

---

# Investigating Online Impulse Buying Behavior In South Asian Context

---

MARRIYAM IFTIKHAR<sup>1</sup>, DR. JAWAD IQBAL<sup>2</sup>

<sup>1</sup>PhD Scholar, School of Business, Management and Administrative Science, The Islamia University of Bahawalpur, Pakistan

<sup>2</sup>Professor, School of Business Management and Administrative Science, The Islamia University of Bahawalpur, Pakistan

---

**Abstract:** Drawing on the stimulus-organism-response (S-O-R) paradigm this study focuses on online sales promotion, impulse buying tendency and social influence to examine online impulsive buying behavior of online customers of Pakistan. The study further assesses the mediating role of urge to buy impulsively on the relationship of sales promotion, impulse buying tendency, social influence and online impulse buying behavior. A total 576 questionnaires were distributed to students from four universities of using convenience sampling technique. The study has used SPSS (version 21.0) and PLS-SEM (version 3.2.8) for analyzing data at 0.05 critical level. According to the analysis results all the factors including sales promotion, impulse buying tendency and social influence significant influence on online impulse buying behavior. Results revealed the positive impact of targeted constructs on online impulse buying behavior with mediating role of urge to buy impulsively. The study adds new theoretical linkages and empirical evidences on the interaction between by sales promotion, impulse buying tendency, social influence and online impulse buying behavior with theoretical support of S-O-R Model. Moreover, this study is useful for e-marketers in assisting them to develop appropriate policies and customer-driven strategies by addressing customer's online impulse buying behavior in south Asian context.

**Keywords:** Social Influence, Impulse Buying Tendency, Sales Promotion, Urge to Buy Impulsively, Online Impulse Buying Behavior, Stimulus-Organism-Response Model (S-O-R)

---

## INTRODUCTION

With the advancement in technology, globalization and internet connectivity, the online shopping has become a global consumer trend. One aspect of online shopping is the online impulse buying that has received greater attention with the start of internet usage and propagation of e-retail world. The phenomenon of online impulse buying behavior (OIBB) is very essential for the retail world. E-retailers are continuously creating strategies to increase the rate of unplanned buying, and also designing websites with the intention to initiate consumer's impulsive buying behavior (Lai, 2017).

Under recent trends, the growth of online shopping has inspired researcher to study OIBB (Floh & Madlberger, 2013; Akram et al., 2018). In the global environment, an amount of 4 billion dollars are expended annually for impulsive buying around 62% supermarkets sales, and about 80% of the market sales of luxury goods accredited to impulse buying (Ruvio & Belk, 2013). Whereas, the online impulse buying signifies nearly 40% of all money expended on e-commerce websites that are based on remarks of shopping experiences of consumers (Ning Shen & Khalifa, 2012).

The e-commerce industry of Pakistan is emerging rapidly in order to strengthen country's economy (Ministry of Commerce, 2019). Due to extraordinary pace of technology adoption, landline availability, cellular coverage, access to computers and smartphones the e-commerce activities are rapidly expanding in Pakistan. The most prominent e-merchants of Pakistan include daraz.pk, homeshopping.pk, and OLX.com.pk (Aadil, 2017). Customers use e-commerce marketplaces to buy their daily use products, food, groceries, medicines and cosmetics. Through e-platforms customers are intending to buy cars, property, laptops and other electronic products online (Usman, 2018). International e-commerce companies like Alibaba.com have also entered in Pakistan's e-retail market (PTA, 2017).

E-commerce industry of Pakistan has estimated 99.3 billion PKR in fiscal year 2018 that was 51.8 Billion PKR in fiscal year 2017 with year on year growth of 92% (SBP, 2018). Likewise, Pakistan's GDP raised over 5% and touched 5.79% in fiscal year 2017-18, highest in 13 years which has shown a positive economic improvement in

the country (Pakistan Economic Survey, 2018). Over 2018, Pakistan's ecommerce industry has shown a rapid development by more usage of mobile devices and increasingly better Internet penetration rates (Dublin, 2020). Numerous studies have made significant contributions in order to understand OIBB in traditional e-commerce websites (Luo, 2005; Madhavaram & Laverie, 2004; Parboteeah et al., 2009; Wells et al., 2011) still, there is a dearth of research in the OIBB context (Shen & Khalifa, 2012). In current scenario, the OIBB research is an emergent field of research however, the number of studies inspecting OIBB are still rare (Turkyilmaz, Erdem & Uslu, 2015). The majority of research work on impulsive buying behavior has been conducted in western countries whereas, in the case of third world countries like Pakistan the studies are rare (Rashid et al., 2019). Therefore, researchers demand for further research for better understanding of phenomenon (Lo, Lin & Hsu, 2016; Chan et al., 2017; Atulkar & Kesari, 2018).

Therefore, this research aims to contribute to an improved understanding of consumer's impulse buying behavior in online channels within Pakistani context. The factors that influence OIBB comprises of sales promotion, social influence and impulse buying tendency, that were overlooked in prior researches to measure OIBB in e-commerce industry. Hence, the study in hand will investigate the OIBB through sales promotion, social influence and impulse buying tendency in order to investigate the reason behind customers' lack of confidence in online shopping in Pakistan. Moreover, the study attempts to bridge the gaps by examining sales promotion, social influence and impulse buying tendency which leads to OIBB of online customers in Pakistan.

## **Literature review and theoretical framework**

### **The S-O-R Model**

In examining consumer's behavior, the S-O-R model is an environmental psychology framework that is made up of three major components including S (Stimulus), O (organism), and R (response) (Chen, Li & Zhao, 2020). Mehrabian and Russell (1974), were the first who applied S-O-R model to study consumers' response/behaviour from different retail stimuli, which are mediated by an organism that is known as an emotional reaction (Parsad et al., 2019). S-O-R model illustrate that consumer's internal evaluation or states are influenced by environmental factors that results consumer's avoidance and approach behaviours. "Stimulus" represents the triggers that encourage consumers to buy a product or service (Chan et al., 2017). Stimulus can be recognized as internal as well as external stimulus (Akram et al., 2017). Internal stimulus refers to the consumers' characteristics (Chan et al. 2017; Amarnath & Jaidev, 2020) while external stimulus is related to marketing, situational and website factors (Lee & Gan, 2020).

"Organism" is related to consumer's internal evaluations (Mehrabian & Russell 1974) that can be characterized as affective and cognitive reactions. The affective reaction are the consumer's emotional responses which are due to consumer's interactions with environment. Whereas, the cognitive reaction refers to a mental process which is due to the consumer's interaction with the stimulus that can be categorized as thinking or evaluation (Chan et al., 2017; Lee & Gan, 2020). Organism (O) represents the internal structures and processes that intervene between the stimuli (external to the person) and the final responses, actions or reactions produced. The intervening structures and processes involve physiological, perceptual, thinking and feeling activities. While "Response" is related to consumers' reaction to online impulse purchase behaviour stimuli and organisms (Akram et al., 2017). The response occurs as the outcome of consumer behaviour/attitude.

