



## **Assessing the impact of Perceived Risk, Sales Promotion, Time Pressure and Website quality on Online Impulse Buying Behavior During Covid-19 Pandemic: A Developing Country Perspective**

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### **ABSTRACT**

*Advanced technology also changes the purchasing behavior of the consumer. Now Buyers favor online shopping in contrast to brick and mortar shopping. This study aimed to investigate the influence of perceived risk, sales promotion, time pressure, and website quality on online impulse buying in Pakistan. The conceptual framework of this study is based on reasoned action theory. Researchers have collected the responses from the online consumers via an online questionnaire using the convenience sampling technique. Data has been analyzed through SPSS and Smart (PLS) to confirm the proposed hypotheses. Results revealed that overall sales promotion, time pressure, and website quality were significantly associated with online impulse buying. In addition, perceived risk has an insignificant association with online impulse buying. However, the findings suggest that online impulse buying encourages buyers. Hence, online vendors must enhance the quality of their websites, create promotional strategies and increase consumer confidence. This study has theoretical and practical implications for managers and educational practitioners.*

**Keywords:** *Online impulse buying, perceived risk, time pressure, sales promotion, website quality, online shopping*

### **1.0 Introduction**

COVID-19 is one of the most severe and difficult challenges governments, business companies, and people have faced worldwide (Hall et al., 2020). COVID-19 carried many emotional, social and financial changes, like deficiency of jobs and low savings. People perceive fear and anxiety going outside and become physically ill or mentally depressed due to future uncertainty (Bradbury-Jones & Isham, 2020). The COVID-19 Period, social distancing, and lockdown have changed the consumer's purchasing behaviour (Donthu & Gustafsson, 2020; J. Kim, 2020; Sheth, 2020). Perceived risk (PR), demographics, environment and advanced technology also change consumers' consumption behaviour. Due to COVID-19 outbreaks, 71% of the consumers continue buying online because of COVID-19 fear (Retail customer Experience, 2020). Previous studies provide insights that consumer buying decisions are solely influenced by price discounts, product packaging and shape (Chen et al., 2020; Grewal et al., 2018; Mead et al., 2020; Verma et al., 2016). However, there is limited knowledge of why consumer impulse buying (IB) increases without any sales promotion (SP) due to fear of COVID-19. Online buying is amongst the most emerging online activities worldwide (Sabanoglu, 2020). For example, China's online business foundation is correspondingly expanding. Measurements display that online business in China approximately reached \$36.6 billion in 2009 (Forbes, 2010). According to e-advertiser, online business trades in Brazil would extend \$17.3 billion by 2016 (Adnan, 2014). Likewise, online buying has changed in metropolitan areas of Pakistan, for instance, Islamabad, Faisalabad, Lahore, and Karachi. These cities are unquestionable settlers of online buying in Pakistan

(Ammar Haider & Nasir, 2016). Pakistan is the 46th huge e-commerce market with an income of US\$2 billion in 2019, and an enhancement of 101% Pakistani e-commerce market contributed to the global rate of 17% in 2019 (e-commerce, 2019). Meanwhile, In January 2021, there were 61.34 million internet users in Pakistan. Internet surfers in Pakistan have been enhanced by 11 million (+21%) between 2020 and 2021. In Pakistan, internet take-up raised to 27.5% (KEMP, 2021).

Due to their inherent behaviors, impulse buyers often visit online stores (Wells, 2011). Online buyers are involved in different mental states of unplanned and sudden behaviors regarding a shopping commitment procedure that complicates it for vendors to forecast (Floh & Madlberger, 2013). In a similar vein, Floh and Madlberger (2013) argued that a higher number of buyers purchased products spontaneously in the present times. It depicts the rising cost of online shopping, focusing on the requirement of online impulse buying (OIB). As cited by Liu et al. (2013), User Interface Engineering, a thriving analyzing firm focusing on product and website features, indicates that probably 40% of online buying transactions are considered impulse purchases (Verhagen & Van Dolen, 2011). Researchers figured about 82% of respondents were involved in OIB (Wu et al., 2016). Impulse buying behavior is ubiquitous among buyers worldwide. Interestingly, Dawson and Kim (2010) figure out 50% of buyers buy products impulsively.

