



PAPER ID: 10A12N



**PERSONALITY AND POST-PURCHASE CONSUMER  
REGRET EXPERIENCED AFTER IMPULSE BUYING:  
A CROSS-THEORETICAL APPROACH WITH  
INDIVIDUAL DIFFERENCES MODERATOR**

**Khalid Mahmood <sup>a\*</sup>, Muhammad Amir Rashid <sup>a</sup>, Ghulam Hussain <sup>a</sup>**

<sup>a</sup> COMSATS University Islamabad, Lahore Campus, PAKISTAN.

**ARTICLE INFO**

*Article history:*

Received 24 May 2019  
Received in revised form 22  
July 2019  
Accepted 01 August 2019  
Available online 07 August  
2019

**Keywords:**

Five-factor model;  
Impulse buying;  
Personality traits;  
Neuroticism;  
Maximization consumer;  
Post-purchase regret;  
Consumer buying regret.

**ABSTRACT**

This study assessed that how five-factor model (FFM) can assume an important role in elaborating the relationship between impulse buying and post-purchase regret by incorporating assumptions from theory of social learning and imitation, social judgment theory and theory of collectivistic culture. Consumer literature and marketing categorize impulse buying behavior (IBB) as fragmented concept which needs to be mustered cross theoretically at post-purchase phase. The literature regarding personality, impulse buying behavior and Post-Purchase Consumer Regret (PPCR) is reviewed and the research revealed relationship between personality traits, impulse buying behavior and post-purchase regret. But there is a little evidence for individual differences variables exploited as moderators between personality traits and post-purchase consumer regret. The study adopted convenience sampling and was concluded by suggesting relationship between FFM and post-purchase consumer regret moderated by maximization.

© 2019 INT TRANS J ENG MANAG SCI TECH.

**SYMBOLS AND ABBREVIATIONS**

Ag	Agreeableness,
Cons	Conscientiousness,
DD	Decision difficulty (Max),
Ex	Extraversion,
FFM	Five factor model,
HS	High standards,
IBB	Impulse buying behavior,
Max	Maximization, (Max),
Neuro	Neuroticism,
Open	Openness to experience,
PPCR	Post-purchase consumer regret,
PPCRFA	Post-purchase consumer regret due to forgone alternatives.

## 1. INTRODUCTION

Post-purchase consumer regret (PPCR) is described as psychological discomfort of consumer based on consequence of purchase decision (Sweeney et al., 2000). Baumeister (2002) found that post-purchase regret might be induced in the consumers within same day or later after impulse buying because they were unable to resist the factors which caused impulsive buying behavior. Post-purchase regret has been of major interest to marketers because they are always keen to know the influential factors which trigger consumers to buy more (Bui et al., 2011). Regret theory was initially developed by considering negative emotion theories explaining that the regret is an outcome of choosing among plenty of available alternatives (Zeelenberg & Pieters, 2004). In fact, regret theory concentrated on a process of decision making which is marked as irrational (Loomes & Sugden, 1982). Negative problems were observed in 80 percent consumers after impulse buying Rook (1987). Kalla and Arora (2011) suggested that existing theories in psychology, marketing and economics did not provide a complete insight about impulse buying behavior and the phenomenon becomes more complex in South Asia. The scholars were also of the view that it needed to be explored in sub-continent as most of the studies are conducted in the West. Further, the post-purchase behavioral phase calls for more work in impulse buying literature to better understand it as predictor, process and outcome based on inter-disciplinary theoretical perspective. It is a viable initiative which is required to be expanded and tested in real life situations (Xiao & Nicholson, 2013). Hence, this study has drawn assumption from theory of social learning and imitation Miller and Dollard (1941), social judgment theory Sherif and Hovland (1961) and theory of collectivistic culture (Triandis, 1995). Personality traits have attained much importance in the area of consumer behavior as researchers are trying to discover the relationship between excessive buying and personality traits (Mueller et al., 2010; Rose, 2007). Hence, Otero-López and Villardefrancos (2013) has used FFM personality traits as antecedents of excessive buying based on impulsiveness. Dispositions and personality affect maximization tendency of an individual and positive or negative life outcomes have been attributed to personality traits in different previous studies (Purvis et al., 2011). The scholars proposed that maximization reflected the dimensions of FFM model. Similarly, while determining the predictors of maximization with reference to personality, it was interesting to note that conscientiousness did not appear as a valid predictor of maximization as it was supposed to be. Rather, the strongest predictor was neuroticism along with openness. Moreover, maximizers also suffer emotional cost due to stress and anxiety induced choices (Purvis et al., 2011; Shiloh et al., 2001). But the question remains that which personality trait accounts for more poorer life consequences (Dar-Nimrod et al., 2009). This provided sufficient evidence to state the research objective as to establish maximization as moderator between personality and post-purchase consumer regret experienced after impulse buying simultaneously with cross-theoretical underpinning. Beatty and Ferrell (1998) laid down the basic definition of impulse buying as instant purchasing activity without any planning, irrelevant of realizing or satisfying a desire. Consequently, this type of regret experienced after an impulsive purchase needs to be further explored (Ozer & Gultekin, 2015).

But literature of the last decade shows that impulsivity is deeply rooted in personality of the people (Verplanken & Herabadi, 2001). So, a great attention is being paid to the psychological constructs in the recent years which may affect impulse buying behavior and a huge research volume is available in this regard (Dhaundiyal & Coughlan, 2009; Franken et al., 2008; Russo et al., 2008;

Wittmann & Paulus, 2008). Studies conducted on impulse buying on the basis of individual differences have opted five factor model as predictor (Badgaiyan et al., 2016; Bratko et al., 2013; Otero-López & Villardefrancos, 2013; Ozer & Gultekin, 2015; Thompson & Prendergast, 2015; Verplanken & Herabadi, 2001; Youn & Faber, 2000).

## 2. THEORY AND HYPOTHESES

Preceding review establishes that post purchase regret after impulse buying is minimally associated with product attributes, in fact, it is deeply rooted in individual differences since when consumers are out of impulse buying episode, the paid price exceeds the derived benefit inducing regret (Bayley & Nancarrow, 1998; Park & Lennon, 2006). Since its emergence as personality dimensions taxonomy, FFM has been used as predictor of many negative behavioral patterns like pathological gambling (Mowen et al., 2009), alcoholism (Kuntsche et al., 2008), workaholism (Clark et al., 2010) and tobacco dependence (Terracciano & Costa, 2004). This helps to formulate hypothesis about personality traits and post-purchase consumer regret experienced after impulse buying.