In this study, the stimulus (S) component refers to sales promotion, impulse buying tendency and social influence, the urge to buy impulsively (UBI) represents affective aspects of organism (O) component as defined by Bagozzi, (1986) while OIBB is the response (R) component of S-O-R framework.

### **Online Impulse Buying Behavior (OIBB)**

OIBB is an unplanned buying decision that is affected by numerous factors comprising of information fit-to-task, visual appeal, utilitarian motivations, hedonic motivations, perceived usefulness, adventure shopping, hedonic motivations, perceived enjoyment, idea shopping and UBI (Akram et al., 2017; Xiang et al., 2016; Akram et al., 2018). OIBB can also be termed as a "spur-of-the-moment" purchase with little or no intention (Bellini, Cardinali, & Grandi, 2017). OIBB arises as a result of an urge to buy a product online that is experienced by a customer but he or she does not carefully analyze whether the product is needed or not (Xiang et al., 2016; Chan et al., 2017).

Prior studies have focused on the role of impulsive buying behavior in online context (Liu et al., 2013; Floh & Madlberger 2013). Few studies have claimed that as compared to customers of traditional store, the online shoppers behave more impulsively (Verhagen & Van Dolen, 2011; Park et al., 2012; Rezaei et al., 2016).

### **Urge to Buy impulsively (UBI)**

Rook and Fisher (1995) introduced the term "Urge to buy impulsively" as a consumer feature that comprises of his/her desire, that instantaneously and unknowingly generate unwanted or unplanned purchases (Foroughi et al., 2013). According to Beatty and Ferrell, (1998), UBI is the state of desire which is experienced due to the encounter of an object in environment. UBI can be explained as the feeling experienced by the consumer after

encountering some stimuli in the shopping environment. When a consumer buys a product, he or she does not consider about whether that product is needed or not. Reasonably, it will lead to an instant purchase in order to satisfy the buying obligation that lead towards impulse buying behavior (Verhagen & Van Dolen, 2011).

Consumers which have greater likelihood of UBI experience a lack of control in contrast to consumers which have comparatively modest tendency of UBI (Dawson & Kim, 2009). The higher tendency of UBI is due to the consumer's excessive interest in it, driven by the desire to get an immediate gift (Siorwska, 2011). Moreover, the individuals with a higher tendency of UBI spend a lot of time looking for commodities, shopping and show a passion to buy impulsively. They are greatly affected by visual elements, advertisements and encouraging gifts (Kazempour & Lotfizadeh, 2017).

### **Sales Promotion**

Sales promotion is defined as an assortment of numerous motivational tactics in order to trigger consumers to buy various products or services within a short time period (Kotler & Keller, 2016). It is the short-term value added to encourage the sales of the product and services purchases (Fitri, 2018). Sales Promotion encourages consumer to immediately buy a product that belongs to a specific brand. Sales promotion stimuli comprises of purchase ideas, purchase suggestions, promotions and sales that encourage consumers UBI (Dawson & Kim, 2010). Moreover, sales promotion stimuli comprise of sales that might be clearance or markdown, the promotions that includes buy one get one free offer, cash rebates, bundling, gift certificates and purchase ideas that comprises of nonstop shopping and purchasing of newly arrived products that can encourage OIBB of consumers (Akram et al., 2018).

Prior studies have shown a positive relationship of sales promotion and OIBB (Nagadeepa et al., 2015; Dawson & Kim, 2010; Weerathunga, & Pathmini, 2015; Fitri, 2018) that is associated with sales promotion stimuli of e-retailers. The sales promotion is very important antecedents of consumers' OIBB which has a positive influence on OIBB (Badgaiyan & Verma, 2015; Akram et al., 2018).

Based on the discussion above following hypothesis has been established:

H1: Sales promotion is positively related to UBI.

H2: Sales promotion is positively related to OIBB.

### **Impulse Buying Tendency**

The concept of impulsive buying tendency as a consumer trait has been given by Rook and Fisher (1995), which has been defined as the amount due to which an individual possibly make immediate, unreflective and unintended buying decisions (Jones et al., 2003). The significance of impulse buying tendency is considered as a manifestation of general impulsiveness (Sharma et al., 2010; Siorwska, 2011; Foroughi et al., 2013).

Studies have shown that consumers tend to indulge more in impulse buying behavior who experiences higher impulse buying tendency, subsequently people with higher impulse buying tendency have more deficiency to control themselves as compared to consumers with comparatively lower impulse buying tendency (Herabadi et al., 2009; Foroughi et al., 2013). Furthermore, researchers have found that individuals who experiences a higher impulse buying tendency have more chances to be influenced by marketing stimuli that include browsing, visual elements, advertisements, promotional gifts, and are inclined to react more often to UBI (Foroughi et al., 2013).

Prior studies determine that consumers are different in acting impulsively, produce unplanned and unintentional response to stimuli due to their impulse buying tendencies (Amos et al., 2014; Sharma et al., 2010; Badgaiyan & Verma, 2014). Similarly, the study of Wells et al., (2011), Liu et al., (2013), Bellini et al., (2017) and Lin and Lin (2013) found a significant relationship between consumers' impulse buying tendency and UBI. The association between consumers' tendency to impulse purchase and UBI in online context has also been studied in comparison with offline shopping context (Xiang et al. 2016). Likewise, Lee and Gan (2020) found that impulse buying tendency is the strongest predictor of UBI.

Therefore, the above discussion leads to following hypotheses:

H3: Impulse buying tendency is positively related to UBI.

H4: Impulse buying tendency is positively related to OIBB.

### **Social Influence**

Social influence provides value to consumers through reviews and comments in order to gain impact from surrounding environment, for instance social media influence or other things they can support. Social influences can be important influencer for consumers' UBI (Gwee & Chang, 2013). In order to access information about the products and services customers mostly use online websites and social media networks (Turkyilmaz et al., 2015). Kusmaharani, & Halim, (2020) investigated that shopping with peers and friend increases consumer's impulse buying behavior.

Moreover, the consumer's decision-making process to purchase a product or service depends upon the views of social media users that influence impulse buying behavior (Chung & Austria, 2012). The firm generated messages and consumer views on social media networks influences consumer's online impulse buying

behaviours. Though, it has been argued that in comparison to firm generated messages, the consumer generated messages strongly influence consumer’s impulsive purchase behavior (Hashmi, Attiq, & Rasheed, 2019).