## **2.0 Problem Statement and Research Gaps**

Shopping tendency has changed from traditional to online shopping around the globe during COVID-19 pandemic. During these testing times, consumers promoted online shopping throughout the world. Numerous online buyers in Pakistan favored online shopping during COVID-19 pandemic. The tendency of online shopping is enhancing in Pakistan, but it is slower than in other developing countries (Qayyum et al., 2018). Based on previous research, it is considered that consumers are ignorant of online buying techniques in Pakistan. In addition, they are very stressful due to overcharges of online buying and possibility strands (Yousaf et al., 2012). Mehmood-ul-Hassan, Deputy Director, Cybercrime Wing, Federal Investigation Agency, said that more than 12,000 complaints related to e-commerce had been registered via FIA only in 2019 (Khalid, 2020).

Protecting identities through budget exchanges and the safety of individual's personal information (Beldad et al., 2010), risk perception for buyers and the requirement of their confidence is gaining their trust on e-retailer and these elements that persuade customers to purchase from the web. Inspirations for their purchase, for example (Useful and declining) and barriers to work such as safety concerns and impressions of trust can deter buyers or reduce their web-based customization shopping (Qayyum et al., 2018).

The impact of PR has been observed in various industries such as tourism industry (Yi et al., 2020), social commerce (Lăzăroiu et al., 2020), mobile commerce (Rind et al., 2017), E-commerce (Liaw & Le, 2017), and fashion industry (Walsh et al., 2017). However, some past and contemporary studies stated that PR has an insignificant relationship with OIB (Baber et al., 2016; Park & Kim, 2016; Pratiwi & Saputri, 2020). On the contrary, PR is significantly associated with OIB (Ha, 2011). Furthermore, researchers have not defined the PR of impulse shopping as a primary concern, even though it was well considered in online shopping (Chen et al., 2019).

Moreover, the impact of time pressure (TP) has been observed in various industries, tourism (Sohn & Lee, 2017), Sports (Mlakar & Kovalchik, 2020), Software industry (Kuutila et al.,

2020), information technology (Carroll & Conboy, 2020), and health (Modi et al., 2020). Similarly, some studies examine the relationship between TP and OIB. TP is significantly associated with OIB (Hu & Qin, 2014; Zhao et al., 2019). However, some scholars used TP to study the decision-making process, but a few researchers have considered it in IB (Hu & Qin, 2014).

Researchers have mentioned that website quality (WQ) is significantly and positively associated with OIB behavior (Akram et al., 2018; Hashmi, 2019; Wells, 2011). Similarly, scholars illustrated that buyers' OIB could significantly be influenced by website attributes, product information, ease of use, currency, trust, and entertainment are five key aspects (Elliott & Speck, 2005). As an illustration (Turkyilmaz et al., 2015) disclosed that complementary relationships are not significantly associated with OIB of shoppers.

Some previous researchers found a positive and significant relationship between SP and IB (Ahmad Musadik & Abdul Ghani Azmi, 2020; Karbasivar & Yarahmadi, 2011; Sains et al., 2016; Themba, 2021). SP had an insignificant relationship with OIB (Danang Satrio, Choliq Sabana, 2020). Some researchers have expanded their research into e-marketing (Vicdan et al., 2007).

From the review of above discussion, we may conclude that the relationship between PR, TP, SP, WQ alongside OIB is still inclusive that requires additional empirical investigation. This study fulfils this gap by considering the least research variables like PR, TP, SP, WQ and OIB in Pakistan.

### **3.0 Literature Review**

#### **3.1 Online impulse buying (OIB)**

Impulse buying is stated as “an abrupt and instant buying with no pre-shopping intention to buy the specific product, resultant of exposure to a stimulus” (Sohn & Lee, 2017). When consumers decide to buy from online stores, they primarily act impulsively. They are activated by effortless buying and evaluation of the items through easy shipment, one click buying, and the absence of social tensions (Jeffrey & Hodge, 2007). Some scholars declared that online consumers are more impulsive than retail shoppers ( Park et al., 2012b; Verhagen & Van Dolen, 2011). Wu et al. (2015) declared that online SPs encourage online shoppers to be cautious regarding their foremost hunt and smoothen the IB (Floh & Madlberger, 2013). Yu and Bastin (2010) stated that various elements, such as folk values, TP, identity, locality, and diversity of economic positions, affect IB behavior. Along with an intellectual point of view, IB mostly happens spontaneously and suddenly. Therefore, IB is unavoidable (Sharma et al., 2010).

