2021

Post-pandemic Impulse Buying Behavior: Exploring the Antecedents of Impulsive Buying Across Product Categories During Post COVID-19 Era in the China

Pei Wang
Florida State University, pw19a@fsu.edu

Sindy Chapa
Florida State University, sindy.chapa@cci.fsu.edu

Recommended Citation

Post-pandemic Impulse Buying Behavior: Exploring the Antecedents of Impulsive Buying Across Product Categories During Post COVID-19 Era in the China

Pei Wang
Florida State University

Sindy Chapa
Florida State University

ABSTRACT

Due to COVID-19 pandemic, online purchases have become the new normal. Based on the S-O-R framework, this study proposed a model to understand consumers' impulsive shopping behavior during post COVID-19 era in China. This study investigated the antecedents of impulsive purchase behavior, while exploring the product categories most likely to be consumed because of the pandemic. An online survey was employed using a convenience national sample frame in China. A total sample of 322 was used to test the proposed model, hypotheses and answer the research questions. Theoretically, the study provides an alternative model that explains the role of website appearance and ease of use on impulsive buying behavior. In addition, the findings indicated the latter variables relate to consumers' product involvement, which affect the hedonic value and, in turn, predicts impulsive shopping behavior. Overall, Chinese participants indicated the most purchased products during post COVID-19 era in 2020 are clothing.

INTRODUCTION

The case of COVID-19 has been in the public interest, as pandemics are one of the most pressing public health challenges in the world (Bonneux & Van Damme, 2006). The COVID-19 pandemic restricts people's activities and makes consumer businesses suffered significantly (iResearch, 2020). A report from the iResearch Consulting Group (2020) showed that the Chinese consumer population failed by more than 80 percent in the first quarter of 2020 due to the social distancing ruled during the pandemic. With the pandemic gradually controlled in China, many reports predicted that there would be a consumption rebound post- pandemic among consumers (Beijing Business Daily, 2020; iResearch Consulting Group, 2020). However, no current empirical studies have conducted in China. With this in mind, and considering most purchase transactions have been done through Internet, it is imperative to explore Chinese consumers' online purchase intentions during the COVID-19 pandemic.

Previous consumer behavior studies conducted during critical moments (i.e., Ebola pandemic) claimed that a series of the psychological factors (i.e., attitudes, norms, abilities, and self-regulation, etc.) produce an emotional arousal among consumers, which affected the consumers'

decision-making process (Gamma et al., 2020). In the case of the COVID-19, Li and colleagues (2020) examined the severity that a pandemic had on consumers in 2020. They stated an impulsive consumption was created during the COVID-19 pandemic. Thereafter, other   studies stated the external stimuli, such as information sources, product shortages, and time scarcity, played major roles in influencing unusual consumer behavior during pandemic (Laato eta al. 2020; Islam et al. 2020). However, little research has been done in examining the impact those marketing stimuli, such as task relevant cues (based on the pandemic shortage and regulations) and product involvement have on impulsive shopping behavior. Therefore, this study aims at exploring online consumers' impulsive purchasing-behavior during the COVID-19 in China.

Previous literature suggests that the Stimuli-Organism-Response (S-O-R) theory can be used to predict consumer behavior in online environments (Eroglu et al., 2001; Adelaar et al., 2003; Parboteeah et al., 2009; Khalifa & Shen, 2007; Floh et al., 2013). Based on the S-O-R framework, this study proposed a model to understand consumers' impulsive shopping behavior during the COVID-19 pandemic. Consequently, this study aims at investigating the impact that an online marketing stimulus (a pandemic emergency cue) plays on the effect that the website's appearance, website's ease of navigation, and product involvement have on consumers' perceived usefulness, perceived enjoyment, and hedonic value, while exploring the impact these variables have on consumers' online impulsive buying. Thus, this study investigates the antecedents of impulsive purchase behavior, while exploring the product categories most likely to be consumed because of the COVID-19 pandemic in China.

THEORETICAL FRAMEWORK ND HYPOTHESES DEVELOPMENT

Relevant Cue: COVID-19 Pandemic

Most research on pandemics focuses on preventive health behaviors, rather than studying consumer behavior (Laato eta al., 2020). Yet, the unique and unexpected economic situation yielded by the COVID-19 pandemic demanded a careful examination on how some external cues affect consumer impulsive buying. In the communication context, a cue is a signal or a sign given to the audience or consumers (Schmitt, 2012). Laato et al. (2020) documented an unusual global purchasing behavior in March 2020. They concluded it was because of the messages received due to the quarantine preparations. Messages related to time restrain, product scarcity, shortage, among other stimuli (pandemic cues) were sent out to consumers. According to the S-O-R model (Parboteeah et al. 2016), there are relevant cues (high and low) representing marketing stimuli. In the context of the global outbreak, a perceived pandemic cue might represent an essential predictor that can lead consumers to cognitive and affective reactions. That is, when a consumer engaged in an activity because of COVID-19 situation, it could be because of receiving a pandemic cue (stimulus). In the case of China, even though the pandemic was gradually controlled by the second quarter of 2020, several positive cases brought from foreign countries generated the second wave of COVID -19 infections during the time of this investigation – therefore, the effect of a pandemic cue was explored in this study during the post-pandemic era in China (Beijing Business Daily, 2020).