Impulse buying might be attributed to unending individual differences and if it holds true, it is inferred that impulse buying corresponds to specific values or it may have a correlation with other lasting individual differences as personality traits and long term objectives (Verplanken & Sato, 2011). Similarly, post-purchase consumer regret is attributed to personality characteristics (Cook et al., 2017). The present world is marked with availability of abundant choices having positive as well as negative consequences for consumers. Hence, considering the deeply rooted association of personality trait neuroticism with IBB, it is expected that;

- **H#1. Neuroticism is positively associated with post-purchase consumer regret experienced after impulse buying**

The importance of impulsive behavior as a construct of psychology prevails in personality systems (Whiteside & Lynam, 2001). Eysenck et al. (1985) presented a personality model having three dimensions. The scholars argued that extraversion comprised of sensation seeking, impulsiveness and venturesomeness and associated impulsive behavior with psychoticism also. So, we expected that;

- **H#2. Extraversion is positively associated with post-purchase consumer regret experienced after impulse buying**

Abundant choice has triggered the feelings of life control and being empowered (Broniarczyk & Griffin, 2014; Chernev et al., 2015). But it may also lead to choice paralysis inducing regret. With reference to a few notable factors just like traits and cognitive style, this blurred side of choices can be more prominent for some people than others (Iyengar & Lepper, 2000). Shopping is marked as a prominent leisure activity in Asia (J. A. Lee & Kacen, 2008) and these cultural differences strengthen the belief that post-purchase regret after an impulse purchase is attributed to individual differences rather than product functionality (Bayley & Nancarrow, 1998; Cook et al., 2017). Therefore, we assumed that;

- **H#3. Agreeableness is positively associated with post-purchase consumer regret experienced after impulse buying**

But, innovative and fast fashion products generate post-purchase regret when their purchase is

attributed to personality rather than need (Cooke et al., 2001). Life stories, personal concerns and personality traits are labeled as a three- tiered framework of personality and consistencies in social behavior are attributed to these traits (Baumgartner, 2002; McAdams, 1996). So, personality reveals attributes of an individual which cause occurrence of specific behavioral patterns in general and a firm relationship between consumer behavior and personality is vital when consumers choose to react and approach a purchase experience. The relationship between personality and buyer behavior also influences the procedures opted by consumers (Horton, 1979). This led to formulate that;

- **H#4. Openness to experience is positively associated with post-purchase consumer regret experienced after impulse buying**

Jensen-Campbell et al. (2002) argued that effortful control has significant positive relationship with conscientiousness and it is negatively correlated with neuroticism. Considering these findings Gramzow et al. (2004) established the same relationship of these two big five dimensions with self-regulation and found that association of the constructs with other three dimensions of big five is inconsistent. Verplanken and Herabadi (2001) concluded that impulse buying stems from personality traits but their results are equivocal (Bratko et al., 2013). These scholars suggested that more research was required regarding the impact of FFM on impulse buying. Thompson and Prendergast (2015) argued that there are inconsistencies in the findings among studies particularly done to establish the relationship between FFM and impulse buying as almost 90% of consumers are occasionally involved in impulse buying (Hausman, 2000). Thus, it was assumed that;

- **H#5. Conscientiousness is positively associated with post-purchase consumer regret experienced after impulse buying**

Interdisciplinary application of psychological theories in marketing is well established but a limited number of studies were conducted to determine the consumers' psychological types as means of predicting their remorse (Fried, 2008). It is of enduring interest to include maximization as moderator to address the inconsistencies in findings (Cheek & Schwartz, 2016; Dalal et al., 2015; Richardson et al., 2014; Turner et al., 2012). The area of buyer's regret and personality as its predictor, remained under-explored though some predictive capability is yield by personality traits (Bell, 1967; Fried, 2008). That is why, perhaps, the cognitive style is an influential factor in risk-reduction after experiencing remorse or dissonance by consumers (Mitchell, 1993). So, we expected that;

- **H#6. Maximization moderates the relationship between FFM traits and post-purchase consumer regret experienced after impulse buying**

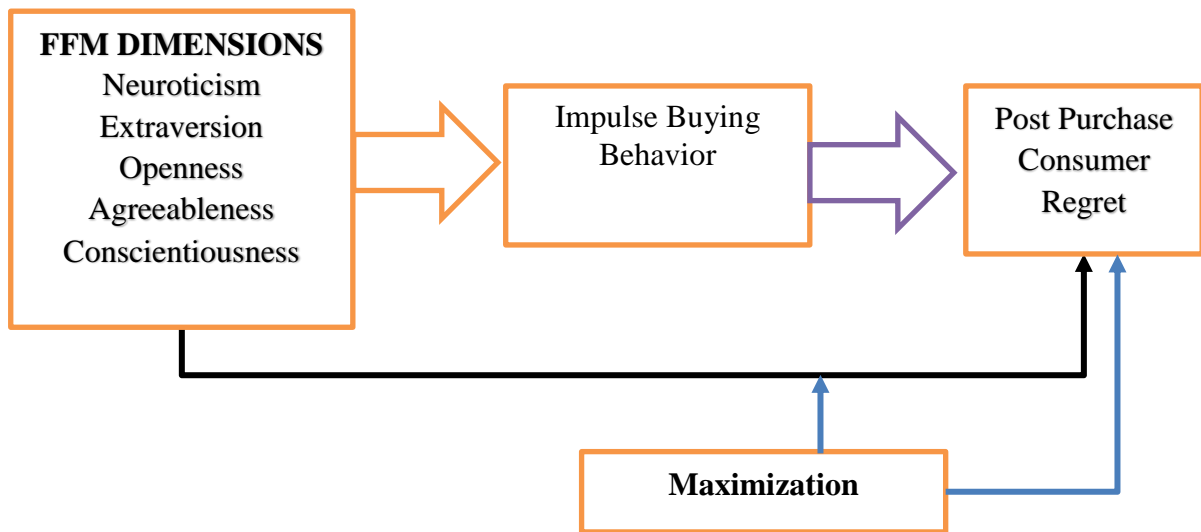
### **3. METHODOLOGY**

#### **3.1 THE STUDY FRAMEWORK**

Figure 1 shows the proposed framework of this study which is derived after literature review. This study consider FM dimensions including Neuroticism, Extraversion, Openness, Agreeableness, Conscientiousness. These factors expect to contribute to the buying behaviors.

#### **3.2 TARGET POPULATION AND SAMPLING PROCEDURE**

Data were collected from universities in district Vehari and its surrounding cities. The respondents included faculty, students and administration staff and convenience sampling was used.