#### **3.2 Perceived risk (PR)**

Peter and Tarpey (1975) stated it as “The probability that the purchase of the product will result in the Displeasure of the consumer”. There are additional risks and wariness related to online shopping instead of offline context (Li & Huang, 2009). The risk elements include financial, product, delivery, and beneficial risks (Lennon, 2009). PR consists of two constituents; one is unreliability related to the end results, and the second is unreliability related to the sequel or gravity of dropping (Dowling & Staelin, 1994; Peter & Ryan, 1976; Peter & Tarpey, 1975).

### **3.2.1 Studies based on perceived risk and online impulse buying**

PR has a significant relationship with OIB (Ha, 2011). Many researchers find the relationship between PR and OIB significant and insignificant results. The impact of PR has been observed in various industries, including social commerce (Lăzăroiu et al., 2020), mobile commerce (Rind et al., 2017), e-commerce (Liaw & Le, 2017), and fashion industry (Walsh et al., 2017). On the contrary, PR has an insignificant relationship with OIB (Baber et al., 2016; E. J. Park & Kim, 2016; Pratiwi & Saputri, 2020). That's why; relationship between those variables is still inclusive and needs further empirical investigation.

Based on the above discussion, the following hypothesis is proposed.

- **H<sub>1</sub>**: PR has a positive relationship with OIB.

### **3.3 Website quality (WQ)**

Detail information is essential in IB. Buyers can access data from websites because they are essential sources for detailed information that persuade buyers to shop from cyberspace, i.e., B2C website (Ranganathan & Ganapathy, 2002). The websites' features that motivates the shoppers to buy more products impulsively include mobile compatibility, accessible to all users, well planned information architecture, well-formatted content, fast load times, browser consistency, effective navigation, and good error handling (Wells, 2011).

#### **3.3.1 Studies based on website quality and online impulse buying:**

Various researches illustrated that WQ can significantly influence buyers' OIB (Akram et al., 2018; Danang Satrio, Choliq Sabana, 2020; Hashmi, 2019). Turkyilmaz et al. (2015) disclosed no significant effect of WQ on OIB. On the contrary, a well-organized website extended the IB of buyers (Clemes et al., 2014; Shergill & Chen, 2005; Wolfenbarger & Gilly, 2003) and declared that well-organized website attributes influence online shopping affection significantly. Many researchers find the relationship between WQ and OIB significant and consider other findings insignificant. Therefore, the relationship between those variables is still inclusive and needs further empirical investigation.

Thus, researchers proposed the following hypothesis:

- **H<sub>2</sub>**: WQ has a positive relationship with OIB.

### **3.4 Time pressure (TP)**

TP regulates perceptions and selections by controlling the capacity of buyers. When TP is high, buyers seem to practice facts and figures comprehensively (Park et al., 1989). TP influences buyers' facts and figures handling (Park et al., 1989) and, ultimately, diminishes buyers' time to access facts (Ben Zur & Breznitz, 1981). In addition, TP obliges buyers to depend on previous encounters and confidential details through intrinsic exploration instead of extrinsic exploration and utilize effortlessly attainable root enlightenment.

#### **3.4.1 Studies based on time pressure and online impulse buying**

The impact of TP has been observed in various industries, tourism (Sohn & Lee, 2017), sports (Mlakar & Kovalchik, 2020), software industry (Kuutila et al., 2020), information technology (Carroll & Conboy, 2020), and health (Modi et al., 2020). Few studies have examined the association between TP and OIB and found significant results (Hu & Qin, 2014; Lee et al., 2017; Van Steenburg & Naderi, 2020; Zhao et al., 2019). Hence, current phenomena urge the

researcher to further investigate the relationship between TP and OIB to fill out the literature gap.

