2022	Understanding the impact of online customers' shopping experience on online impulsive buying: A study on two leading E-commerce platforms	Gulfraz M.B., Sufyan M., Mustak M., Salminen J., Srivastava D.K.	
		2021	'Instagram made Me buy it': Generation Z impulse purchases in fashion industry	Djafarova E., Bowes T.	
		2021	Panic buying in the COVID-19 pandemic: A multi-country examination	Islam T., Pitafi A.H., Arya V., Wang Y., Akhtar N., Mubarik S., Xiaobei L.	
		2019	Clicking the boredom away – Exploring impulse fashion buying behavior online	Sundström M., Hjelm-Lidholm S., Radon A.	
		2009	Shopping value in online auctions: Their antecedents and outcomes	Lee M.-Y., Kim Y.-K., Fairhurst A.	
	Emerald	Asia Pacific Journal of Marketing and Logistics	2022	A dual process on shopping well-being across shopping contexts: the role of shopping values and impulse buying	Nghia H.T., Olsen S.O., Trang N.T.M.
	Wiley	International Journal of Consumer Studies	2022	Impulse buying: A systematic literature review and future research directions	Redine A., Deshpande S., Jebarajakirthy C., Surachartkumtonkun J.

	Systems Research and Behavioral Science	2012	Flow Experience and Internet Shopping Behavior: Investigating the Moderating Effect of Consumer Characteristics	Hsu C.-L., Chang K.-C., Chen M.-C.
Routledge	Journal of Strategic Marketing	2017	Untangling the relationships between consumer characteristics, shopping values, and behavioral intention in online group buying	Lim W.M.
SAGE	Journal of Macromarketing	2022	The “Well-Being” and “Ill-Being” of Online Impulsive and Compulsive Buying on Life Satisfaction: The Role of Self-Esteem and Harmony in Life	Olsen S.O., Khoi N.H., Tuu H.H.
Springer	Journal of the Academy of Marketing Science	2020	Impulse buying: a meta-analytic review	Iyer G.R., Blut M., Xiao S.H., Grewal D.
		2018	The emotional review–reward effect: how do reviews increase impulsivity?	Motyka S., Grewal D., Aguirre E., Mahr D., de Ruyter K., Wetzels M.