Therefore, this leads to following hypotheses:

H5: Social influence is positively related to UBI.

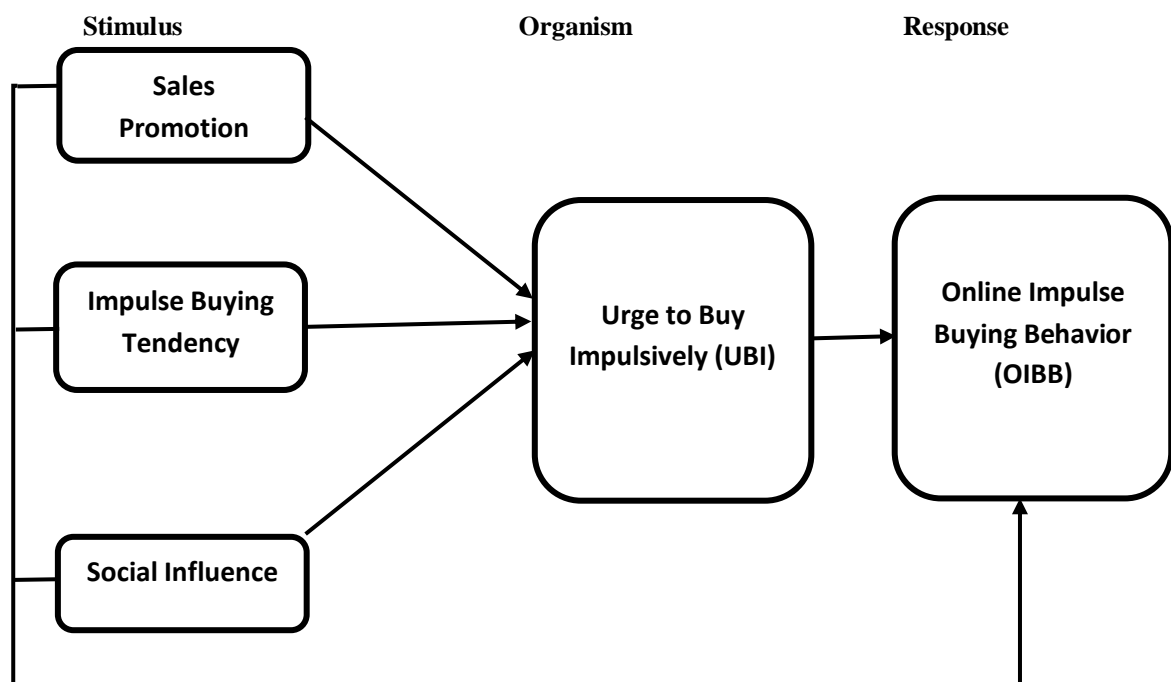
H6: Social influence is positively related to OIBB.

Prior researches discriminate UBI and actual IBB as distinct and separate constructs (Shen & Khalifa, 2012; Huang, 2016). Zhang et al., (2018) found a positive relationship among UBI and actual IBB. That is, consumers are more likely to engage in a purchase of a product impulsively due to their higher urge to buy that product.

Based on the above discussion, the following hypothesis has been established:

H7: Urge to buy impulsively is positively related to OIBB.

The theoretical framework of the study was developed on the basis of previous discussion on the concept OIBB of customers, presented in figure 1 including three independent variables (sales promotion, social influence and impulse buying tendency) one mediating variable (namely UBI), one dependent variable (namely OIBB). This conceptual framework is based on the S-O-R model. Rendering to S-O-R model, the OIBB in this study represents the approach aspect of the response component. Consumer’s positive UBI is discussed in the study which is an approach behavior towards the stimuli (i.e. OIBB) that consequently encourage OIBB of consumers.



**Fig.1: Conceptual Framework**

UBI hinders consumers to search for substitutes that in turns lead to an IBB (Lee et al., 2009). The prior researchers have found that IBB has a positive impact on UBI (Zhang et al., 2006; Foroughi et al., 2012; Shen & Khalifa, 2012; Mohan et al., 2013; Huang, 2016; Chung et al., 2017). Zhang et al., (2018) found a positive relationship among UBI and actual IBB. i.e. consumers are more likely to engage in a purchase of a product impulsively due to their higher urge to buy a product impulsively. Thus, to test the mediation effect of UBI on OIBB, the following hypotheses are established:

H8: UBI mediates the relationship between sales promotion and OIBB.

H9: UBI mediates the relationship between impulse buying tendency and OIBB.

H10: UBI mediates the relationship between social influence and OIBB.

In this study, UBI is a mediator in the relationship between sales promotion, impulse buying tendency, social influence and OIBB. To test the mediation effect, Baron and Kenny (1986) suggested that the independent variables need to be significantly related to the mediating variable (i.e., UBI), and the mediation variable needs to have a significant relationship with the dependent variable (i.e., OIBB).

**Research Methodology**

The target population of the study include online consumers of Pakistan. In January 2020, there were 76.38 million users of internet in Pakistan making 10<sup>th</sup> largest population of internet users in the world (PTA, 2020).

Between 2019 and 2020 the internet users in Pakistan increased by 11 million which was 17%. Among the total population of Pakistan 35% of people uses internet in 2020. The current study determined the sample size for surveys distribution based on the Krejcie and Morgan (1970) sampling guidelines a sample size of 384 was considered as enough.

Anticipating the low response rate, the researcher distributed more questionnaires as suggested by Miller and Salikind (2002), and Keyton (2015) and employed an over sampling method by increasing the sample size by 40 to 50% to address low response rate problem and the issue of unusable responses. Hence, the sample size was increased by 50% of the total sample size 384 and the total questionnaire distributed were 576.

The data collection was done from four largest universities of Pakistan located in four administrative divisions of Punjab i.e. the Islamia University of Bahawalpur (IUB) from Bahawalpur division, Bahauddin Zakariya University (BZU) from Multan division, University of the Punjab (PU) from Lahore division and Fatimah Jinnah Women university (FJWU) from Rawalpindi division. Moreover, these four divisions were divided in to three geographical regions: Lahore in northern region, Rawalpindi in middle region while Multan and Bahawalpur in southern region.

The population of the study was almost finite and it was very difficult to include every individual of the population (Etikan, Musa, & Alkassim, 2016). Therefore, due to lack of proper sampling frame with regard to online users in Pakistan, convenience sampling method was used. A 5-point Likert scale was used to measure the items of questionnaire. All items were adapted from previous studies sales promotion (Karbasivar & Yarahmadi, 2011; Rasheed, Yaqub & Baig, 2017) comprising of six items, impulse buying tendency (Atulkar & Kesari, 2018) contains four items, social influence (Loureiro, Costa, & Panchapakesan, 2017) contains six items, UBI contains five items (Habib & Qayyum, 2017; Liu, Li & Hu, 2013) and OIBB comprises of eight items (Aragoncillo & Orus, 2018). A total number of 29 items were yielded.