Thus, the researchers proposed the following hypothesis:

**H3:** TP has a positive relationship with OIB.

### 3.5 Sales promotion

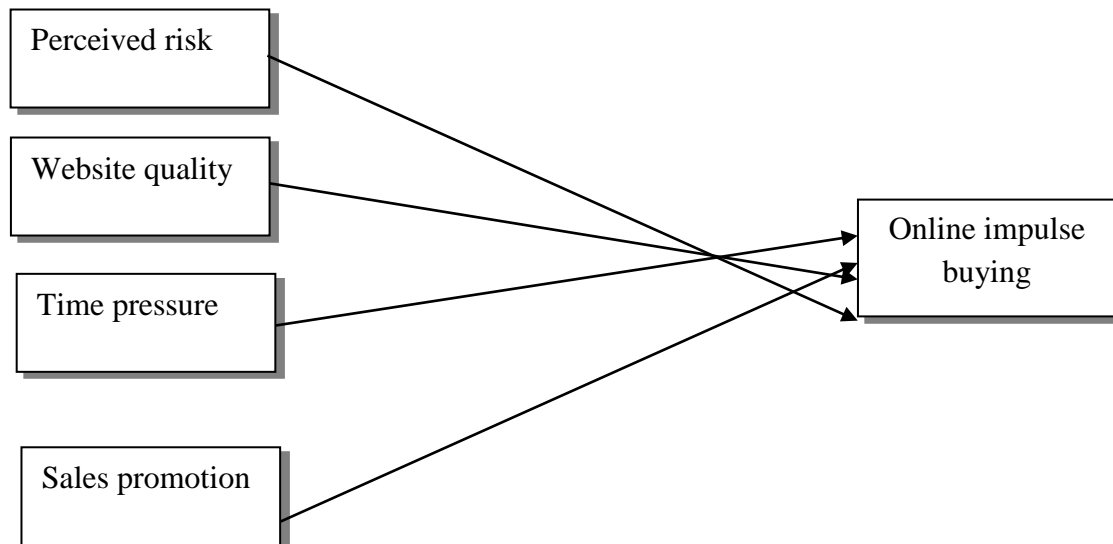
The critical aspect of advertising campaigns is the SP (Kotler & Keller, 2012). SP is a motivational instruments group organized to rapidly and considerably motivate the buyers to buy particular items. Various researchers argued SP plays a crucial role in continuously enhancing the number of buyers. For example, In the US, the number of buyers unexpectedly increased OIB due to online vouchers (Foresster, 2014).

#### 3.5.1 Studies based on sales promotion and online impulse buying:

Many researchers found that the relationship between SP and OIB is significant and others considered insignificant. Some previous studies have found that SP positively and significantly influence IB (Ahmad Musadik & Abdul Ghani Azmi, 2020; Karbasivar & Yarahmadi, 2011; Sains et al., 2016; Themba, 2021). On the other hand, researchers Danang Satrio and Choliq Sabana (2020) found that SP is insignificantly associated with OIB. Therefore, the relationship between these variables is still inclusive and needs further empirical investigation.

Hence, researchers hypothesize that:

- **H4:** SP has a positive relationship with OIB.



**Figure 3.1 conceptual framework**

This study has derived the framework from the theory of reasoned action. Purchase intention can be built through two components i.e., attitude and subjective norm toward behavior (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). In the above figure, the conceptual framework shows the direct relationship of PR, TP, WQ and SP on consumer OIB behavior. At this stage, SPs, WQ are interlinked with attitude. Similarly, PR and TP are interlinked to subjective norms. These beliefs shape one's intention to perform or not perform the behavior.

#### **4.0 Research Method**

In this study, we have used a deductive research approach to test the hypothesis that investigates how PR, SP, TP, and WQ are associated with consumers' OIB behavior. The unit of analysis is online consumers in Pakistan. This study has collected the responses from respondents through an online questionnaire. It is a suitable method to collect information regarding consumers' encounters with OIB. A self-administrated questionnaire was shared through online mediums, i.e., Facebook, WhatsApp, email, Instagram, Linked-In. A five-point Likert scale is used in the questionnaire to collect responses. The target population of this study is online buyers of Pakistan. The survey sample was online buyers who purchased by website or application at e-commerce. Non-probability sampling, particularly purposive sampling, is used to collect the responses. The sample size is determined by following the rule of thumb (i.e., multiplying the total items of the questionnaire by ten) proposed by (Hair et al., 2014). Thus, the sample size is 290. Nulty (2008) suggested that the response rate in consumer studies is 40%-60%. The 580 questionnaires links were shared via emails, social media platforms, including Facebook/messenger, WhatsApp, Instagram, Linked-In to the online consumers. **Three hundred fifty-two questionnaires were received. After initial screening, 301 responses were useable.**

#### **5.0 Data Analysis and Results**

This study used PLS-SEM to examine the relationships between latent (unobserved) and indicator (observed) variables. This study adopted the two-stage method, including the measurement and structural models, to analyze the conceptual framework. A measurement model is used to examine the constructs' reliability and validity. On the other hand, a structural model is used to analyze the association between the hypothesized relationships.