3. FINDINGS AND DISCUSSION

a. Framework

Figure 1: Theoretical framework inferred by authors from the literature reviewed

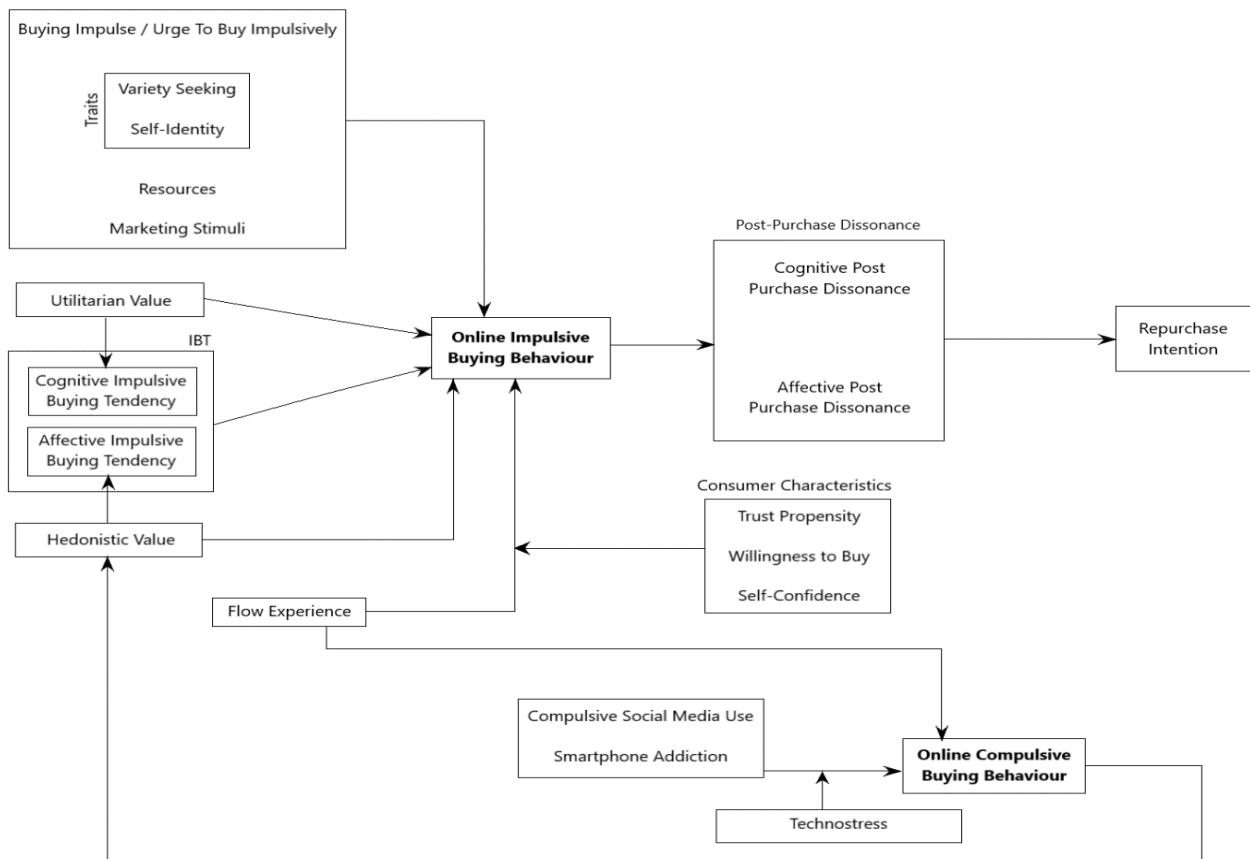


Table 3: List of Variables

Variable name	Source	Elaboration
Buying Impulse / Urge to Buy Impulsively	(Lo, et al., 2022)	The urge to buy or the buying impulse refers to a consumer's relatively sudden and spontaneous desire to acquire a particular product or service without prior evaluation of its utilitarian value, on which the consumer may not necessarily act immediately (Verhagen & Van Dolen, 2011; Rook & Fisher, 1995). The studies (Weinberg & Gottwald, 1982; Beatty & Ferrell, 1998; Rook & Fisher, 1995) observe that impulse buying behavior can fundamentally be separated into two stages: the buying motivation that may or may not be premeditated, and the consequent activation of impulse-purchasing. (Verhagen & Van Dolen, 2011; Beatty & Ferrell, 1998) observe that buying impulse or urge to buy has a positive association with actual impulse buying behavior.
Variety Seeking / Sensation Seeking	(Iyer, Blut, Xiao, & Grewal, 2020)	Certain individual traits have been strongly associated with impulse buying behavior. (Punj, 2011; Sharma, Markon, & Clark, 2014; Van Trijp & Steenkamp, 1992) note that the intrinsic character trait of variety seeking or sensation seeking or novelty seeking has a strong positive association with impulse buying behavior. (Dittmar, Beattie, & Friese, 1995; Dittmar & Bond, 2010) notes that impulse purchases typically have some association with the consumer's self-identity or perception of one's ideal self to compensate for his/her perceived identity deficits.
Self-Identity		(Kacen & Lee, 2002; Jones, Reynolds, Weun, & Beatty, 2003; Hoch & Loewenstein, 1991) observed that consumers who lack the resources of time and money are less likely to engage in impulse buying activity.
Resources		(Blattberg & Neslin, 1990) argue that marketing stimuli have a direct and immediate influence on consumers' in-store behavior. (Youn & Faber, 2000) and (Xu & Huang, 2014) find that price discounting and sales promotions leverage consumers' short-term satisfaction thereby influencing them towards making impulse purchases. (de Kervenoael, Aykac, & Palmer, 2009) observed that attractive banner advertisements, promotional offers, and discounts have a positive influence on impulse buying behavior.
Marketing Stimuli		(Valacich, Parboteeah, & Wells, 2007) define utilitarian value or functional convenience as the availability of characteristics that enhance the consumer's sense of usefulness regarding a particular product or product class. (Moeller, Fassnacht, & Ettinger, 2009) observe that utilitarian value is evaluated by consumers in the form of time and effort savings, and for routine purchases such as groceries, impulse decisions are made by consumers based on immediately perceived convenience and cost. (Shirmohammadi, Ghane, & Ebrahimi, 2015) finds that perception of product usability positively influences unplanned purchasing behavior.
Utilitarian Value	(Nghia, Olsen, & Trang, 2022)	(Parboteeah, Valacich, & Wells, 2009) defines hedonistic value as the enjoyment or pleasure consumers gain from interacting with a product or service, and argues that it is a strong predictor of impulse buying behavior. (Alalwan, 2018) finds that this sense of perceived enjoyment positively influences consumers' purchase behavior. (Floh & Madlberger, 2013; Bian & Forsythe, 2012; Park, Kim, Funches, & Foxx, 2012) observe that when consumers are pleasurablely engaged, they are significantly more prone to making impulsive purchases. Furthermore, (Kim & Johnson, 2016) finds that a pleasurable experience interacting with a product or service may influence consumers to make an impulsive purchase of the same product later as well.
Hedonic Value		(Weun, Jones, & Beatty, 1998; Gerbing, Ahadi, & Patton, 1987) define impulse buying tendency refers to a consumer's innate tendency to make impulse purchases. (Rook & Fisher, 1995) observes that impulsive shopping tendency is an innate individual characteristic independent of external stimuli. (Beatty & Ferrell, 1998) finds that consumers possessing high impulse buying tendencies are significantly more likely to make impulse purchases than others.
Cognitive Impulsive Buying Tendency	(Balakrishnan, Foroudi, & Dwivedi, 2020)	With rapid online marketplace growth, consumers are exposed to a great variety of choices which may result in compulsive buyers experiencing post-purchase dissonance and dissatisfaction, and thus less likely to engage in repurchase behavior (Kukar-Kinney, Scheinbaum, & Schaeffers, 2016). Conflict of beliefs and available options could result
Affective Impulsive Buying Tendency		
Cognitive Post-Purchase Dissonance		

Affective Post-Purchase Dissonance		in a state of dissonance being experienced negatively affecting the consumers' long-term repurchase activity (Festinger, 1957; Elliot & Devine, 1994).
Repurchase Intention		
Flow Experience	(Hsu, Chang, & Chen, 2012; Mason, Zamparo, Marini, & Ameen, 2022)	(Novak, Hoffman, & Yung, 2000) observes that flow experience helps retail brands attract consumers and positively influences their attitudes and behavior. (Mathwick & Rigdon, 2004; Kabadayi & Gupta, 2005) note that flow experience positively influences consumer attitude and intent to make impulse purchases, revisit and repurchase both within the offline and online context.
Trust Propensity		Trust propensity refers to the general willingness of individuals to depend on or trust others (Ridings, Gefen, & Arinze, 2002). (Lee & Turban, 2001) note that consumers vary in their tendency to trust others in both online and offline settings. Trust propensity helps reduce uncertainty and is thus positively associated with consumers making impulse purchases on e-commerce platforms (Limerick & Cunnington, 1993). (Baker, Levy, & Grewal, 1992) notes that willingness to buy is an innate characteristic wherein consumers having a high willingness to buy are more likely to make spontaneous impulsive purchases. (Smith & Sivakumar, 2004) notes that when the phenomena of flow experience and willingness to buy meet, consumers are more likely to make impulsive and repeat purchases. (Smith & Sivakumar, 2004; Sparks & Shepherd, 1992) note that as consumers transition from novices to veteran customers at a particular e-commerce platform, their self-confidence rises and they are more willing to engage in impulse buying behavior on that platform.
Willingness to Buy		
Self-Confidence	(Hsu, Chang, & Chen, 2012)	
Compulsive Social Media Use	(Okazaki, Schubert, Tagashira, & Andrade, 2021)	(Bernardi & Pallanti, 2009) note that compulsive social media is the spontaneous seeking of social media platforms in a manner like an addiction. Compulsive social media use is positively associated with a lack of control and poor social interaction (Caplan, 2003). Compulsive social media users use social media as a mood regulator to reduce feelings of anxiety, guilt, or restlessness and improve feelings of self-worth (Andreassen, et al., 2016).
Technostress		Technostress refers to the negative psychological stress associated with understanding and coping with evolving information and communication technologies (Weil & Rosen, 1997). Compulsivity and technostress are positively associated, with the likelihood of technostress rising with compulsive smartphone use and compulsive social media use (Lee, Chang, Lin, & Cheng, 2014; Hsiao, Shu, & Huang, 2017).
Smartphone Addiction	(Mason, Zamparo, Marini, & Ameen, 2022)	Smartphones are in recent times the most popular tool for online commerce activities. (Konok, Gigler, Bereczky, & Miklósi, 2016; Chopdar, Paul, & Prodanova, 2022) observed that there is a strong positive association between smartphone usage frequency and online compulsive buying behavior, and thus conjectured that smartphone addicts are more likely to engage in online compulsive purchases.