The study employed PLS-SEM technique using the software application Smart PLS (Ringle, Wende, & Will, 2010) path modelling (Version 3.2.8) in order to estimate research model. Moreover, the study used a two-step procedure of PLS to evaluate and report the PLS-SEM path results according to the recommendations of Henseler, Ringle & Sinkovics, (2009). The two steps include the assessment of the structural and measurement model (Hair et al., 2016).

**Results**

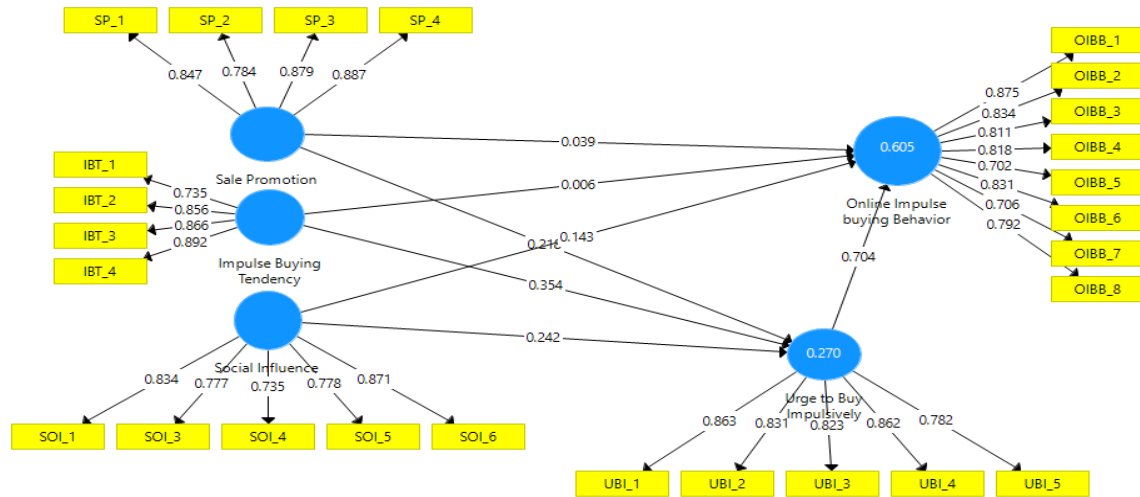
The demographic features examined in the study were gender, age group, marital status and family income (monthly) which were measured on nominal and ordinal scale are shown in the Table 1. In demographic analysis the distribution of respondent’s preliminary based on the gender, which showed that (48.1%) were male while (51.9 %) were female. The age of respondents illustrates that majority of respondents were 20- 30 years old (58.3 %), about (22 %) fall within the age of 31-40 years and about (10%) fall in the range above 50 years while remaining (9.7%) were falling in the age of 41-50 years. With respect to marital status it was observed that most of the respondents were single (53.4%) and about (46.6%) were married. Majority of respondents belongs to the income group of 50,000 to 99,999 (50.4%), while below 49,999 (19.3%), 100,000 and above (13.6%) and 100,000 to 199,999 (16.7%) respectively.

**Table 1: Demographics of Respondents**

Demographic Variables	Frequency	Percentage %
<b>Gender</b>		
Male	227	48.1
Female	245	51.9
<b>Age Group</b>		
20-30	275	58.3
31-40	104	22.0
41-50	46	9.7
Above-50	47	10.0
<b>Marital Status</b>		
Single	252	53.4
Married	220	46.6
<b>Financial Earnings (Monthly)</b>		
Below 49,999	91	19.3
50,000 to 99,999	238	50.4
100,000 to 199,999	64	13.6
200,000 and Above	79	16.7

**Measurement model**

This study employed PLS-SEM using Smart PLS (version 3.8.2) to estimate theoretical model (Ringle, Wende, & Will, 2010). The first step is the assessment of outer model also known as measurement model using PLS. This measurement is aimed at determining the goodness of measures which is done through reliability and validity test (Ramayah et al., 2011). In order to find out internal consistency reliability, the individual item's reliability, content validity, discriminant validity, and convergent validity must be determined (Hair et al., 2011; Hair, Ringle, & Sarstedt, 2013). In this study, PLS approaches developed by Fornell and Larcker (1981) are employed to evaluate reliability, convergent and discriminant validity of the research instrument.



**Fig.1**

**The Measurement Model**

Note: IBT – Impulse Buying Tendency; SOI– Social Influence; SP–Sales Promotion; UBI – Urge to Buy Impulsively; OIBB – Online Impulse buying Behavior

**Table 2:Results of Measurement Model**

Construct	Items	Loading	Cronbach's Alpha	CR	AVE
<b>Sales Promotion (SP)</b>	SP1	0.847	0.874	0.912	0.723
	SP2	0.784			
	SP3	0.879			
	SP4	0.887			
<b>Impulse Buying Tendency (IBT)</b>	IBT1	0.735	0.860	0.905	0.705
	IBT2	0.856			
	IBT3	0.866			
	IBT4	0.892			
<b>Social Influence (SOI)</b>	SOI1	0.834	0.859	0.899	0.641
	SOI3	0.777			
	SOI4	0.735			

	SOI5	0.778				
	SOI6	0.871				
<b>Urge to buy Impulsively (UBI)</b>			0.889		0.919	0.693
	UBI1	0.863				
	UBI2	0.831				
	UBI3	0.823				
	UBI4	0.862				
	UBI5	0.782				
<b>Online Impulse Buying Behavior (OIBB)</b>			0.918		0.933	0.637
	OIBB1	0.875				
	OIBB2	0.834				
	OIBB3	0.811				
	OIBB4	0.818				
	OIBB5	0.702				
	OIBB6	0.831				
	OIBB7	0.706				
	OIBB8	0.792				

Note: IBT – Impulse Buying Tendency; SOI– Social Influence; SP–Sales Promotion; UBI – Urge to Buy Impulsively;  
 OIBB – Online Impulse buying Behavior

All AVE values in this study displayed higher loadings that were greater than 0.50 on their respective constructs, presenting acceptable convergent validity. The table 3 (given below) shows that the ‘square root’ of AVE was greater than the correlation among the latent variables, indicating adequate discriminant validity (Fornell & Larcker, 1981).