**Figure 1:** The framework of this study

### 3.3 DATA COLLECTION METHOD AND RESPONSE

The questionnaire was constructed containing items about all constructs. It had three parts starting with the first one to provide demographic information about respondents. The respondents were asked to recall previous impulse purchases of Fast Moving Consumer Goods because the study simultaneously addressed the post-purchase consumer regret which arose after impulse buying (Ozer & Gultekin, 2015; Thompson & Prendergast, 2015). The researchers distributed 970 self-administrated questionnaires containing all the measures out of which 538 were returned assuring a 55 percent receiving rate. This also included 33 incomplete responses which were rejected and 505 were included in the study. Lack of research culture and unawareness about its importance in Pakistan led to decide on self-administration of survey instead of opting for electronic media although it is equally good (Hussain et al., 2016).

## 4. INSTRUMENTATIONS

### 4.1 FIVE FACTOR MODEL (FFM)

FFM dimensions were measured by adapting Gosling et al. (2003) scale. It ensures the cultural similarity as it has been recently used in India (Badgaiyan et al., 2016). According to scholars, these scales are developed to ensure time economy in research. It has two items for each trait.

### 4.2 MAXIMIZATION

Maximization is defined in terms of three distinct aspects: experiencing decision difficulty, expressing high standards and searching alternatives for best possible option (Nenkov et al., 2008). Short Form of Maximization Scale (MS-S) by Nenkov et al. (2008) consisting of six items was used.

### 4.3 IMPULSE BUYING BEHAVIOR (IBB)

This construct was measured by using Thompson and Prendergast (2015) impulse buying behavior scale consisting five items. The scholars selected and modified items for cross-cultural application of the scale. The modification was also meant to assess the impulsive buying behavior for preceding four to eight weeks purchases. These items were drawn from available scales (Rook &

Fisher, 1995; Verplanken & Herabadi, 2001) and measure directly spontaneous, unreflective and unplanned impulse buying (Piron, 1991).

#### 4.4 POST-PURCHASE REGRET

Post-purchase consumer regret (PPCR) scale was adopted from (S. H. Lee & Cotte, 2009) as it addresses all the facets of regret. The study was based on pure impulse buying which occurs spontaneously by ignoring the alternatives although data was collected about all the facets. (Badgaiyan et al., 2016; Bratko et al., 2013).

### 5. RESULT

This section presents the result of the study. The researchers employed PLS path-modeling to assess the measurement model and structural model. Measurement model tests the psychometric properties of the scales employed. Structural model is employed to test the proposed hypotheses of the study. Scales reliability and convergent validity was ensured through measurement model (Esposito Vinzi & Russolillo, 2010). The authors introduced the procedure to assess outer loading and established that outer loading value must be 0.5 or above. Items having less value needed to be deleted in ascending order for variance extracted. It was done to increase the data quality. Although PLS is generally used for small data, its uniqueness of producing results with even two items encouraged us to apply it. This cannot be achieved with SEM which relies on covariance (Akter et al., 2011). Partial least square modeling could obviate covariance based SEM limitations like factor indeterminacy, model identification, measurement level, distributional properties and sample size (Chin, 1998; Hussain et al., 2016; Wetzels et al., 2009). Result is shown in Table 1.

**Table 1** Measurement Model Result.

Construct	Items	Loadings	Cronbach Alpha	Communality	Ave
Extraversion	FFM1	0.937	0.814	0.914	0.841
	FFM6	0.897			
Agreeableness	FFM2	0.864	0.665	0.675	0.522
	FFM7	0.546			
Conscenciousness	FFM3	0.978	0.903	0.950	0.905
	FFM8	0.924			
Neuroticism	FFM4	0.948	0.754	0.883	0.792
	FFM9	0.829			
Openness	FFM5	0.939	0.831	0.921	0.854
	FFM10	0.910			
Post purchase consumer regret	PCRFA1	0.788	0.558	0.817	0.691
	PCRFA2	0.873			

**Table 2** Comparison of Square root of average variance extracted score and correlations

	Ag	Cons	Ex	Neuro	Open
Ag	0.722				
Cons	0.022	0.951			
Ex	0.041	0.844	0.917		
Neuro	0.020	-0.062	-0.092	0.890	
Open	0.051	0.875	0.836	-0.096	0.924
PPCR	0.166	0.048	0.073	-0.218	0.067

Note: All the values shown in diagonal and bolded represent the square route of average whilst those of the diagonal represent latent variable correlations

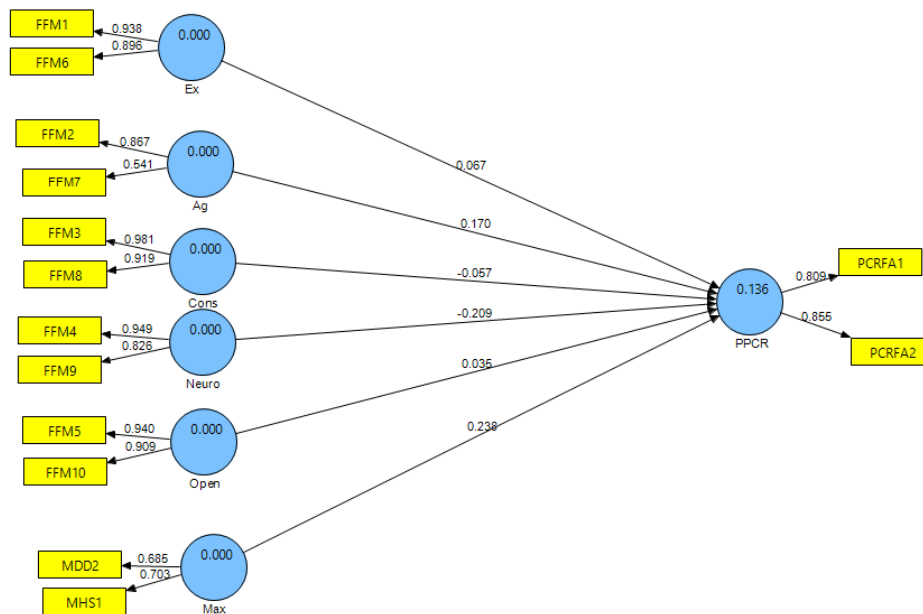
## 5.1 MODEL EVALUATIONS

### 5.1.1 MEASUREMENT MODEL

Discriminant validity was observed for assurance of external consistency of this model. In this context, Table 2 shows the latent variable comparison where AVE of variables is computed: agreeableness (Ag) = 0.722, conscientiousness (Cons) = 0.951, extraversion (Ex) = 0.917, neuroticism (Neuro)= 0.890, openness (Open)= 0.924.