b. Typology

(Audi, 1989) and (Mele, 1987) conceptualize impulses as being related to a psychological weakness of will. (James, 1890) similarly defined an impulse as a sudden irresistible urge felt that may be acted upon. (Rook D. W., 1987) and (Hoch & Loewenstein, 1991) extend this definition by defining impulse buying as a sudden and spontaneous urge felt by consumers to purchase without pre-purchase decision-making. From the literature reviewed, we observed that there is some lack of clarity between different facets of impulse buying behavior, especially between impulsive and compulsive buying behaviors, with the two terms having frequently been used interchangeably. Thus, we clarify the following definitions as part of our study.

i. Consumer Impulsiveness and the Urge to Buy Impulsively

(Youn & Faber, 2000) studied the influence of both environmental and internal factors on an individual's impulse buying behavior, and observed that consumers who possess impulsivity as an innate trait i.e., they are impulsive by disposition tend to be more easily influenced by external stimuli towards making impulse purchases. (Rook D. W., 1987) defines the buying impulse as a sudden and spontaneous urge to buy impulsively, that manifests itself as a sudden inclination to act without prior deliberation. The studies (Balakrishnan, Foroudi, & Dwivedi, 2020) and (Rodríguez-Torrico, Cabezudo, & San-Martín, 2017) study the relationship between consumer impulsiveness and their purchasing behavior within the online context. (Rodríguez-Torrico, Cabezudo, & San-Martín, 2017) observed that modern mobile cellular devices allow consumers to seek information readily and engage in shopping activity whenever and from wherever they choose, even sometimes facilitating making an impulsive online purchase after encountering the concerned product at a physical store. In conformance with (Youn & Faber, 2000), (Balakrishnan, Foroudi, & Dwivedi, 2020) observes that an increase in promotional offerings leads to a greater degree of impulse purchasing behavior by positively enhancing the innate impulsiveness trait of consumers.

ii. Impulsive and Compulsive Buying Behaviors

Researchers have observed that both impulsive and compulsive buying behaviors manifest through a buying impulse or a sudden spontaneous urge to buy. However, (DeSarbo & Edwards, 1996) observe that the underlying motivations for impulsive and compulsive buying behaviors are different and thus they should be considered distinct yet related constructs. (Flight, Rountree, & Beatty, 2012) observe that impulse purchasing behavior is typically outcome-oriented, and product or situation focused whereas compulsive buying behaviors tend to be repetitive and in response to changes in the consumers' emotional state. (Olsen, Khoi, & Tuu, 2022) notes that compulsive behavior unlike impulsiveness is rooted in addiction.

Many of the articles reviewed as part of this study discuss either or both impulsive and compulsive buying behaviors within the online context. (Kukar-Kinney, Ridgway, & Monroe, 2009) studied the relationship between compulsive buying and consumer buying motivations about both brick-and-mortar retailers and online shopping platforms, and observed that as consumers' compulsive buying tendencies increased, they were increasingly motivated to shop online. This phenomenon was attributed to an individual's ability to buy unobserved online in comparison to an offline context, as well as to positive feelings experienced when making an online compulsive purchase. (Lo, et al., 2022) studied impulse buying behavior within the context of live streaming commerce, and observes that consumers' parasocial interaction, vicarious experience, scarcity persuasion, and price perception significantly influence the cognitive and emotional reactions of consumers which in turn induce impulse buying behavior. (Okazaki, Schuberth, Tagashira, & Andrade, 2021) argues that brand engagement has a positive association with compulsive buying behavior and personality traits such as vanity, narcissism, and materialism act as moderators and technology-related stress technostress is a mediator of this relationship. (Balakrishnan, Foroudi, & Dwivedi, 2020) proposes that the relationships between impulsive buying behavior and cognitive and affective post-purchase behaviors are significant and that impulsiveness navigates primarily through the affective and not cognitive state. (He, Kukar-Kinney, & Ridgway, 2018) identified six constructs associated with online compulsive buying within the Chinese context: immediate positive feelings, avoiding social interaction, buying anytime/anywhere, observed buying, daydreaming, and emotional response to online purchases. (Gulfraz, Sufyan, Mustak, Salminen, & Srivastava, 2022) studied how the psychological and functional aspects of the online customer shopping experience influence impulsive buying behavior and found there exists a positive relationship between shopping experience and impulsive buying behavior with the mediator of attitudinal loyalty and the negative moderating influence of self-control. (Rodríguez-Torrico, Cabezudo, & San-Martín, 2017) finds that impulsive consumers have a greater propensity to use mobile devices for shopping and that a mobile omnichannel sales process is more often used by impulsive rather than non-impulsive consumers. The positive association between mobile phone use and impulsive buying behavior could be due to their providing consumers the ability to search and shop anywhere and at any time (Wang, Malthouse, & Krishnamurthi, 2015). (Kukar-Kinney, Scheinbaum, & Schaefer, 2016) observed that due to hedonic and social motivations such as social approval and fitting in, online daily deals are especially tempting for compulsive buyers. (Mason, Zamparo, Marini, & Ameen, 2022) notes that there exists a positive association between smartphone addiction and compulsive buying with mood regulatory behavior and flow experience mediating this relationship. (Djafarova & Bowes, 2021) notes that social media platforms have a greater tendency to encourage impulsive purchasing behavior among females than among male

consumers. (Sundström, Hjelm-Lidholm, & Radon, 2019) observe that among the youth population impulsive purchase activity on online e-commerce platforms is often motivated by boredom, with boredom making them easily responsive to stimuli such as attractive prices, easy access, and free delivery. (Lee, Kim, & Fairhurst, 2009) finds that compulsive buying behavior has a positive association with hedonic shopping value within the online auction context, and infers that compulsive buyers are more likely to participate in online auctions due to hedonic motivations such as the thrill of bidding, excitement of winning, stimulation of beating competitors, and enjoyment in finding rare or unusual items. (Nghia, Olsen, & Trang, 2022) finds that both the cognitive and affective aspects of impulsive buying behavior have a positive relationship with shopping well-being. In contradiction to (Silvera, Lavack, & Kropp, 2008), (Aragoncillo & Orus, 2018; Nghia, Olsen, & Trang, 2022) note that the impulsive buying tendency of consumers tends to be greater within the online than in offline context. (Lim, 2017) notes that compulsive buying behavior has a direct influence on both utilitarian and hedonic shopping values and thus indirectly influences online group buying intention. (Motyka, et al., 2018) observes that emotional reviews or other public testimonials by other consumers encourage impulsive buying behavior among consumers. (Hsu, Chang, & Chen, 2012) observes that flow experience is positively related to online impulsive buying behavior, and it is moderated by the consumers' trust propensity, willingness to buy, and self-confidence.