##### **5.1 The Measurement Model**

Evaluating the measurement model (external model) is the first step in PLS-SEM analysis. The outer model is concerned with component measurement, which indicates the extent to which the indicators (items) are technically loaded and related to the relevant constructs. In other words, the study of outer models reveals that research questions examine the structures for which they were designed to be measured by checking that they are precise and accurate.

Researchers evaluated the measurement models by assessing the reliability and validity of the constructs. The acceptability of the outer model can be assessed by: (1) The reliability of the individual item, i.e. the reliability of the indicator and the internal reliability of stability utilizing composite reliability (CR); (2) convergent reliability for variables related with individual constructs utilizing the average variance extracted (AVE); And (3) the discriminant validity using the Fornell-Larcker criterion and the external loading of the indicator.

At first, internal consistency tests the consistency of results between items. By examining the CR, the internal consistency was confirmed in this analysis. The threshold value must not be less than 0.60 (Henseler et al., 2009), but the most adequate value (Hair et al., 2012) is 0.70 and beyond. Hence, a CR value between 0.6 and 0.7 indicates average internal consistency; whereas worth amidst 0.70 and 0.90 is contemplated more appropriate (Nunnally, 1994).

Thus, CR and Cronbach's alpha were examined for every construct in this study, and the outcomes found in Table 4.4 shows that all CR and Cronbach's alpha values are above the recommended threshold value of 0.60 to 0.70 (Hair et al., 2011; Henseler et al., 2009). In this

study, the CR values vary from 0.84 to 0.94, representing the reliability of the measurement model.

An AVE value of 0.50 declares that the convergent validity (CV) is enough (Hair et al., 2013). In this analysis, the CV was tested by calculating the AVE values. The outcome shows a variety of AVE values amidst 0.51 and 0.54, so it can be declared that convergent validity is indicated.

**Table 5.0**  
*Loadings, Reliability and Convergent Validity Values*

variables	Items	Loading	Cronbach's Alpha	CR	AVE
OIB	OIB1	0.830	0.642	0.807	0.587
	OIB5	0.605			
	OIB6	0.840			
PR	PR1	0.623	0.801	0.804	0.516
	PR2	0.553			
	PR3	0.696			
	PR4	0.942			
SP	SP1	0.808	0.881	0.913	0.678
	SP2	0.851			
	SP3	0.844			
	SP4	0.777			
	SP5	0.834			
TP	TP1	0.772	0.800	0.862	0.559
	TP2	0.838			
	TP3	0.579			
	TP4	0.803			
	TP5	0.716			
WQ	WQ1	0.795	0.907	0.925	0.608
	WQ2	0.698			
	WQ3	0.651			
	WQ4	0.788			
	WQ5	0.815			
	WQ6	0.826			
	WQ7	0.811			
	WQ8	0.833			

NOTE: OIB=online impulse buying, PR= perceived risk, SP= sales promotion, TP= Time pressure, WQ= website quality

Discriminant validity was then considered, in relation to the degree to which one construct is basically different from the other (Churchill, 1979; Hair et al., 2013). The Fornell-Larcker standard is the traditional method for perspective discriminant validity (Hair et al., 2013). The outer factor loading was evaluated as a significant criterion in examining the contribution of the indicator to the allocated construct. This is because 4 out of 29 items were removed from the external model study, but none of the variables has been removed and sufficient figure of items per variable ( Hair et al., 2012). (see Table 5.1)

**Table 5.1**  
*Discriminant validity*

Variables	OIB	PR	SP	TP	WQ
<i>OIB</i>	<b>0.766</b>				
<i>PR</i>	0.143	<b>0.719</b>			
<i>SP</i>	0.649	0.046	<b>0.823</b>		
<i>TP</i>	0.417	0.397	0.382	<b>0.748</b>	
<i>WQ</i>	0.682	-0017	0.714	0.379	<b>0.779</b>