### 5.1.2 STRUCTURAL MODEL

Direct relationship of the study constructs is computed in PLS. It reveals analysis of inner modeling. It tells about relationship dependency in hypothesized model under study(Hair et al., 2006). Agarwal and Karahanna (2000) suggested that path coefficients were equal to regression and beta coefficients. Model significance is decided on the premise of t-values and regression beta values and if it is above 1.64, it is assumed to be significant (Henseler et al., 2014). This value helps in deciding on suggested hypothesis (Figure 1).

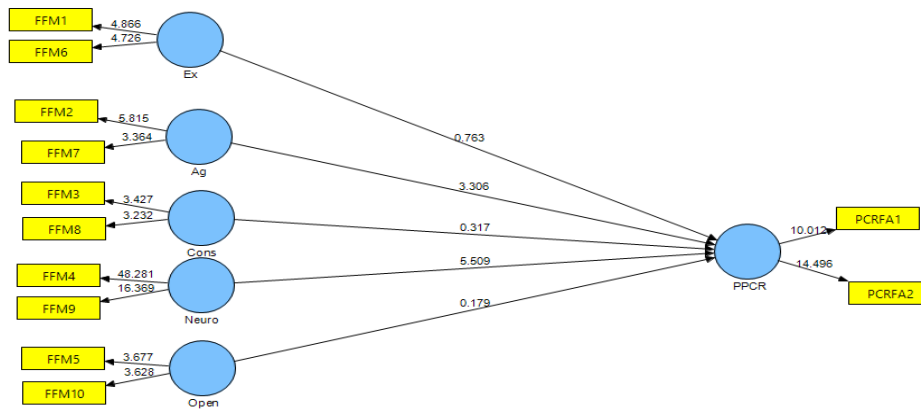


**Figure 2:** Measurement Model

All the rejected hypothesis contain t-value less than 1.64 and accepted hypothesis have a t-value of above 1.64. It is illustrated in Table 3. Figure 2 demonstrates t-values subsequent to bootstrapping.

**Table 3:** Hypothesis (Direct Effects).

	Path Coefficients	Standard Error (STERR)	T Statistics ( O/STERR )	Decision
Ag -> PPCR	0.168	0.049	3.309	Supported
Cons -> PPCR	-0.036	0.116	0.313	Not supported
Ex -> PPCR	0.062	0.083	0.747	Not supported
Neuro -> PPCR	-0.217	0.041	5.502	Supported
Open -> PPCR	0.017	0.098	0.173	Not supported



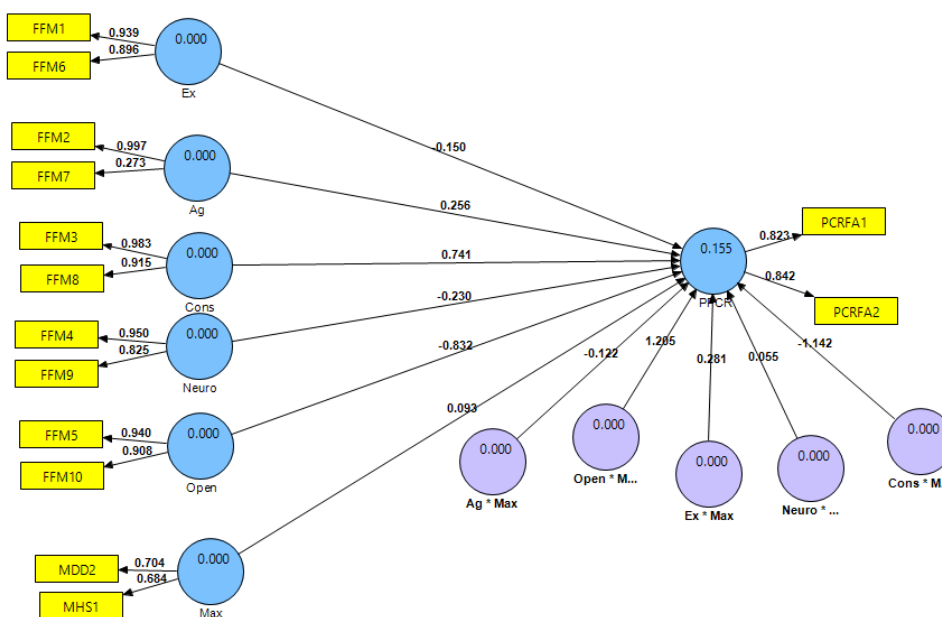
**Figure 3:** Structural Model.

### 5.1.3 MODERATING EFFECTS

Smart PLS 2.0 M3 requires to create direct relationship between moderator and criterion variable which are maximization and post-purchase consumer regret respectively. This led to calculating both direct effect and moderating effect for improving the study. Beta coefficients were obtained by running PLS algorithm and results are shown in Table 4. Regarding the hypothesis testing the researchers applied method of bootstrapping. As depicted in Table 4, out of five interaction hypothesis two hypothesis are significant at t-value above 1.64 and three hypothesis are insignificant having t-value below 1.64. Comparison of Figures 2 and 5 reveals that the value of post purchase consumer regret is increased from 0.134 to 0.155 after induction of maximization as moderator between FFM personality traits and post-purchase consumer regret. Figure 4 shows interaction term.

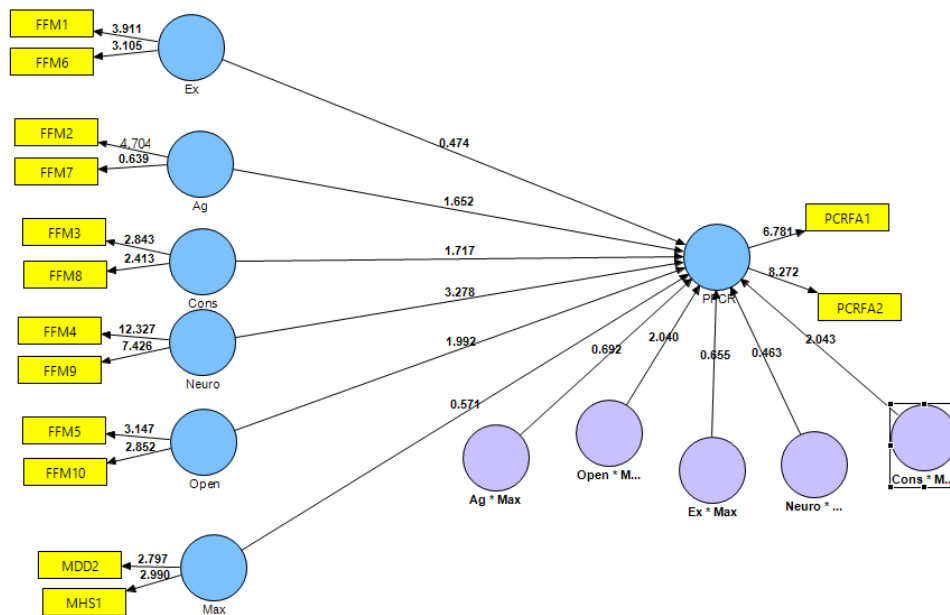
**Table 4** Hypothesis (Indirect)