iii. Panic Buying

Of the articles reviewed as part of this study, only (Islam, et al., 2021) discussed the phenomenon of panic buying behavior. Panic buying refers to the act of buying large quantities of a commodity or product driven by a fear of shortages or price increase i.e., a sense of perceived scarcity. (Islam, et al., 2021) classifies panic buying as being either impulsive or obsessive (compulsive). In the case of impulsive panic buying behavior, the rapidity of the purchase decision bypasses the proper evaluation of the product or commodity (Kacen & Lee, 2002). On the other hand, in the case of obsessive or compulsive panic buying behavior, there is a preoccupation in making spontaneous repeated purchases to alleviate the sense of panic or stress (Japutra, Ekinici, & Simkin, 2019; Ridgway, Kukar-Kinney, & Monroe, 2008). Panic buying is a special case of impulse buying behavior that typically manifests only during times of disaster and disappears within a short period (Badgaiyan & Verma, 2015).

c. Theories

i. Stimuli Organism Response (S-O-R) Model

The S-O-R (stimuli-response-organism) model conceptualizes consumer decision-making behavior as consisting of three elements: a set of environmental stimuli, the organism receiving the stimuli, and the response the stimuli elicit (Mehrabian & Russell, 1974; Bagozzi, 1986). The decision-making is induced by input stimuli that create a basis for analyzing or interpreting a situation towards a decision state. The organism selects, organizes, and understands these stimuli to form a perception. The same stimuli could induce different perceptions among different consumers. Based on these factors a response or decision is made by the individual. We observed that the S-O-R model was the most used theoretical foundation among studies on online impulse buying behavior, and even so among studies in the broader literature on impulse buying behavior. The bulk of the reviewed literature consistently examines relationships between external stimuli, consumers' cognitive and affective processes, and their response behavior, and thus can be reconciled with the S-O-R model (Hoch & Loewenstein, 1991; Shen & Khalifa, 2012). Within the reviewed literature on online impulse buying, the environmental stimuli can be classified into website or app, marketing, and situational stimuli (Parboteeah, Valacich, & Wells, The influence of website characteristics on a consumer's urge to buy impulsively, 2009). The organism construct of the S-O-R model can be reconciled with consumers' internal evaluations and their innate characteristics, and primarily can be interpreted in terms of cognitive and affective aspects of the same consumer(s) (Adelaar, Chang, Lancendorfer, Lee, & Morimoto, 2003) (Mehrabian & Russell, 1974). The response construct is more commonly reconciled with the urge to buy impulsively rather than online impulse buying itself, since measuring actual impulse buying behavior is challenging in most experimental or survey settings since respondents tend to behave in a socially desirable manner (Liu, H. Li, & F. Hu, 2013) (Rook & Fisher, 1995) (Wells, Parboteeah, & Valacich, 2011).

ii. Cognitive Dissonance Theory

Cognitive dissonance happens when there is a perception of two or more contradictory sets of information and there is psychological stress when reconciling both. When two such pieces of information are not psychologically consistent with each other, the discomfort triggered motivates the individual to find a way to reconcile the contradictions to ease the psychological discomfort (Festinger, Conflict, decision, and dissonance, 1964). (Cummings & Venkatesan, 1976; Mellinas, Nicolau, & Park, 2019) observe that as consumers have different experiences during their decision-making, the inconsistency between their beliefs and actions possibly results in a state of dissonance wherein there is a conflict between their thinking and purchase behaviors (Sweeney, Hausknecht, & Soutar, 2000). Post-purchase dissonance concerning an impulse purchase can lead to dissatisfaction with their purchase experience and thus negatively influence consumers' repurchase intention, loyalty, and word-of-mouth (George & Yaoyuneyong, 2010).

iii. Theory of Impulsiveness

(Stern, 1962) discusses that impulsiveness and impulsive behavior are instantaneous phenomena, made without prior planning. (Bellenger, Robertson, & Hirschman, 1978) note that "impulsification" of consumers typically happens after the consumer enters the shopping environment via reminder impulsiveness, and (Rook & Fisher, 1995) argues that this behavior is driven by economic and social stimuli. (Ainslie, 1975) argues that this state of impulsiveness is induced by reward-seeking behavior, whereas (Ashworth, Darke, & Schaller, 2005) argues that in-store economic and social stimuli such as offers and discounts are a rewarding phenomenon that induces impulsive buying behavior.

iv. Social Comparison Theory

The social comparison theory states that individuals make evaluations regarding their perceptions, opinions, and abilities i.e., self-assessment by comparison with known others, to reduce uncertainty and better define the self as a part of the social whole. (Dittmar & Drury, Self-image—is it in the bag? A qualitative comparison between “ordinary” and “excessive” consumers, 2000; Faber & O'guinn, 1992) note that compulsive buyers typically possess lower self-esteem and a poorer self-image than non-compulsive buyers. (DeSarbo & Edwards, 1996) and (Ridgway, Kukar-Kinney, & Monroe, 2008) argue that compulsive purchases help such individuals satiate their need for social approval and enhance their feelings of self-worth. (Bearden, Netemeyer, & Teel, 1989; Bearden, Netemeyer, & Teel, 1990) find that compulsive buyers are thus more susceptible to normative interpersonal influence i.e., they are more easily influenced regarding purchase decisions by social comparison and others' reactions to them.

v. Competitive Arousal Model

According to the competitive arousal model, escalated arousal is experienced by consumers when there is competition with others for the acquisition of a particular product. During this state of heightened arousal, the consumer experiences reduced attentional capacity and are prone to irrational decision-making (Mano, 1992; Gilovich, Medvec, & Savitsky, 2000). Consistent with the competitive arousal model, perceived scarcity experienced during times of panic or auctions has a strong positive association with consumer arousal level, resulting in consumers having a greater likelihood of making an impulse purchase (Islam, et al., 2021).