NOTE: OIB=online impulse buying, PR= perceived risk, SP= sales promotion, TP= Time pressure, WQ= website quality

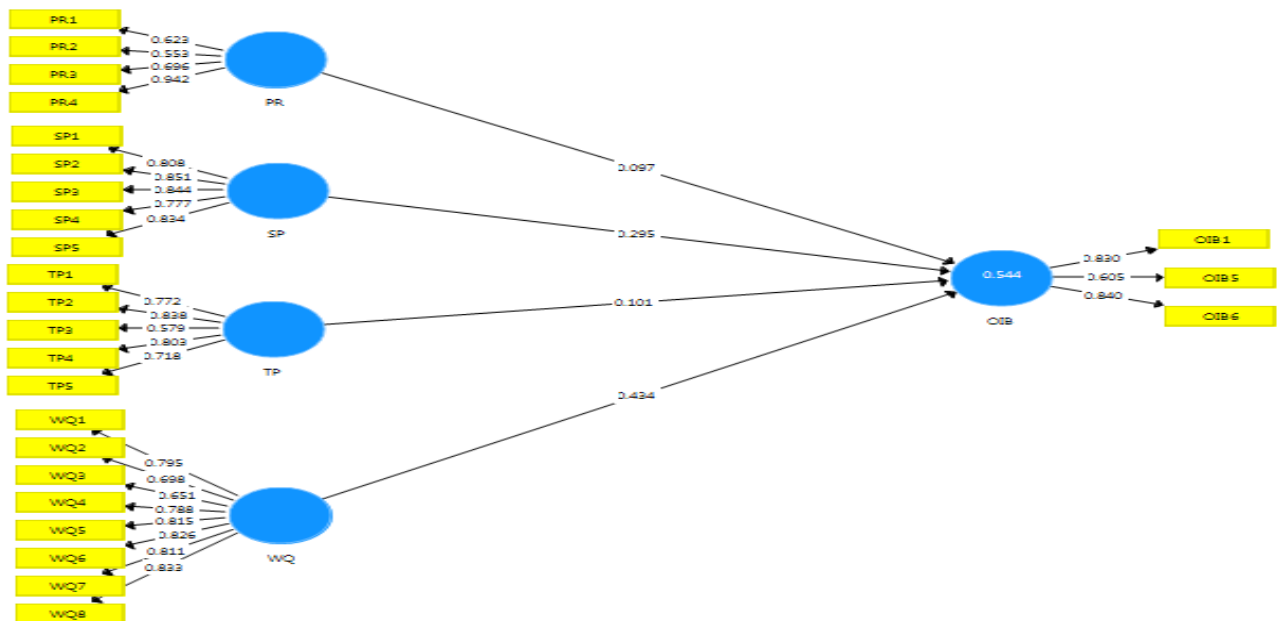


Figure 5.1  
Measurement Model

## 5.2 The structural Model

The structural model was executed to test the hypothesized relationship. The significance of results was tested by PLS-SEM bootstrapping method with 5,000 sub-samples (Hair JF, 2011; 2012; 2013; Henseler, 2009). The t-value with confidence intervals of 95% ( $t > 1.645$ ,  $p < 0.05$ ) was used to examine the association between latent and criterion variables (see table 5.3). The results reveal that PR is not significantly associated with OIB ( $t = 1.339$ ;  $p < 0.181$ ). Hence, hypothesis 1 is not supported. Similarly, results show that SP is significantly and positively associated with OIB ( $t = 4.483$ ;  $p < 0.000$ ), supporting hypothesis 2. In the same vein, the finding indicates a significant and positive relationship between TP and OIB ( $t = 2.111$ ;  $p < 0.035$ ); so in light of these results, hypothesis 3 is supported. In addition, results have confirmed a significant and positive relationship between WQ and OIB ( $t = 6.225$ ,  $p < 0.000$ ). So, in light of these results hypothesis 4 is supported.