	Path	Standard Error	T Statistics	Decision	
	Coefficients	(STERR)	( O/STERR )		
Ag * Max	→ PPCR	-0.121	0.176	0.691	Not supported
Cons * Max	→ PPCR	-1.142	0.559	2.043	Supported
Ex * Max	→ PPCR	0.280	0.428	0.654	Not supported
Neuro * Max	→ PPCR	0.055	0.118	0.463	Not Supported
Open * Max	→ PPCR	1.205	0.590	2.040	Supported



**Figure 4:** Interaction Term





**Figure 5:** Bootstrapping Model.

## 6. DISCUSSION

FFM has particularly been used and proved as an antecedent of excessive buying and other negative behavioral outcomes (Clark et al., 2010; Kuntsche et al., 2008; Otero-López & Villardefrancos, 2013). Further, FFM personality traits particularly neuroticism and conscientiousness and generally the remaining three are predictors of maximization which is negatively associated with customer satisfaction (Cheek & Schwartz, 2016; Nenkov et al., 2008; Purvis et al., 2011). FFM successfully predicted the impulse buying when studied with trait affect having positive or negative dimensions (Stafford et al., 2010). A relationship by simultaneously linking five factor model with impulse buying behavior and post-purchase consumer regret experienced after it might be influential as buyers within the same day or long after an impulse purchase may experience post-purchase regret because they were unable to resist stimuli causing impulse buying. Dispositions and personality affect maximization tendency of an individual and positive or negative life outcomes have been attributed to personality traits in different previous studies (Purvis et al., 2011). Among individual differences factors, maximization (choosing the best) has emerged as important measures associated with personality in the contemporary era (Cheek & Schwartz, 2016; Schwartz et al., 2002). Recent studies suggested exploiting individual differences moderators while using FFM as predictor of IBB and negative behavioral outcomes at post-purchase level considering cross-theoretical perspective. The theory of social learning and imitation argues that occurrence of observable behavior is not possible in the absence of certain drives which are categorized as primary or secondary in nature. During socialization process, imitation drive becomes its base. Hence, it is assumed that response matching with others gains reward properties in itself and frequency of this reward determines the intensity of occurrence of behavior. The consistency of the reward strongly maintains the imitation drive. The theory established that other person's behavior is a cue which induces internal response resulting in a drive to act on the basis of previous reward strength. Drive reduction is achieved through this imitative process (Miller & Dollard, 1941).

Now considering Triandis (1995) definition of collectivism which categorized it as a social pattern comprising of people who view themselves as bonded with groups, families and coworkers in society, it is not surprising to note that personal attributes are withheld or repressed in collectivistic cultures leading to create a weaker attitude–behavior and attitude-intention relationship and it remains so for impulsivity also (Bagozzi et al., 2000; Kashima et al., 1992). But, individuals living in collectivistic cultures rapidly change their impulse buying behavior driven by such social patterns as normative evaluations and high standards (in-group goals and duties) in different situational contexts (Triandis, 1995). Assumption from social judgment theory Sherif and Hovland (1961) is used here to support the relationship between FFM and post-purchase consumer regret followed by impulse buying. The theory assumes that individuals categorize and discriminate among stimuli either these are attitudinal or neutral in nature. Sherif and Hovland (1961) proposed that “persons who are strongly committed to positions use fewer categories than less involved persons and highly involved people place a large number of items in unacceptable category”.

The literature review section supported the assumption by confirming realization of severe post-purchase regret when there was sudden onset of impulse buying behavior. Thus, the study found positive relationship between openness to experience and post-purchase consumer regret. This trait has a comfortable tolerance characteristic accompanied by capability to accommodate information and being impulsive (Costa & McCrae, 2008). Openness to experience is marked by being emotionally rich and having a complex life due to deeply rooted sensitivity for beauty and art. These people are undogmatic in their values and attitudes, they are behaviorally supple and curious in their intellect (Costa Jr & McCrae, 1995). Their curiosity leads them to experience both positive and negative emotional states more deeply in comparison with the people low on this dimension and who always think conventionally (Lakhal et al., 2012; Matzler et al., 2006). They firmly consider the hedonic values of products being purchased and their decision making styles are indicative of their motivation and shopping behavior (DeYoung et al., 2005; Zurawicki, 2010). The relationship between personality trait “openness to experience” and impulsive tendency buying is equivocal, (Badgaiyan et al., 2016), so its relationship with post-purchase consumer regret was not only induced due to what was purchased but also corresponded to what could have been purchased (S. H. Lee & Cotte, 2009). Purvis et al. (2011) explored that openness to experience was the strongest predictor of maximization that is why the direct and interaction hypothesis are proved in the present study. Following the scholars, maximization was aggregated into a single composite score and it is positively associated with post-purchase consumer regret.

People high in conscientiousness are diligent and organized (Costa Jr & McCrae, 1995). Instead of being spontaneous, these people exhibit controlled and planned social behavior and also try to be perfect. They have the tendency to postpone emotional impulses and do not like to be impulsive shoppers. But, at moments, these people are also involved in impulse purchases and feeling regret emotions (Gohary & Hanzaee, 2014; Joshanloo et al., 2012; Zurawicki, 2010). Likely, conscientiousness was also found positively correlated with post-purchase consumer regret although consumers with this trait show a greater self-control yet the assumption from collectivistic culture theory is proved that people in such culture change their impulsive behavior swiftly which results in remorse (Novliadi et al., 2018).

Neuroticism depicts psychiatric conditions of distress. People who score high on this dimension are emotionally inconsistent and they frequently express worries and anxieties along with aches in the body also. They also exhibit inappropriate behavior in social situations (Costa & McCrae, 1992). Johnson and Attmann (2009) revealed that neuroticism is also characterized by compulsive buying which was a disturbing behavior. Further, as the level of neuroticism increases, the vulnerability to impulsiveness and depression also increases leading to inappropriate decision making (Costa Jr & McCrae, 1995). Thus, people who are oriented towards neuroticism remain preoccupied with the current situation rather than rationalizing the decisions by considering past experiences or future consequences (Chetthamrongchai & Davies, 2000). Hence, they are more likely to experience post-purchase consumer regret but interaction hypothesis is rejected in this study while direct effect is confirmed. The reason might be it emerged as a strongest predictor of searching alternatives in literature (Purvis et al., 2011).