d. Contexts

i. Domains

The reviewed studies have studied impulsive and compulsive buying behaviors within the online context across the domains of live streaming, e-shopping website, mobile shopping applications, online auctions, and the omnichannel marketplace. (Kukar-Kinney, Ridgway, & Monroe, 2009) studies and compares compulsive buying behavior across both online stores and offline brick-and-mortar retailers. (Lo, et al., 2022) studies impulsive purchase behavior within the live-streaming context. (Okazaki, Schuberth, Tagashira, & Andrade, 2021) studies obsession and compulsive behavior with a focus on the popular image-sharing social media platform Instagram. (Balakrishnan, Foroudi, & Dwivedi, 2020) studied

the impact of coupons and membership programs on consumer purchase behavior. (He, Kukar-Kinney, & Ridgway, 2018) studied the measurement and impact and motivational drivers of compulsive buying behavior within the Chinese cultural context. (Kukar-Kinney, Scheinbaum, & Schaefer, 2016) discusses how compulsive buying behavior manifests within the context of daily deals websites, and notes that compulsive buyers and daily deal consumers represent two distinct consumer segments. (Mason, Zamparo, Marini, & Ameen, 2022) discusses the relationship between smartphone addiction, flow experience, and compulsive buying behavior through mobile-app channels. (Rodríguez-Torrico, Cabezudo, & San-Martín, 2017) studies impulsive behavior within an omnichannel fashion marketplace, with simultaneous exposure of customers to both a physical retail store and its accompanying mobile shopping app. (Islam, et al., 2021) studied the influence of panic and scarcity on consumers' impulsive and obsessive buying behaviors. (Lee, Kim, & Fairhurst, 2009) studied compulsive buying and variety-seeking behavior within the context of online auctions.

ii. Mediators and Moderators

The study (Lo, et al., 2022) finds that parasocial interaction, vicarious experience, scarcity persuasion, and price perception within the online live-streaming context have a positive association with consumers' cognitive and affective reactions, which in turn positively influences their urge to buy impulsively. (Okazaki, Schuberth, Tagashira, & Andrade, 2021) observes that on Instagram vanity moderates the relationship between brand engagement and compulsive social media use, and narcissism moderates compulsive social media use and compulsive buying behavior. (Gulfraz, Sufyan, Mustak, Salminen, & Srivastava, 2022) observes that the relationship between perceived online shopping experience and impulsive buying on e-commerce aggregator platforms is mediated by attitudinal loyalty and negatively moderated by the consumer's self-control. (Djafarova & Bowes, 2021) examines the role of gender as a moderator for impulse shopping on Instagram. (Nghia, Olsen, & Trang, 2022) studies the role of self-control as a moderator between consumer shopping values and impulsive buying tendencies across both offline and online contexts. (Hsu, Chang, & Chen, 2012) attempts to examine the moderating role of trust propensity, willingness to buy, and self-confidence between flow experience and online shopping behavior.

e. Characteristics

Online impulse buying behavior has been discussed in literature from multiple perspectives. Some scholars focus on the role of external factors such as hedonism on online impulse buying behavior (Adelaar, Chang, Lancendorfer, Lee, & Morimoto, 2003) (Parboteeah, Valacich, & Wells, The influence of website characteristics on a consumer's urge to buy impulsively, 2009), whereas others focus on the role of online stimuli on impulse purchase activity either online or offline (Koufaris, 2002) (Chih, Wu, & Li, 2012). Studies could also be broadly classified on the nature of the impulse purchasing behavior discussed: pure impulse buying behavior, reminder impulse buying, and planned impulse shopping behavior (Stern, The significance of impulse buying today, 1962) (Dawson & Kim, 2009). The bulk of the current literature consists of cross-sectional studies with a notable lack of longitudinal studies having been undertaken within the area of online impulse shopping behavior.

f. Methodologies

Much of the reviewed literature consists of quantitative studies, with only three studies (Djafarova & Bowes, 2021), (Sundström, Hjelm-Lidholm, & Radon, 2019), (Redine, Deshpande, Jebarajakirthy, & Surachartkumtonkun, 2022) having been undertaken using qualitative approaches. The study (Djafarova & Bowes, 2021) inferred hypotheses from thematic analysis of focus group data, whereas (Sundström, Hjelm-Lidholm, & Radon, 2019) developed their inferences through semi-structured face-to-face interviews using an inductive reasoning method. (Redine, Deshpande, Jebarajakirthy, & Surachartkumtonkun, 2022) undertook a systematic literature review, whereas (Iyer, Blut, Xiao, & Grewal, 2020) followed a meta-analytic approach. (Balakrishnan, Foroudi, & Dwivedi, 2020) and (Motyka, et al., 2018) followed an experimental methodology. The remaining studies were undertaken using the methods of structured equation modeling and causal analysis i.e., regression using primary data.

4. CONCLUSION

The purpose of the current study was to systematically review the literature on online impulse buying behavior to understand the typology of concepts discussed and the theoretical foundations used by various studies in this domain. The primary objective of this study was to develop an understanding of impulse buying behavior within the online context from the literature. Accordingly, a comprehensive framework (Figure 1) was developed incorporating both aspects of online impulse buying frequently discussed in the literature: online impulsive and online compulsive buying behaviors. This study also elaborates on the differences and commonalities between consumer impulsiveness, the buying impulse, impulsive and compulsive buying behaviors, and panic buying, a variety of distinct concepts that are frequently mislabelled as each other by researchers. The current study also attempts to synthesize the reviewed literature in terms of underlying theories, contexts, characteristics, and methodologies, based on which future research in this domain could be undertaken.

a. Implications

The present systematic literature review offers both theoretical and managerial implications. Firstly, it is the first review that discusses the various aspects of impulse-related consumer behavior: consumer impulsiveness, the buying impulse, impulsive and compulsive buying behaviors, and panic buying within the online context. Studies that discuss the same are few even in the context of brick-and-mortar retailing. Furthermore, it is the only systematic review at least within the online context that critically examines the theoretical foundations underlying online impulse buying behavior. Practitioners in the field of e-retail or social media commerce would benefit from the theoretical model proposed by this study which encapsulates both online impulsive and compulsive buying experiences. Policymakers in the field of addiction-related behaviors or disaster management too may benefit from perusing the discussion on compulsive and panic-buying behaviors, and the theoretical underpinnings of these phenomena.

b. Limitations and Recommendations

This systematic literature review specified certain inclusion and exclusion criteria for the selection of academic literature. Accordingly, the analyses and interpretations are restricted to articles that satisfy this set of criteria. Thus, the findings cannot be generalized across the broader literature on online impulse buying behavior. Nonetheless, this review can provide a useful reference to future researchers within this domain. Subsequent research can be undertaken across a broader body of literature, or with greater specificity of context. Future research could also be undertaken with a focus on the generalizability of certain context-specific moderators and mediators discussed as part of this review.