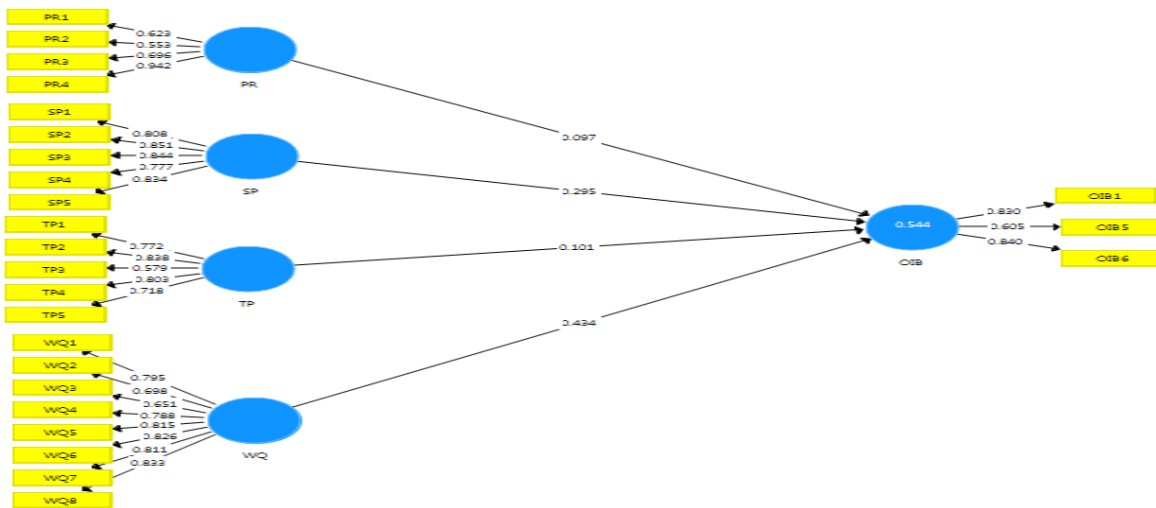


Figure 5.2  
PLS algorithm

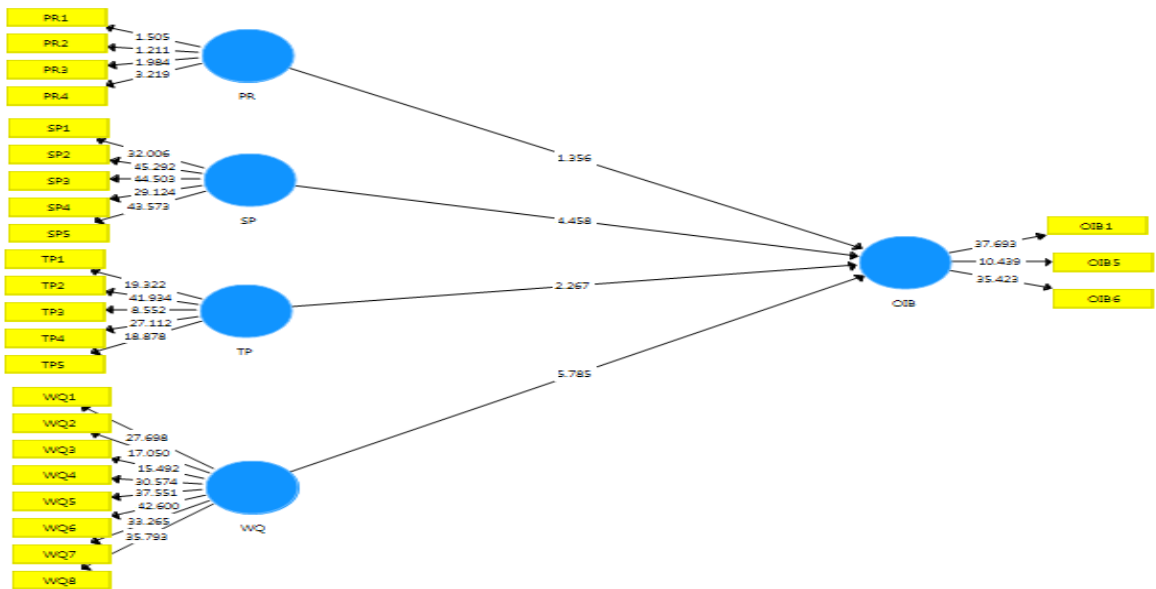


Figure 5.3  
PLS bootstrapping

Table 5.3

<i>Hypothesis</i>	<i>Path</i>	<i>S.D</i>	<i>B</i>	<i>t- value</i>	<i>p- value</i>	<i>Results</i>
H1	PR>OIB	0.072	0.097	1.339	0.181	Not Supported
H2	SP>OIB	0.066	0.295	4.483	0.000	Supported
H3	TP>OIB	0.048	0.101	2.111	0.035	Supported
H4	WQ>OIB	0.070	0.434	6.225	0.000	Supported