People high on agreeableness may form harmonious relations and in doing so they reject the domineering perspective. They do not be suspicious, in fact they rely on others (Zurawicki, 2010). People who are on the lower side of this dimension, they doubt unfamiliar things (Wang & Yang, 2008). They also possess tendencies to fall prey to negative emotional states (Ho et al., 2004). Duijsens and Diekstra (1996) discovered that agreeableness and impulse buying are negatively correlated but this claim lacks sufficient literature support (Balabanis, 2002; Wang & Yang, 2008). Hence, its direct relationship with PPCR is supported but indirect relationship is not supported.

Pleasure and enjoyment are the most prominent in traits cluster which explains extraversion dimension of personality (Costa Jr & McCrae, 1995; Costa & McCrae, 2008). Guido et al. (2007) concluded that extraversion showed hedonic shopping attributes in their personality resulting in abrupt decision-making. Extraversion is positively associated with impulsive buying tendency in most of the studies (Badgaiyan et al., 2016). But surprisingly, Gohary and Hanzae (2014) discovered negative correlation between impulse buying and extraversion which needed to be tested in real life situations. So, both direct as well as indirect relationship with PPCR is not supported.

## 7. CONCLUSION

Initially observed as exciting and enthusiastic activity providing feelings of happiness and delight Weinberg and Gottwald (1982), IBB has gradually emerged as an uncontrollable regret inducing phenomenon (Baumeister, 2002; Ozer & Gultekin, 2015). The focus has also shifted from product characteristics to personality and individual differences as predictors and antecedents (Peck & Childers, 2006; Rook & Gardner, 1993; Thompson & Prendergast, 2015; Verplanken et al., 2005). Moreover, maximizers also suffer emotional cost due to stress and anxiety induced choices (Purvis et al., 2011; Shiloh et al., 2001). Maximizers experienced more regret and post-decisional anxiety. Poorer life consequences are attributable to traits (Dar-Nimrod et al., 2009). So, along with personal fear of invalidity, personal need for structure and need for evaluation at antecedent level Badgaiyan et al. (2016), it is expected that maximization intervenes as moderator between five factor model personality traits and post-purchase consumer regret experienced after an impulse purchase. Facets of maximization may generate matched-dependent behavior. Deep connectivity and social embeddedness of consumers in collectivistic culture was witnessed by following high standards (HS)

which are socially learned and consumers are in a state of decision difficulty(DD) by putting a large number of items in unacceptable category during the purchase situation, and to avoid this difficulty, drive reduction is achieved by matching the behavior (impulsively buying the product in this case) which results in post-purchase consumer regret later on.

## 8. DATA AVAILABILITY AND MATERIAL

Data involved in this study can be requested to the corresponding author.

## 9. REFERENCES

- Agarwal, R., & Karahanna, E. (2000). Time flies when you're having fun: Cognitive absorption and beliefs about information technology usage. *MIS quarterly*, 665-694.
- Akter, S., D'Ambra, J., & Ray, P. (2011). An evaluation of PLS based complex models: the roles of power analysis, predictive relevance and GoF index.
- Badgaiyan, A. J., Verma, A., & Dixit, S. (2016). Impulsive buying tendency: Measuring important relationships with a new perspective and an indigenous scale. *IIMB Management Review*, 28(4), 186-199.
- Balabanis, G. (2002). The relationship between lottery ticket and scratch-card buying behaviour, personality and other compulsive behaviours. *Journal of Consumer Behaviour*.
- Baumeister, R. F. (2002). Yielding to temptation: Self-control failure, impulsive purchasing, and consumer behavior. *Journal of consumer Research*, 28(4), 670-676.
- Baumgartner, H. (2002). Toward a personology of the consumer. *Journal of consumer Research*, 29(2), 286-292.
- Bayley, G., & Nancarrow, C. (1998). Impulse purchasing: a qualitative exploration of the phenomenon. *Qualitative Market Research: An International Journal*, 1(2), 99-114.
- Beatty, S. E., & Ferrell, M. E. (1998). Impulse buying: Modeling its precursors. *Journal of retailing*, 74(2), 169-191.
- Bell, G. D. (1967). The automobile buyer after the purchase. *The Journal of Marketing*, 12-16.
- Bratko, D., Butkovic, A., & Bosnjak, M. (2013). Twin study of impulsive buying and its overlap with personality. *Journal of Individual Differences*.
- Broniarczyk, S. M., & Griffin, J. (2014). Decision difficulty in the age of consumer empowerment.
- Bui, M., Krishen, A. S., & Bates, K. (2011). Modeling regret effects on consumer post-purchase decisions. *European Journal of Marketing*, 45(7/8), 1068-1090.
- Cheek, N. N., & Schwartz, B. (2016). On the meaning and measurement of maximization. *Judgment and Decision Making*, 11(2), 126.
- Chernev, A., Böckenholt, U., & Goodman, J. (2015). Choice overload: A conceptual review and meta-analysis. *Journal of Consumer Psychology*, 25(2), 333-358.
- Chetthamrongchai, P., & Davies, G. (2000). Segmenting the market for food shoppers using attitudes to shopping and to time. *British Food Journal*, 102(2), 81-101.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, 295(2), 295-336.