**Table 3:Discriminant validity Matrix -Latent Variable Correlations and Square Roots of AVE**

	<b>IBT</b>	<b>OIBB</b>	<b>SP</b>	<b>SOI</b>	<b>UBI</b>
<b>IBT</b>	<b>0.839</b>				
<b>OIBB</b>	0.267	<b>0.798</b>			
<b>SP</b>	0.013	0.290	<b>0.850</b>		
<b>SOI</b>	0.029	0.379	0.300	<b>0.801</b>	
<b>UBI</b>	0.364	0.764	0.295	0.318	<b>0.833</b>

**Note:** Entries shown in boldface represent the square root of the AVE  
 IBT – Impulse Buying Tendency; SOI– Social Influence; SP–Sales Promotion; UBI – Urge to Buy Impulsively;OIBB – Online Impulse buying Behavior

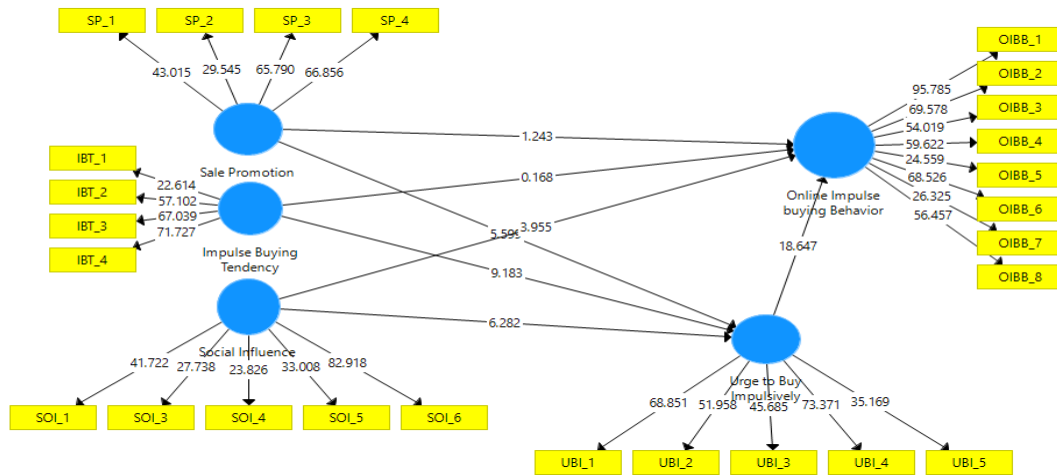
**Structural Model**

The structural model was assessed through PLS-SEM (PLS algorithm and bootstrapping)(Chin, 2010).To examine the significance of path coefficients the standard procedure of bootstrapping with 500 bootstrap samples and 472 data cases was employed (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). The coefficient of determination (R<sup>2</sup> values) of the endogenous construct (Chin, 2010; Henseler et al., 2009) and the significance level of the path coefficients were determined (Henseler et al., 2014). Chin (1998) suggested the R<sup>2</sup> values assessment criteria0.67 as substantial, 0.33 as moderate and 0.19 as weak respectively.Table 4 illustrates the R<sup>2</sup> of each endogenous latent variable where R<sup>2</sup> of the OIBB was 0.605 and R<sup>2</sup> of UBI was 0.270.

**Table 4:R<sup>2</sup> of Endogenous Latent Constructs**

Construct	R Square	Result
OIBB	0.605	Substantial
UBI	0.270	Moderate

Note: UBI – Urge to Buy Impulsively; OIBB – Online Impulse buying Behavior



**Fig.2:Direct and indirect path coefficient of the structural model (bootstrapping)**

Note: IBT – Impulse Buying Tendency; SOI– Social Influence; SP–Sales Promotion; UBI – Urge to Buy Impulsively; OIBB – Online Impulse buying Behavior

**Table 4:Results of hypothesis testing – Direct relationships**

Hypotheses	Relationship	Beta	SE	t-value	P-value	Decision
H1	SP->UBI	0.218	0.039	5.599	0.000	Supported
H2	SP->OIBB	0.193	0.039	4.995	0.000	Supported
H3	IBT->UBI	0.354	0.039	9.183	0.000	Supported
H4	IBT->OIBB	0.256	0.040	6.448	0.000	Supported
H5	SOI->UBI	0.242	0.039	6.282	0.000	Supported
H6	SOI->OIBB	0.314	0.0398	8.062	0.000	Supported
H7	UBI->OIBB	0.704	0.03818	18.647	0.000	Supported

Note: IBT – Impulse Buying Tendency; SOI– Social Influence; SP–Sales Promotion; UBI – Urge to Buy Impulsively; OIBB – Online Impulse buying Behavior

The results authenticate S-O-R model, revealed that sales promotion is positively related to UBI ( $\beta = 0.218$ ,  $t = 5.599$ ,  $p = 0.000$ ), sales promotion and OIBB shown a significant relationship ( $\beta = 0.193$ ,  $t = 4.995$ ,  $p = 0.000$ ), hence, hypotheses H1 and H2 were supported. Likewise, impulse buying tendency is positively related to UBI ( $\beta = 0.354$ ,  $t = 9.183$ ,  $p = 0.000$ ), impulse buying tendency and OIBB were positively significant ( $\beta = 0.256$ ,  $t = 6.448$ ,  $p = 0.000$ ), therefore hypotheses H3 and H4 were supported. Moreover, the results showed that social influence is positively related to UBI ( $\beta = 0.242$ ,  $t = 6.282$ ,  $p = 0.000$ ), impulse buying tendency and OIBB were positive and significantly associated ( $\beta = 0.314$ ,  $t = 8.062$ ,  $p = 0.000$ ) hence, hypotheses H5 and H6 were supported. The findings of the study showed a positive and significant relation between UBI and OIBB ( $\beta = 0.704$ ,  $t = 18.647$ ,  $p = 0.000$ ) hence, hypothesis H7 was supported.

A mediation test is done to find out whether a mediating variable enhance the impact of an independent variable on a dependent variable (Hair et al., 2014). The re-sampling mediation technique (bootstrapping) is one of the most rigorous and powerful procedures for testing the mediation effect that was used in this study to test the indirect effect of each variable (Hayes, 2009; Zhao et al., 2010).



**Table 5: Results of hypothesis testing - Indirect relationships**

Hypotheses	Relationship	Beta	SE	t-value	P-value	Decision
H8	SP->UBI->OIBB	0.153	0.030	5.155	0.000	Mediation
H9	IBT->UBI->OIBB	0.249	0.0327	7.705	0.000	Mediation
H10	SOI->UBI->OIBB	0.170	0.0295	9.300	0.000	Mediation

Note: IBT – Impulse Buying Tendency; SOI– Social Influence; SP–Sales Promotion; UBI – Urge to Buy Impulsively;  
OIBB – Online Impulse buying Behavior

The result revealed that, UBI significantly mediated the relationship between sales promotion and OIBB ( $\beta = 0.153$ ,  $t = 5.278$ ,  $p = 0.000$ ) accordingly, Hypothesis 8 was supported. The mediation of UBI in the relationship between impulse buying tendency and OIBB was found to be statistically significant ( $\beta = 0.249$ ,  $t = 8.010$ ,  $p = 0.000$ ), hence, Hypothesis 9 was supported. Moreover, the mediation of UBI in the relationship between social influence and OIBB was statistically significant ( $\beta = 0.170$ ,  $t = 5.781$ ,  $p = 0.000$ ) therefore, Hypothesis 10 was supported.