REFERENCES

- [1] Adelaar, T., Chang, S., Lancendorfer, K. M., Lee, B., & Morimoto, M. (2003). Effects of media formats on emotions and impulse buying intent. *Journal of Information Technology*.
- [2] Ainslie, G. (1975). Specious reward: a behavioral theory of impulsiveness and impulse control. *Psychological bulletin*.
- [3] Alalwan, A. A. (2018). Investigating the impact of social media advertising features on customer purchase intention. *International Journal of Information Management*.
- [4] Amos, C., Holmes, G. R., & Keneson, W. C. (2013). A meta-analysis of consumer impulse buying. *Journal of Retailing and Consumer Services*.
- [5] Andreassen, C. S., Billieux, J., Griffiths, M. D., Kuss, D. J., Demetrovics, Z., Mazzoni, E., & Pallesen, S. (2016). The relationship between addictive use of social media and video games and symptoms of psychiatric disorders: A large-scale cross-sectional study. *Psychology of Addictive Behaviors*.
- [6] Aragoncillo, L., & Orus, C. (2018). Impulse buying behaviour: an online-offline comparative and the impact of social media. *Spanish Journal of Marketing-ESIC*.
- [7] Ashworth, L., Darke, P. R., & Schaller, M. (2005). No one wants to look cheap: Trade-offs between social disincentives and the economic and psychological incentives to redeem coupons. *Journal of Consumer Psychology*.
- [8] Audi, R. (1989). Self-deception and practical reasoning. *Canadian Journal of Philosophy*.

- [9] Badgaiyan, A. J., & Verma, A. (2015). Does urge to buy impulsively differ from impulsive buying behaviour? Assessing the impact of situational factors. *Journal of Retailing and Consumer Services*.
- [10] Bagozzi, R. P. (1986). Attitude formation under the theory of reasoned action and a purposeful behaviour reformulation. *British Journal of Social Psychology*.
- [11] Baker, J., Levy, M., & Grewal, D. (1992). An experimental approach to making retail store environmental decisions. *Journal of retailing*.
- [12] Balakrishnan, Foroudi, & Dwivedi, Y. (2020). Does online retail coupons and memberships create favourable psychological disposition? *Journal of Business Research*.
- [13] Bashar, A., Singh, S., & Pathak, V. K. (2022). A bibliometric review of online impulse buying behaviour. *International Journal of Electronic Business*, 162-183.
- [14] Bearden, W. O., Netemeyer, R. G., & Teel, J. E. (1989). Measurement of consumer susceptibility to interpersonal influence. *Journal of consumer research* .
- [15] Bearden, W. O., Netemeyer, R. G., & Teel, J. E. (1990). Further validation of the consumer susceptibility to interpersonal influence scale. *ACR North American Advances*.
- [16] Beatty, S. E., & Ferrell, M. E. (1998). Impulse buying: Modeling its precursors. *Journal of retailing*.
- [17] Bellenger, D. N., Robertson, D. H., & Hirschman, E. C. (1978). A pragmatic concept of impulse purchasing to guide in-store promotion. *Journal of Advertising Research*.
- [18] Bernardi, S., & Pallanti, S. (2009). Internet addiction: a descriptive clinical study focusing on comorbidities and dissociative symptoms. *Comprehensive psychiatry*.
- [19] Bian, Q., & Forsythe, S. (2012). Purchase intention for luxury brands: A cross cultural comparison. *Journal of Business Research*.
- [20] Blattberg, R. C., & Neslin, S. A. (1990). *Sales promotion: Concepts, methods, and strategies*. Prentice Hall.
- [21] Caplan, S. E. (2003). Preference for online social interaction: A theory of problematic Internet use and psychosocial well-being. *Communication research*.
- [22] Chih, W., Wu, C., & Li, H. (2012). The antecedents of consumer online buying impulsiveness on a travel website: Individual internal factor perspective. *Journal of Travel & Tourism Marketing*.
- [23] Chiu, Y.-P., Lo, S.-K., Hsieh, A.-Y., & Hwang, Y. (2019). Exploring why people spend more time shopping online than in offline stores. *Computers in Human Behavior*.
- [24] Chopdar, P. K., Paul, J., & Prodanova, J. (2022). Mobile shoppers' response to Covid-19 phobia, pessimism and smartphone addiction: Does social influence matter? *Technological Forecasting and Social Change*.
- [25] Cummings, W. H., & Venkatesan, M. (1976). Cognitive dissonance and consumer behavior: A review of the evidence. *Journal of Marketing Research*.
- [26] Dawson, S., & Kim, M. (2009). External and internal trigger cues of impulse buying online. *Direct Marketing*.
- [27] de Kervenoael, R., Aykac, D. S., & Palmer, M. (2009). Online social capital: Understanding e-impulse buying in practice. *Journal of retailing and consumer services*.
- [28] DeSarbo, W. S., & Edwards, E. A. (1996). Typologies of compulsive buying behavior: A constrained clusterwise regression approach. *Journal of consumer psychology*.
- [29] Dittmar, H., & Bond, R. (2010). I want it and I want it now: Using a temporal discounting paradigm to examine predictors of consumer impulsivity. *British Journal of Psychology*.
- [30] Dittmar, H., & Drury, J. (2000). Self-image—is it in the bag? A qualitative comparison between “ordinary” and “excessive” consumers. *Journal of economic psychology*.
- [31] Dittmar, H., Beattie, J., & Friese, S. (1995). Gender identity and material symbols: Objects and decision considerations in impulse purchases. *Journal of economic psychology*.
- [32] Djafarova, E., & Bowes, T. (2021). ‘Instagram made Me buy it’: Generation Z impulse purchases in fashion industry. *Journal of Retailing and Consumer Services*.
- [33] Elliot, A. J., & Devine, P. G. (1994). On the motivational nature of cognitive dissonance: Dissonance as psychological discomfort. *Journal of personality and social psychology*.
- [34] Faber, R. J., & O'guinn, T. C. (1992). A clinical screener for compulsive buying. *Journal of Consumer Research*.
- [35] Festinger, L. (1957). Social comparison theory. *Selective Exposure Theory* .
- [36] Festinger, L. (1964). Conflict, decision, and dissonance.