- Clark, M. A., Lelchook, A. M., & Taylor, M. L. (2010). Beyond the Big Five: How narcissism, perfectionism, and dispositional affect relate to workaholism. *Personality and Individual Differences, 48*(7), 786-791.
- Cook, S. C., Cook, S. C., Yurchisin, J., & Yurchisin, J. (2017). Fast fashion environments: consumer's heaven or retailer's nightmare? *International Journal of Retail & Distribution Management, 45*(2), 143-157.
- Cooke, A. D., Meyvis, T., & Schwartz, A. (2001). Avoiding future regret in purchase-timing decisions. *Journal of consumer Research, 27*(4), 447-459.
- Costa Jr, P. T., & McCrae, R. R. (1995). Domains and facets: Hierarchical personality assessment using the Revised NEO Personality Inventory. *Journal of personality assessment, 64*(1), 21-50.
- Costa, P. T., & McCrae, R. R. (1992). Normal Personality Assessment in Clinical Practice. *Psychological Assessment, 4*(1), 5-13.
- Costa, P. T., & McCrae, R. R. (2008). The revised neo personality inventory (neo-pi-r). *The SAGE handbook of personality theory and assessment, 2*, 179-198.
- Dalal, D. K., Diab, D. L., Zhu, X. S., & Hwang, T. (2015). Understanding the construct of maximizing tendency: A theoretical and empirical evaluation. *Journal of Behavioral Decision Making, 28*(5), 437-450.
- Dar-Nimrod, I., Rawn, C. D., Lehman, D. R., & Schwartz, B. (2009). The maximization paradox: The costs of seeking alternatives. *Personality and Individual Differences, 46*(5), 631-635.
- DeYoung, C. G., Peterson, J. B., & Higgins, D. M. (2005). Sources of openness/intellect: Cognitive and neuropsychological correlates of the fifth factor of personality. *Journal of personality, 73*(4), 825-858.
- Dhaundiyal, M., & Coughlan, J. (2009). The effect of hedonic motivations, socialibility and shyness on the impulsive buying tendencies of the Irish consumer.
- Duijsens, I. J., & Diekstra, R. W. (1996). DSM-III-R and ICD-10 personality disorders and their relationship with the big five dimensions of personality. *Personality and Individual Differences, 21*(1), 119-133.
- Esposito Vinzi, V., & Russolillo, G. (2010). Partial least squares path modeling and regression. *Wiley interdisciplinary reviews: computational statistics. New York: Wiley.*
- Eysenck, S. B., Pearson, P. R., Easting, G., & Allsopp, J. F. (1985). Age norms for impulsiveness, venturesomeness and empathy in adults. *Personality and Individual Differences, 6*(5), 613-619.
- Franken, I. H., van Strien, J. W., Nijs, I., & Muris, P. (2008). Impulsivity is associated with behavioral decision-making deficits. *Psychiatry research, 158*(2), 155-163.
- Fried, T. A. (2008). *The relationship between psychological types, demographics and post-purchase buyer's remorse* (Vol. 69).
- Gohary, A., & Hanzae, K. H. (2014). Personality traits as predictors of shopping motivations and behaviors: a canonical correlation analysis. *Arab Economic and Business Journal, 9*(2), 166-174.
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality, 37*(6), 504-528.
- Gramzow, R. H., Sedikides, C., Panter, A., Sathy, V., Harris, J., & Insko, C. A. (2004). Patterns of self-regulation and the Big Five. *European Journal of personality, 18*(5), 367-385.

- Guido, G., Capestro, M., & Peluso, A. M. (2007). Experimental analysis of consumer stimulation and motivational states in shopping experiences. *International Journal of Market Research*, 49(3), 365.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis*. Uppersaddle River, NJ: Pearson Prentice Hall.
- Hausman, A. (2000). A multi-method investigation of consumer motivations in impulse buying behavior. *Journal of consumer marketing*, 17(5), 403-426.
- 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.
- Ho, V. T., Weingart, L. R., & Rousseau, D. M. (2004). Responses to broken promises: does personality matter? *Journal of Vocational Behavior*, 65(2), 276-293.
- Horton, R. L. (1979). Some relationships between personality and consumer decision making. *Journal of Marketing Research*, 233-246.
- Hussain, G., Wan Ismail, W. K., Rashid, M. A., & Nisar, F. (2016). Substitutes for leadership: alternative perspectives. *Management Research Review*, 39(5), 546-568.
- Iyengar, S. S., & Lepper, M. R. (2000). When choice is demotivating: Can one desire too much of a good thing? *Journal of personality and social psychology*, 79(6), 995.
- Jensen-Campbell, L. A., Rosselli, M., Workman, K. A., Santisi, M., Rios, J. D., & Bojan, D. (2002). Agreeableness, conscientiousness, and effortful control processes. *Journal of Research in Personality*, 36(5), 476-489.
- Johnson, T., & Attmann, J. (2009). Compulsive buying in a product specific context: clothing. *Journal of Fashion Marketing and Management: An International Journal*, 13(3), 394-405.
- Joshanloo, M., Rastegar, P., & Bakhshi, A. (2012). The Big Five personality domains as predictors of social wellbeing in Iranian university students. *Journal of Social and Personal Relationships*, 29(5), 639-660.
- Kalla, S. M., & Arora, A. (2011). Impulse buying: A literature review. *Global Business Review*, 12(1), 145-157.
- Kuntsche, E., von Fischer, M., & Gmel, G. (2008). Personality factors and alcohol use: A mediator analysis of drinking motives. *Personality and Individual Differences*, 45(8), 796-800.
- Lakhal, S., Frenette, É., Sévigny, S., & Khechine, H. (2012). Relationship between choice of a business major type (thing-oriented versus person-oriented) and Big Five personality traits. *The International Journal of Management Education*, 10(2), 88-100.
- Lee, J. A., & Kacen, J. J. (2008). Cultural influences on consumer satisfaction with impulse and planned purchase decisions. *Journal of business Research*, 61(3), 265-272.
- Lee, S. H., & Cotte, J. (2009). Post-purchase consumer regret: Conceptualization and development of the PPCR scale. *NA-Advances in Consumer Research Volume 36*.
- Loomes, G., & Sugden, R. (1982). Regret theory: An alternative theory of rational choice under uncertainty. *The economic journal*, 92(368), 805-824.
- Matzler, K., Bidmon, S., & Grabner-Kräuter, S. (2006). Individual determinants of brand affect: the role of the personality traits of extraversion and openness to experience. *Journal of Product & Brand Management*, 15(7), 427-434.