## DISCUSSION

The findings of the study are in line with the studies of Park and Noh, (2012) and Kim and Johnson, (2016) that, there is a positive relationship of sales promotion with UBI likewise, sales promotion is positively related to OIBB (Akram et al., 2018; Badgaiyan & Verma, 2015; Sundström et al., 2019; Mittal et al., 2018; Chen & Yao, 2018; Wiranata, & Hananto, 2020). Therefore, it was proposed that UBI mediates the relationship among sales promotion and OIBB which was found to be significant and supported. Moreover, the findings were supported by S-O-R model given by Mehrabian and Russell (1974). In other words, the aim of sales promotion is to trigger consumers' needs and UBI that leads to actual OIBB.

Furthermore, the study collaborated with the previous research of Gwee and Chang, (2013), that social influences is essential in triggering consumers' UBI that leads to actual OIBB (Hashmi, Attiq, & Rasheed, 2019; Hu et al., 2016; Chung & Austria, 2012; Kusmaharani, & Halim, 2020). Similarly, higher impulse buying tendency, the stronger urge to buy a product or service impulsively leads consumer to make actual impulse purchases. In line with the prior studies of Badgaiyan and Verma, (2014), Amos et al., (2014), Bellini et al., (2017) and Lee, and Gan (2020) that impulse buying tendency is the strongest predictor of UBI which leads to OIBB.

## CONCLUSION, LIMITATION AND FUTURE RESEARCH

This study provides more clear understanding to the researchers and practitioners that how OIBB is influenced by sales promotion, impulse buying tendency and social influence. This study strengthens the existing knowledge in the fields of e-commerce, e-retailing and e-marketing related literature, by covering the research gaps among prior studies. The study adds new theoretical linkages and empirical evidences on the interaction between sales promotion, impulse buying tendency, social influence and OIBB with theoretical support of S-O-R Model. Moreover, by considering UBI as a mediator, this study contributes to the scarce literature on OIBB. The findings of this study are important in the development of e-commerce industry in the South Asian region in general and specifically in Pakistan as there are limited studies conducted in this specific region. Furthermore, this study is useful for marketers in assisting them to develop appropriate policies and customer-driven strategies by addressing customer's OIBB in south Asian context. This study would help e-retailers in order to design their e-marketing strategies by best utilization of positive responses, and to deliver consumer promises which are helpful in generating sales and designing e-promotional strategies to enhance their performance.

The current study has been achieved to a great extent, also the findings provide both theoretical and practical contributions. Nevertheless, it is worth mentioning that there are some limitations of the current study which further highlighted the scope of future studies. This study was quantitative, and the researcher relied on questionnaire data only for statistical analysis. Future research may consider using qualitative or mixed mode methods to examine OIBB that may include the use of interviews from the online customers to get more interpretive and in-depth information about the variables of study.

It is suggested that future research should add other constructs, for instance website characteristics, consumer's personality traits, culture and online retailer reputation to examine their influence on OIBB. The study identified UBI as a mediator variable in e-commerce industry whereas, other mediating variables such as consumer emotions, product involvement or shopping enjoyment can be used in future. Moreover, this study was conducted in a developing country i.e. Pakistan while future research might empirically test this relationship in other countries that would help to have an overview of consumer behaviours from different backgrounds and cultural settings.

## REFERENCES

1. Aadil, S. (2017). Ranked: These are the top 10 online ecommerce stores in Pakistan. Reterived from: <https://propakistani.pk/2017/07/19/rankedtop-10-online-ecommerce-stores-pakistan/>
2. Akram, U., Hui, P., Khan, M. K., Hashim, M., Qiu, Y., & Zhang, Y. (2017). Online Impulse Buying on “Double Eleven” Shopping Festival: An Empirical Investigation of Utilitarian and Hedonic Motivations. In International Conference on Management Science and Engineering Management Springer, Cham, Japan, 680-692.
3. Akram, U., Hui, P., Khan, M. K., Tanveer, Y., Mehmood, K., & Ahmad, W. (2018). How website quality affects online impulse buying. *Asia Pacific Journal of Marketing and Logistics*.
4. Amarnath, D. D., & Jaidev, U. P. (2020). Toward an integrated model of consumer reactance: a literature analysis. *Management Review Quarterly*, 1-50.
5. Amos, C., Holmes, G. R., & Keneson, W. C. (2014). A meta-analysis of consumer impulse buying. *Journal of Retailing and Consumer Services*, 21(2), 86–97.
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. Atulkar, S., & Kesari, B. (2018). Role of consumer traits and situational factors on impulse buying: does gender matter? *International Journal of Retail & Distribution Management*, 46(4), 386-405.
8. Badgaiyan, A.J., & Verma, A. (2015). Does urge to buy impulsively differ from impulsive buying behavior? Assessing the impact of situational factors. *Journal of Retailing and Consumer Services*, 22(1), 145-157.
9. Badgaiyan, A. J., & Verma, A. (2014). Intrinsic factors affecting impulsive buying behaviour—Evidence from India. *Journal of Retailing and consumer services*, 21(4), 537-549.
10. Bagozzi, R. P. (1986). *Principles of Marketing Management*, SRA Science Research Associates. Inc., Chicago.
11. Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173.
12. Beatty, S. E., & Ferrell, M. (1998). Impulse buying: Modeling its precursors. *Journal of Retailing*, 74, 169–191.
13. Bellini, S., Cardinali, M.G., & Grandi, B. (2017). A structural equation model of impulse buying behaviour in grocery retailing. *Journal of Retailing and Consumer Services* 36, 164–171.
14. Chan, T.K., Cheung, C.M. & Lee, Z.W. (2017). The state of online impulse-buying research: A literature analysis. *Information Management* 54 (2): 204–217.
15. Chen, C. C., & Yao, J. Y. (2018). What drives impulse buying behaviors in a mobile auction? The perspective of the Stimulus-Organism-Response model. *Telematics and Informatics*, 35(5), 1249-1262.
16. Chen, Y., Li, D., & Zhao, Z. (2020, April). Research on Product Recommendation and Consumer Impulsive Purchase Under Social Commerce Platform—Based on S-O-R Model. In 5th International Conference on Social Sciences and Economic Development (ICSSSED 2020) (pp. 215-223). Atlantis Press.
17. Chin, W. W. (2010). How to write up and report PLS analyses. In *Handbook of partial least squares* (pp. 655-690). Springer, Berlin, Heidelberg.
18. Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, 295(2), 295-336.
19. Chung, C., & Austria, K. P. (2012). Attitudes toward product messages on social media: An examination of online shopping perspectives among young consumers. *International Journal of E-Services and Mobile Applications*, 4(4), 1-14.
20. Chung, N., Song, H. G., & Lee, H. (2017). Consumers’ impulsive buying behavior of restaurant products in social commerce. *International Journal of Contemporary Hospitality Management*.
21. Dawson, S., & Kim, M. (2009). External and internal trigger cues of impulse buying online. *Direct Marketing* 3 (1), 20–34.
22. Dawson, S. and Kim, M, (2010), Cues on apparel web sites that trigger impulse purchases, *Journal of Fashion Marketing and Management*, 14(2), 230-246.
23. Dublin, Feb. 07, 2020 (GLOBE NEWSWIRE) -- The "**Pakistan B2C E-Commerce Market 2019**" report has been added to **ResearchAndMarkets.com's** offering. <https://www.globenewswire.com/news-release/2020/02/07/1981639/0/en/Pakistan-B2C-E-Commerce-Market-2019-By-2025-Half-of-the-Population-is-Expected-to-Have-Mobile-Devices.html>
24. Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, 5(1), 1-4.
25. Fitri, F. R. (2018). The influence of web quality and sales promotion toward impulse buying behavior with openness personality as moderating variable. *Jurnal Akuntansi, Manajemen dan Ekonomi*, 20(1), 48-55.