- [37] Flight, R. L., Rountree, M. M., & Beatty, S. E. (2012). Feeling the urge: Affect in impulsive and compulsive buying. *Journal of Marketing Theory and Practice*.
- [38] Floh, A., & Madlberger, M. (2013). The role of atmospheric cues in online impulse-buying behavior. *Electronic Commerce Research and Applications*.
- [39] George, B. P., & Yaoyuneyong, G. (2010). Impulse buying and cognitive dissonance: a study conducted among the spring break student shoppers. *Young Consumers*.
- [40] Gerbing, D. W., Ahadi, S. A., & Patton, J. H. (1987). Toward a conceptualization of impulsivity: Components across the behavioral and self-report domains. *Multivariate behavioral research*.
- [41] Gilovich, T., Medvec, V. H., & Savitsky, K. (2000). The spotlight effect in social judgment: an egocentric bias in estimates of the salience of one's own actions and appearance. *Journal of personality and social psychology*.
- [42] Gulfranz, M., Sufyan, M., Mustak, M., Salminen, J., & Srivastava, D. (2022). Understanding the impact of online customers' shopping experience on online impulsive buying: A study on two leading E-commerce platforms. *Journal of Retailing and Consumer Services*.
- [43] He, H., Kukar-Kinney, M., & Ridgway, N. (2018). Compulsive buying in China: Measurement, prevalence, and online drivers. *Journal of Business Research*.
- [44] Hoch, S. J., & Loewenstein, G. F. (1991). Time-inconsistent preferences and consumer self-control. *Journal of consumer research*.
- [45] Hsiao, K. L., Shu, Y., & Huang, T. C. (2017). Exploring the effect of compulsive social app usage on technostress and academic performance: Perspectives from personality traits. *Telematics and Informatics*.
- [46] Hsu, C.-L., Chang, K.-C., & Chen, M.-C. (2012). Flow Experience and Internet Shopping Behavior: Investigating the Moderating Effect of Consumer Characteristics. *Systems Research and Behavioral Science*.
- [47] Hussain, A., Ali, Z., Ullah, M., & Rasool, F. (2021). A Structured Literature Review on Impulse Buying: Online Jitters and Offline Jeepers. *Humanities & social sciences reviews*, 37-49.
- [48] Islam, T., Pitafi, A., Arya, V., Wang, Y., Akhtar, N., Mubarak, S., & Xiaobei, L. (2021). Panic buying in the COVID-19 pandemic: A multi-country examination. *Journal of Retailing and Consumer Services*.
- [49] Iyer, G., Blut, M., Xiao, S., & Grewal, D. (2020). Impulse buying: a meta-analytic review. *Journal of the Academy of Marketing Science*.
- [50] James, W. (1890). The perception of reality. *Principles of psychology*.
- [51] Japutra, A., Ekinci, Y., & Simkin, L. (2019). Self-congruence, brand attachment and compulsive buying. *Journal of Business Research*.
- [52] Jones, M. A., Reynolds, K. E., Weun, S., & Beatty, S. E. (2003). The product-specific nature of impulse buying tendency. *Journal of business research*.
- [53] Kabadayi, S., & Gupta, R. (2005). Website loyalty: an empirical investigation of its antecedents. *International Journal of Internet Marketing and Advertising*.
- [54] Kacen, J. J., & Lee, J. A. (2002). The influence of culture on consumer impulsive buying behavior. *Journal of consumer psychology*.
- [55] Kim, A. J., & Johnson, K. K. (2016). Power of consumers using social media: Examining the influences of brand-related user-generated content on Facebook. *Computers in human behavior*.
- [56] Konok, V., Gigler, D., Bereczky, B. M., & Miklósi, Á. (2016). Humans' attachment to their mobile phones and its relationship with interpersonal attachment style. *Computers in Human Behavior*.
- [57] Koufaris, M. (2002). Applying the technology acceptance model and flow theory to online consumer behavior. *Information Systems Research*.
- [58] Kukar-Kinney, M., Ridgway, N., & Monroe, K. (2009). The Relationship Between Consumers' Tendencies to Buy Compulsively and Their Motivations to Shop and Buy on the Internet. *Journal of Retailing*.
- [59] Kukar-Kinney, M., Scheinbaum, A., & Schaefer, T. (2016). Compulsive buying in online daily deal settings: An investigation of motivations and contextual elements. *Journal of Business Research*.
- [60] Lee, M. K., & Turban, E. (2001). A trust model for consumer internet shopping. *International Journal of Electronic Commerce*.
- [61] Lee, M.-Y., Kim, Y.-K., & Fairhurst, A. (2009). Shopping value in online auctions: Their antecedents and outcomes. *Journal of Retailing and Consumer Services*.

- [62] Lee, Y. K., Chang, C. T., Lin, Y., & Cheng, Z. H. (2014). The dark side of smartphone usage: Psychological traits, compulsive behavior and technostress. *Computers in human behavior*.
- [63] Lim, W. (2017). Untangling the relationships between consumer characteristics, shopping values, and behavioral intention in online group buying. *Journal of Strategic Marketing*.
- [64] Limerick, D., & Cunnington, B. (1993). Managing the new organisation: A blueprint for networks and strategic alliances.
- [65] Liu, Y., H. Li, & F. Hu. (2013). Website attributes in urging online impulse purchase: An empirical investigation on consumer perceptions. *Decision Support Systems*.
- [66] Lo, P.-S., Dwivedi, Y., Wei-Han, T. G., Ooi, K.-B., Cheng-Xi, A. E., & Metri, B. (2022). Why do consumers buy impulsively during live streaming? A deep learning-based dual-stage SEM-ANN analysis. *Journal of Business Research*.
- [67] Mano, H. (1992). Judgments under distress: Assessing the role of unpleasantness and arousal in judgment formation. *Organizational Behavior and Human Decision Processes*.
- [68] Mason, M., Zamparo, G., Marini, A., & Ameen, N. (2022). Glued to your phone? Generation Z's smartphone addiction and online compulsive buying. *Computers in Human Behavior*.
- [69] Mathwick, C., & Rigdon, E. (2004). Play, flow, and the online search experience. *Journal of consumer research*.
- [70] Mehrabian, A., & Russell, J. A. (1974). An approach to environmental psychology. The MIT Press.
- [71] Mele, A. R. (1987). Irrationality: An essay on akrasia, self-deception, and self-control. Oxford University Press.
- [72] Mellinas, J. P., Nicolau, J. L., & Park, S. (2019). Inconsistent behavior in online consumer reviews: The effects of hotel attribute ratings on location. *Tourism Management*.
- [73] Moeller, S., Fassnacht, M., & Ettinger, A. (2009). Retaining customers with shopping convenience. *Journal of Relationship Marketing*.
- [74] Motyka, S., Grewal, D., Aguirre, E., Mahr, D., de Ruyter, K., & M., W. (2018). The emotional review–reward effect: how do reviews increase impulsivity? *Journal of the Academy of Marketing Science*.
- [75] Nghia, H. T., Olsen, S. O., & Trang, N. T. (2022). A dual process on shopping well-being across shopping contexts: the role of shopping values and impulse buying. *Asia Pacific Journal of Marketing and Logistics*.
- [76] Nghia, H., Olsen, S., & Trang, N. (2022). A dual process on shopping well-being across shopping contexts: the role of shopping values and impulse buying. *Asia Pacific Journal of Marketing and Logistics*.
- [77] Novak, T. P., Hoffman, D. L., & Yung, Y. F. (2000). Measuring the customer experience in online environments: A structural modeling approach. *Marketing science*.
- [78] Okazaki, S., Schuberth, F., Tagashira, T., & Andrade, V. (2021). Sneaking the dark side of brand engagement into Instagram: The dual theory of passion. *Journal of Business Research*.
- [79] Olsen, S., Khoi, N., & Tuu, H. (2022). The “Well-Being” and “Ill-Being” of Online Impulsive and Compulsive Buying on Life Satisfaction: The Role of Self-Esteem and Harmony in Life. *Journal of Macromarketing*.
- [80] Pacheco, D. C., de Serpa Arruda Moniz, A. I., Caldeira, S. N., & Silva, O. D. (2021). Online Impulse Buying—Integrative Review of Social Factors and Marketing Stimuli. *International Conference on Advanced Research in Technologies, Information, Innovation and Sustainability* (pp. 629-640). Cham: Springer.
- [81] Pacheco, D. C., de Serpa Arruda Moniz, A. I., Caldeira, S. N., & Silva, O. D. (2022). Online Impulse Buying—Integrative Review of Psychological Factors. *Perspectives and Trends in Education and Technology*, 527-536.
- [82] Pacheco, D. C., de Serpa Arruda Moniz, A. I., Caldeira, S. N., & Silva, O. D. (2022). Online Impulse Buying—Integrative Review on Self-Regulation, Risks and Self-Regulatory Strategies. *Advances in Tourism, Technology and Systems*, 311-319.
- [83] Parboteeah, D. V., Valacich, J. S., & Wells, J. D. (2009). The influence of website characteristics on a consumer's urge to buy impulsively. *Information systems research*.
- [84] Parboteeah, D. V., Valacich, J. S., & Wells, J. D. (2009). The influence of website characteristics on a consumer's urge to buy impulsively. *Information systems research*.
- [85] Park, E. J., Kim, E. Y., Funches, V. M., & Foxx, W. (2012). Apparel product attributes, web browsing, and e-impulse buying on shopping websites. *Journal of business research*.
- [86] Paul, J., & Criado, A. R. (2020). The art of writing literature review: What do we know and what do we need to know? *International Business Review*.
- [87] Punj, G. (2011). Impulse buying and variety seeking: Similarities and differences. *Journal of Business Research*.