- McAdams, D. P. (1996). Personality, modernity, and the storied self: A contemporary framework for studying persons. *Psychological Inquiry*, 7(4), 295-321.
- Miller, N. E., & Dollard, J. (1941). Social learning and imitation.
- Mitchell, V.-W. (1993). Factors affecting consumer risk reduction: A review of current evidence. *Management Research News*, 16(9/10), 6-20.
- Mowen, J. C., Fang, X., & Scott, K. (2009). A hierarchical model approach for identifying the trait antecedents of general gambling propensity and of four gambling-related genres. *Journal of business Research*, 62(12), 1262-1268.
- Mueller, A., Claes, L., Mitchell, J. E., Wonderlich, S. A., Crosby, R. D., & De Zwaan, M. (2010). Personality prototypes in individuals with compulsive buying based on the Big Five Model. *Behaviour Research and Therapy*, 48(9), 930-935.
- Nenkov, G. Y., Morrin, M., Schwartz, B., Ward, A., & Hulland, J. (2008). A short form of the Maximization Scale: Factor structure, reliability and validity studies.
- Novliadi, F., Zahreni, S., & Iskandar, L. M. (2018). Consumer purchase regret: how personality influences outcome regret and process regret. *Journal of Business and Retail Management Research*, 13(1).
- Otero-López, J. M., & Villardefrancos, E. (2013). Five-Factor Model personality traits, materialism, and excessive buying: A mediational analysis. *Personality and Individual Differences*, 54(6), 767-772.
- Ozer, L., & Gultekin, B. (2015). Pre-and post-purchase stage in impulse buying: The role of mood and satisfaction. *Journal of retailing and consumer services*, 22, 71-76.
- Park, J., & Lennon, S. J. (2006). Psychological and environmental antecedents of impulse buying tendency in the multichannel shopping context. *Journal of consumer marketing*, 23(2), 56-66. doi: 10.1108/07363760610654998
- Peck, J., & Childers, T. L. (2006). If I touch it I have to have it: Individual and environmental influences on impulse purchasing. *Journal of business Research*, 59(6), 765-769. doi: <http://dx.doi.org/10.1016/j.jbusres.2006.01.014>
- Piron, F. (1991). Defining impulse purchasing. *NA-Advances in Consumer Research Volume 18*.
- Purvis, A., Howell, R. T., & Iyer, R. (2011). Exploring the role of personality in the relationship between maximization and well-being. *Personality and Individual Differences*, 50(3), 370-375.
- Richardson, C. M., Ye, H. J., Ege, E., Suh, H., & Rice, K. G. (2014). Refining the measurement of maximization: Gender invariance and relation to psychological well-being. *Personality and Individual Differences*, 70, 229-234.
- Rook, D. W. (1987). The buying impulse. *Journal of consumer Research*, 14(2), 189-199.
- Rook, D. W., & Fisher, R. J. (1995). Normative influences on impulsive buying behavior. *Journal of consumer Research*, 22(3), 305-313.
- Rook, D. W., & Gardner, M. P. (1993). In the mood: Impulse buying's affective antecedents. *Research in consumer behavior*, 6(7), 1-28.
- Rose, P. (2007). Mediators of the association between narcissism and compulsive buying: the roles of materialism and impulse control. *Psychology of addictive behaviors*, 21(4), 576.
- Russo, P. M., De Pascalis, V., Varriale, V., & Barratt, E. S. (2008). Impulsivity, intelligence and P300 wave: an empirical study. *International Journal of Psychophysiology*, 69(2), 112-118.

- Schwartz, B., Ward, A., Monterosso, J., Lyubomirsky, S., White, K., & Lehman, D. R. (2002). Maximizing versus satisficing: happiness is a matter of choice. *Journal of personality and social psychology*, 83(5), 1178.
- Sherif, M., & Hovland, C. I. (1961). Social judgment: Assimilation and contrast effects in communication and attitude change.
- Shiloh, S., Koren, S., & Zakay, D. (2001). Individual differences in compensatory decision-making style and need for closure as correlates of subjective decision complexity and difficulty. *Personality and Individual Differences*, 30(4), 699-710.
- Stafford, L. D., Ng, W., Moore, R. A., & Bard, K. A. (2010). Bolder, happier, smarter: The role of extraversion in positive mood and cognition. *Personality and Individual Differences*, 48(7), 827-832.
- Sweeney, J. C., Hausknecht, D., & Soutar, G. N. (2000). Cognitive dissonance after purchase: A multidimensional scale. *Psychology and Marketing*, 17(5), 369-385.
- Terracciano, A., & Costa, P. T. (2004). Smoking and the Five-Factor Model of personality. *Addiction*, 99(4), 472-481.
- Thompson, E. R., & Prendergast, G. P. (2015). The influence of trait affect and the five-factor personality model on impulse buying. *Personality and Individual Differences*, 76, 216-221.
- Triandis, H. C. (1995). *Individualism & collectivism*: Westview press.
- Turner, B. M., Rim, H. B., Betz, N. E., & Nygren, T. E. (2012). The maximization inventory. *Judgment and Decision Making*, 7(1), 48.
- Verplanken, B., & Herabadi, A. (2001). Individual differences in impulse buying tendency: Feeling and no thinking. *European Journal of personality*, 15(S1), S71-S83.
- Verplanken, B., Herabadi, A. G., Perry, J. A., & Silvera, D. H. (2005). Consumer style and health: The role of impulsive buying in unhealthy eating. *Psychology & Health*, 20(4), 429-441. doi: 10.1080/08870440412331337084
- Verplanken, B., & Sato, A. (2011). The psychology of impulse buying: An integrative self-regulation approach. *Journal of Consumer Policy*, 34(2), 197-210.
- Wang, C.-C., & Yang, H.-W. (2008). Passion for online shopping: The influence of personality and compulsive buying. *Social Behavior and Personality: an international journal*, 36(5), 693-706.
- Weinberg, P., & Gottwald, W. (1982). Impulsive consumer buying as a result of emotions. *Journal of business Research*, 10(1), 43-57.
- Wetzels, M., Odekerken-Schröder, G., & Van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS quarterly*, 177-195.
- Whiteside, S. P., & Lynam, D. R. (2001). The five factor model and impulsivity: Using a structural model of personality to understand impulsivity. *Personality and Individual Differences*, 30(4), 669-689.
- Wittmann, M., & Paulus, M. P. (2008). Decision making, impulsivity and time perception. *Trends in cognitive sciences*, 12(1), 7-12.
- Xiao, S. H., & Nicholson, M. (2013). A multidisciplinary cognitive behavioural framework of impulse buying: a systematic review of the literature. *International Journal of Management Reviews*, 15(3), 333-356.



Zeelenberg, M., & Pieters, R. (2004). Beyond valence in customer dissatisfaction: A review and new findings on behavioral responses to regret and disappointment in failed services. *Journal of business Research*, 57(4), 445-455.

Zurawicki, L. (2010). Neural Bases for Segmentation and Positioning *Neuromarketing* (pp. 163-210): Springer.



**Khalid Mahmood** is a Lecturer (in Marketing) at Department of Management Sciences, COMSATS University Islamabad, Vehari Campus & a Ph.D fellow at COMSATS University Lahore Campus. He has a decade of corporate sector experience in marketing & sales. His area of interest is Marketing & Psychology



**Dr. Muhammad Amir Rashid** is an Associate Professor & Head of HR at COMSATS Institute of Information Technology, Lahore, Pakistan. He holds an Master degree in Business Administration from University of the Lyceum, Philippines and a PhD degree in Management from Universiti Teknologi Malaysia. His researches are in the areas of Entrepreneurship, Marketing, Corporate Governance and Leadership.



**Dr. Ghulam Hussain** is an Assistant Professor at the Department of Management Sciences, COMSATS University Islamabad, Lahore Campus, Pakistan. His research interest includes leadership, entrepreneurship and quantitative analysis. He has published his research in reputed journals. He lectures on research methodology and quantitative analysis.

**Trademarks Disclaimer:** All products names including trademarks™ or registered® trademarks mentioned in this article are the property of their respective owners, using for identification and educational purposes only. The use of them does not imply any endorsement or affiliation.