26. Floh, A., & Madlberger, M. (2013). The role of atmospheric cues in online impulse-buying behavior. *Electronic Commerce Research and Applications*, 12(6), 425–439.
27. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
28. Foroughi, A., Buang, N. A., & Sadeghi, R. H. M. (2012). Exploring the influence of situational factors (money & time available) on impulse buying behaviour among different ethics. *International Journal of Fundamental Psychology & Social Sciences (IJFPSS)*, 2(2), 41-44.
29. Foroughi, A., Buang, N. A., Senik, Z. C., & Hajmisadeghi, R. S. (2013). Impulse buying behavior and moderating role of gender among Iranian shoppers. *Journal of Basic and Applied Scientific Research*, 3(4), 760-769.
30. Gwee, M. Y., & Chang, K. T. (2013). Developing E-Loyalty Amongst Impulsive Buyers via Social Influence on Group Buying Websites. In PACIS (p. 141).
31. Habib, M. D., & Qayyum, A. (2017). A Structural Equation Model of Impulse Buying Behavior in Online Shopping. *UW Journal of Management Sciences*, 1, 1-14.
32. Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long range planning*, 46(1-2), 1-12.
33. Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, 19(2), 139-152.
34. Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM). *European business review*.
35. Hair Jr, J. F., Sarstedt, M., Matthews, L. M., & Ringle, C. M. (2016). Identifying and treating unobserved heterogeneity with FIMIX-PLS: part I–method. *European Business Review*.
36. Hashmi, H., Attiq, S., & Rasheed, F. (2019). Factors Affecting Online Impulsive Buying Behavior: A Stimulus Organism Response Model Approach. *Market Forces*, 14(1), 19-42.
37. Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication monographs*, 76(4), 408-420.
38. Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., ... & Calantone, R. J. (2014). Common beliefs and reality about PLS: Comments on Rönkkö and Evermann (2013). *Organizational research methods*, 17(2), 182-209.
39. Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing*. Emerald Group Publishing Limited.
40. Herabadi, A. G., Verplanken, B., & Van Knippenberg, A. (2009). Consumption experience of impulse buying in Indonesia: Emotional arousal and hedonistic considerations. *Asian Journal of Social Psychology*, 12(1), 20-31.
41. Hu, M., Huang, F., Hou, H., Chen, Y., & Bulysheva, L. (2016). Customized logistics service and online shoppers' satisfaction: an empirical study. *Internet Research*, 26(2), 484-497.
42. Huang, L. T. (2016). Flow and social capital theory in online impulse buying. *Journal of Business Research*, 69(6), 2277–2283.
43. Jones, A.M., Reynolds, E.K., Weun, S., & Beatty, E.S. (2003). The product-specific nature of impulse buying tendency. *Journal of Business Research* 56 (7): 505–511.
44. Karbasivar, A., & Yarahmadi, H. (2011). Evaluating Effective Factors on Consumer Impulse Buying Behavior. *Asian Journal of Business Management Studies* , 2 (4), 174-181
45. Kazempour, Y. dan Lotfizadeh, F. (2017). The Impact of Situational Factors (Store, Personal) on Urge to Buy Impulsively and Impulse Buying Behavior. *European Journal of Buisness and Innovation Research*, 5(4), 12-27.
46. Keyton, J. (2015). 23 Outcomes and the criterion problem in communication competence research. *Communication competence*, 585.
47. 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*, 58, 98-108.
48. Kotler, P., & Keller, K., L. (2016). *Marketing Management*, 15th Edition, Pearson Education, Inc.
49. Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
50. Kusmaharani, A. S., & Halim, R. E. (2020). Social Influence and Online Impulse Buying of Indonesian Indie Cosmetic Products. *Jurnal Ilmiah Manajemen*, 10(2), 237-248.
51. Lai, J. (2017). The Comparative Research on Online Impulsive Buying Behavior between the UK and China. *Journal of Residual Science and Technology*, 14(1), 119-124.
52. Lee, M. Y., Kim, Y. K., & Fairhurst, A. (2009). Shopping value in online auctions: Their antecedents and outcomes. *Journal of Retailing and Consumer Services*, 16(1), 75-82.
53. Lee, Y. Y., & Gan, C. L. (2020). Applications of SOR and para-social interactions (PSI) towards impulse buying: the Malaysian perspective. *Journal of Marketing Analytics*, 8(2), 85-98.