- [88] Redine, A., Deshpande, S., Jebarajakirthy, C., & Surachartkumtonkun, J. (2022). Impulse buying: A systematic literature review and future research directions. *International Journal of Consumer Studies*.
- [89] Ridgway, N. M., Kukar-Kinney, M., & Monroe, K. B. (2008). An expanded conceptualization and a new measure of compulsive buying. *Journal of Consumer Research*.
- [90] Ridings, C. M., Gefen, D., & Arinze, B. (2002). Some antecedents and effects of trust in virtual communities. *The journal of strategic information systems*.
- [91] Rodríguez-Torrico, Cabezado, S. J., & San-Martín. (2017). Tell me what they are like and I will tell you where they buy. An analysis of omnichannel consumer behavior. *Computers in Human Behavior*.
- [92] Rook, D. W. (1987). The buying impulse. *Journal of consumer research* .
- [93] Rook, D., & Fisher, R. (1995). Normative influences on impulsive buying behavior. *Journal of Consumer Research*.
- [94] Sharma, L., Markon, K. E., & Clark, L. A. (2014). Toward a theory of distinct types of “impulsive” behaviors: a meta-analysis of self-report and behavioral measures. *Psychological bulletin*.
- [95] Shen, K. N., & Khalifa, M. (2012). System design effects on online impulse buying. *Internet Research*.
- [96] Shirmohammadi, M., Ghane, N., & Ebrahimi, M. R. (2015). Investigating and prioritizing the effective factors on internet impulse buying behavior of customers (case study: discount group sites). *Business and Management*.
- [97] Silvera, D. H., Lavack, A. M., & Kropp, F. (2008). Impulse buying: the role of affect, social influence, and subjective wellbeing. *Journal of consumer marketing*.
- [98] Smith, D. N., & Sivakumar, K. (2004). Flow and Internet shopping behavior: A conceptual model and research propositions. *Journal of Business Research*.
- [99] Sparks, P., & Shepherd, R. (1992). Self-identity and the theory of planned behavior: Assessing the role of identification with " green consumerism". *Social psychology quarterly*.
- [100] Stern, H. (1962). The significance of impulse buying today. *Journal of marketing*.
- [101] Stern, H. (1962). The significance of impulse buying today. *Journal of marketing*.
- [102] Sundström, M., Hjelm-Lidholm, S., & Radon, A. (2019). Clicking the boredom away – Exploring impulse fashion buying behavior online. *Journal of Retailing and Consumer Services*.
- [103] Sweeney, J. C., Hausknecht, D., & Soutar, G. N. (2000). Cognitive dissonance after purchase: A multidimensional scale. *Psychology & Marketing*.
- [104] Valacich, J. S., Parboteeah, D. V., & Wells, J. D. (2007). The online consumer's hierarchy of needs. *Communications of the ACM*.
- [105] Van Trijp, H. C., & Steenkamp, J. B. (1992). Consumers' variety seeking tendency with respect to foods: measurement and managerial implications. *European review of agricultural economics*.
- [106] Verhagen, T., & Van Dolen, W. (2011). The influence of online store beliefs on consumer online impulse buying: A model and empirical application. *Information & Management*.
- [107] Wang, R. J., Malthouse, E. C., & Krishnamurthi, L. (2015). On the go: How mobile shopping affects customer purchase behavior. *Journal of retailing*.
- [108] Weil, M. M., & Rosen, L. D. (1997). Technostress: Coping with technology@ work@ home@ play.
- [109] Weinberg, P., & Gottwald, W. (1982). Impulsive consumer buying as a result of emotions. *Journal of Business Research*.
- [110] Wells, J., Parboteeah, V., & Valacich, J. (2011). Online impulse buying: Understanding the interplay between consumer impulsiveness and website quality. *Journal of the Association for Information Systems*.
- [111] Weun, S., Jones, M. A., & Beatty, S. E. (1998). Development and validation of the impulse buying tendency scale. *Psychological reports*.
- [112] Xu, Y., & Huang, J. S. (2014). Effects of price discounts and bonus packs on online impulse buying. *Social Behavior and Personality: an international journal*.
- [113] Youn, S., & Faber, R. J. (2000). Impulse buying: its relation to personality traits and cues. *ACR North American Advances*.