## **5.2 Discussion:**

The present study highlighted an essential attribute of consumer behavior towards OIB in Pakistan to understand and empirically examine the relationship between PR, SP, TP, WQ and OIB. The first objective of this research is to investigate the relationship between PR and OIB. Surprisingly, the result shows that H1 is not supported. The second objective of this research is to examine the relationship between SP and OIB. The results found that SP has a significant relationship with OIB H2 is supported. The review of past studies has confirmed the significant relationship between SP and OIB because the finding of this association is in line with the previous studies (Ahmad Musadik & Abdul Ghani Azmi, 2020; Karbasivar & Yarahmadi, 2011). Moreover, the third objective of this study is to examine the relationship between TP and OIB. This study reveals that TP and OIB have a significant relationship. Thus, H3 is supported. Past studies confirmed the significant relationship between TP and OIB as results align with previous studies (Van Steenburg & Naderi, 2020; Zhao et al., 2019). Furthermore, the fourth objective of this study is to examine the relationship between WQ and OIB. This relationship's results indicate that WQ is positively and significantly associated with OIB. Hence, H4 is supported. Review of past studies confirmed that the significant relationship between WQ and OIB as the results are consistent with prior studies (Danang Satrio, Choliq Sabana, 2020; Hashmi, 2019).

## **5.3 Implication of the study:**

The results of this research have both theoretical and practical implications. This research has theoretically empowered the current knowledge in the fields of e-commerce, e-marketing, e-retail and related literature by recognizing and filling the gap found between the prior researches in Pakistan. This research utilizes sales-related factors such as WQ, PR, SP and TP. Some practical implications are too invented through the outcomes. First, the existing research expresses that a website's quality is positively associated with online impulse shopping. This will assist the vendor's to enhance the rate of IB and at the same time help consumers make their buying decisions. An enormous responsibility also falls on the shoulders of web developers. For online web users, website developers can incorporate visual appeals, emotional appeals, and innovative features to satisfy OIB. In addition, SP assists online vendors in influencing marketing strategies and consumer buying decisions. Design of online promotional strategies aimed to promote online sales. In addition, e-marketers must examine the potential behavior of buyers and devise strategies at the maximum rate. Therefore, they come back to purchase on the web portal. The higher the TP, the more important the impulse purchasing of consumers. For variant items types and variant contexts of consumption, emotional communication can construct variant marketing influence. Given the complex and diverse market situation, firms need to adopt timely, appropriately flexible and adaptive strategies. For example, promoting low-engagement items creates an environment of high TP and prompts buyers to decide about buying swiftly, which has a positive effect. This research could help online businesses to gain a competitive advantage. One thing to consider is that the results of this study are not limited to Pakistani e-retailer. They are evenly advantageous to all online businesses around the globe.

## **5.5 Limitation of the study:**

This research is restricted to Pakistan only due to the sample size of 301 respondents and time and budget constraints. This researches can be imitated in other cultures with a huge sample size to gain more general results. The current research considers the restricted aspects of PR and current risks for a better and more comprehensive analysis of the PR influence on the trend of

OIB in future studies. Other PR factors may also need to be considered. The study is not industry-related. More studies can use this model in a particular industry.

### **5.6 Conclusion and future recommendation:**

Earlier literature missed a comprehensive investigation into the association between PR and online impulse shopping and TP and OIB in the Pakistani buyers' market. The current research has played a significant role in current physical knowledge, focusing only on IB in an online context. The trend of online shopping has been enhanced in Pakistan in recent times. As a developing economy with a shorter literacy level, Pakistan has many concerns about online users' behaviour, one of them is considered as PR. Future research may consider other aspects which influence buyers in the online buying environment. In the context of online shopping, there are many factors that can affect buyers' buying behavior. The attractiveness of the shopping situation, limited promotion over time, group discounts, brand, word of mouth between customers, consumer's reviews, etc., can influence the buyer's online purchases.\

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