54. Lin, P. C., & Lin, Z. H. (2013). Buying impulse triggered by digital media. *The Service Industries Journal*, 33(9-10), 892-908.
55. Liu, Y., Li, H., & Hu, F. (2013). Website attributes in urging online impulse purchase: An empirical investigation on consumer perceptions. *Decision Support Systems*, 55(3), 829–837.
56. Lo, L. Y. S., Lin, S. W., & Hsu, L. Y. (2016). Motivation for online impulse buying: A two-factor theory perspective. *International Journal of Information Management*, 36(5), 759-772.
57. Loureiro, S., Costa, I., & Panchapakesan, P. (2017). A passion for fashion: The impact of social influence, vanity and exhibitionism on consumer behaviour. *International Journal of Retail & Distribution Management*, 45(5), 468-484.
58. Luo, X. (2005). How does shopping with others influence impulsive purchasing? *Journal of Consumer Psychology*, 15(4), 288–294.
59. Madhavaram, S. R., & Laverie, D. A. (2004). Exploring impulse purchasing on the Internet. *Advances in Consumer Research*, 31(1), 59–66.
60. Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. the MIT Press.
61. Miller, D. C., & Salkind, N. J. (2002). *Handbook of research design and social measurement*. Sage.
62. Ministry of Commerce.(2019). Government of Pakistan Ministry of Commerce Annual report 2019. <http://www.commerce.gov.pk/>
63. Mittal, S., Sondhi, N., & Chawla, D. (2018). Process of impulse buying: A qualitative exploration. *Global Business Review*, 19(1), 131-146.
64. Mohan, G., Sivakumaran, B., & Sharma, P. (2013). Impact of store environment on impulse buying behavior. *European Journal of marketing*, 47(10), 1711-1732.
65. Nagadeepa, C., Selvi, T., & Pushpa, A. (2015). Impact of sale promotion techniques on consumers' impulse buying behaviour towards apparels at Bangalore. *Asian Journal of Management Sciences & Education*, 4(1), 116-124.
66. Ning Shen, K., & Khalifa, M. (2012). System design effects on online impulse buying. *Internet Research*, 22(4), 396-425.
67. Pakistan Economic Survey. (2017-18). *Pakistan Economic Survey (2017-18) Ministry of Finance Pakistan*. <http://www.finance.gov.pk/index.html>
68. 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*, 20(1), 60–78.
69. 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*, 65(11), 1583–1589.
70. Park, H. H., & Noh, M. J. (2012). The influence of innovativeness and price sensitivity on purchase intention of smart wear. *Journal of the Korean Society of Clothing and Textiles*, 36(2), 218-230.
71. Parsad, C., Prashar, S., Vijay, T. S., & Sahay, V. (2019). Role of In-Store Atmospheric and Impulse Buying Tendency on Post-Purchase Regret. *Journal of Business & Management*, 25(1).
72. PTA. (2017). *Pakistan Telecommunication Authority Pakistan Annual report 2017*. <http://www.pta.gov.pk/>
73. PTA. (2020). *Pakistan Telecommunication Authority Pakistan Annual report 2020*. <http://www.pta.gov.pk/>
74. Ramayah, T., Lee, J. W. C., & In, J. B. C. (2011). Network collaboration and performance in the tourism sector. *Service Business*, 5(4), 411.
75. Rasheed, A., Yaqub, R.M., & Baig, F., (2017). Factors Affecting Impulse Buying Behaviours in Shopping Malls: Evidence from Bahawalpur Region, Pakistan. *Journal of Marketing and Consumer Research*, 39, 1-20.
76. Rashid, M. A., Islam, T., Malik, M. U., & Ahmer, Z. (2019). Impact of materialism on impulsive buying: mediating role of credit card use and brand loyalty. *Pakistan Economic and Social Review*, 57(1), 23.
77. Rezaei, S., Ali, F., Amin, M., & Jayashree, S. (2016). Online impulse buying of tourism products: The role of web site personality, utilitarian and hedonic web browsing. *Journal of Hospitality and Tourism Technology*, 7(1), 60-83.
78. Ringle, C. M., Wende, S., & Will, A. (2010). Finite mixture partial least squares analysis: Methodology and numerical examples. In *Handbook of partial least squares* (pp. 195-218). Springer, Berlin, Heidelberg.
79. Rook, D.W., & Fisher, R. (1995). Normative influences on impulsive buying behavior. *Journal of Consumer Research* 22, 305–313.
80. Ruvio, A. A., & Belk, R. W. (2013). A process view of transgenders' self-identity conflict. *The Routledge companion to identity and consumption*, 141.
81. Sharma, P., Sivakumaran, B., & Marshall, R. (2010), "Impulse buying and variety seeking: A trait-correlates perspective", *Journal of Business Research*, 63(3), 276-283.
82. Shen, K., & Khalifa, M. (2012). System design effects on online impulse buying. *Internet Research*, 22(4), 396-425.

83. Siorowska, A. G. (2011). Gender as a moderator of temperamental causes of impulse buying tendency. *Journal of Customer Behavior*, 10(2), 119–142.
84. Sundström, M., Hjälm-Lidholm, S., & Radon, A. (2019). Clicking the boredom away—Exploring impulse fashion buying behavior online. *Journal of Retailing and Consumer Services*, 47, 150-156.
85. Turkyilmaz, C. A., Erdem, S. & Uslu, A. (2015). The Effects of Personality Traits and Website Quality on Online Impulse Buying. *Procedia-Social and Behavioral Sciences*, 175(2015), 98-105.
86. Usman, H. (2018, October 28). Pakistan's e-commerce market nearly doubles to Rs40b. *The Express Tribune*. <https://tribune.com.pk/story/1835428/2-pakistans-e-commerce-market-nearly-doubles-rs40b/>
87. Verhagen, T., & van Dolen, W. (2011). The influence of online store beliefs on consumer online impulse buying: A model and empirical application. *Information & Management*, 48(8), 320-327.
88. Weerathunga, A. K., & Pathmini, M. G. S. (2015). Impact of Sales Promotion on Consumer's Impulse Buying Behaviour (IBB); Study in Supermarkets in Anuradhapura City. In *International Research Symposium Rajarata University of Sri Lanka* (pp. 321-329).
89. Wells, J.D., Parboteeah, V., & Valacich, J.S. (2011), "Online impulse buying: understanding the interplay between consumer impulsiveness and website quality", *Journal of the Association for Information Systems*, 12(1), 32-56.
90. Wiranata, A. T., & Hananto, A. (2020). Do Website Quality, Fashion Consciousness, and Sales Promotion Increase Impulse Buying Behavior of E-Commerce Buyers?. *Indonesian Journal of Business and Entrepreneurship (IJBE)*, 6(1), 74-74.
91. Xiang, L., Zheng, X., Lee, M. K., & Zhao, D. (2016), "Exploring consumers' impulse buying behavior on social commerce platform: The role of parasocial interaction", *International Journal of Information Management*, 36(3), 333-347.
92. Zhang, K. Z., Xu, H., Zhao, S., & Yu, Y. (2018). Online reviews and impulse buying behavior: the role of browsing and impulsiveness. *Internet Research*, 28(3), 522-543.
93. Zhang, X., Prybutok, V. R., & Koh, C. E. (2006). The role of impulsiveness in a TAM-based online purchasing behavior. *Information Resources Management Journal (IRMJ)*, 19(2), 54-68.
94. Zhao, X., Lynch Jr, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of consumer research*, 37(2), 197-206.