The literature on online shopping behaviors identifies key indicators affecting consumer perceptions, including perceived usefulness, perceived enjoyment and perceived ease of use (Ramayah & Ignatius 2005; Davis et al.,1989; Adams et al., 1992). The theory of acceptance model (TAM) has also supported the assertion that these indicators are key predictors of a consumer's intention to behave (Amoako-Gyampah & Salam, 2004). Likewise, hedonic value has been found to be key a determinant explaining impulsiveness regarding online purchase behavior (Ramanathan et al., 2006; Chung et al., 2017). In the proposed research model (See Figure 1), a pandemic cue act as stimulus to test the relationships that a relevant cue has on perceived usefulness, ease of use, perceived enjoyment, and hedonic shopping value, as suggested by the S-O-R model. Therefore, based on the S-O-R framework and the TAM theory, it is expected that consumers the pandemic cues will affect consumers' perceived product usefulness, perceive product enjoyment, and hedonic values. Nevertheless, a non-directional hypothesis is proposed during this exploratory study.

H1: Pandemic cues (PC) will have a significant effect on (a) perceived usefulness (PU), (b) perceived enjoyment (PE), and (c) hedonic shopping value (HSV).

Online Communication Stimuli: Easy to Use and Website Appearance

According to the Eroglu et al. (2001), the effect of website characteristics on a consumer's impulsive purchase behavior can also serve as elements of stimuli that lead to cognitive and affective reactions. Based on the S-O-R model, the high task-relevant cues exist in the utilitarian aspects of the website, including ease of navigation, website security, and download delay (Bauer et al., 2002; Zhang & Von Dran, 2001–2002; Palmer, 2002). One of the low task relevant cues identified in the literature is website appearance, which includes colors, music, and font (Van der Heijden et al., 2003; Eroglu et al., 2001). This model chose ease of navigation to represent high-task relevant cues and website appearance to represent low-task relevant cues. Both variables have been found to have a positive influence on usefulness and the hedonic aspects of impulse buying (Parboteeah et al., 2016). That is, when a consumer perceives a website ease of navigate and its appearance to be more appealing, they might be more likely to perceived the product useful, enjoyable and show higher hedonic values. Thus, the following hypothesis is proposed:
H2: Ease of navigation (EV) will positively affect (a) perceived usefulness (PU), (b) perceived enjoyment (PE) and (c) hedonic shopping value (HSV).
H3: Website appearance (WA) will positively affect (a) perceived usefulness (PU) and (b) perceived enjoyment (PE) (c) hedonic shopping value (HSV).

Product Involvement

Product involvement is typically defined as a consumer's enduring perceptions of a product based on their inherent needs, values, and interests (Zaichkowsky, 1985; Mittal, 1995). Product involvement has been used as one of several explanatory variables in consumer behavioral studies (Dholakia, 1998). In the consumer decision-making process, product involvement has been found to be an essential factor leading to both planned and impulsive purchases (Charters & Pettigrew, 2006; Rahman & Reynolds, 2015; Cox, 2009; Parboteeah et al., 2016). The level of

product involvement can be cognitive or affective during the consumer choice process (e.g. Chakravarti & Janiszewski, 2003; Kokkinaki, 1999; Kleiser & Wagner, 1999). Thus, in line with the work by Parboteeah et al. (2016), it is expected that consumers' level of involvement with a product will affect the perceived usefulness, enjoyment and level of hedonic values. That is, consumers who are highly involved with a product might find the product to be more useful, enjoyable, and show higher hedonic values. Thus, the following hypothesis is proposed:

H4: Product involvement (PI) will positively affect (a) perceived usefulness (PU), (b) perceived enjoyment (PE), and (c) hedonic shopping value (HSV).

Perceived Enjoyment and Perceived Usefulness

Extensive studies have concentrated on the interplay between cognition and affect (Holbrook & Batra, 1987; Shiv & Fedorikhin, 1999). Holbrook and Batra (1987) stated that cognition influences affection, and then ultimately determines behavior. Parboteeah et al. (2009) concluded that there should be an interaction between perceived usefulness and perceived enjoyment to certain stimuli. They propose this relationship should be positive, which will increase the enjoyment factor of online impulse buying. Based on this assertion, it is expected that consumers who perceived a product to be useful will be feel gratified, affecting their perceived enjoyment. Thus, the following hypothesis is proposed:

H5: Perceived usefulness (PU) will positively affect perceived enjoyment (PE).

Hedonic Shopping Value and Urge to Buy Impulsively

Hedonic shopping value (HSV) is an experiential, emotional, and irrational value. Consumers who seek hedonic shopping value see shopping as a positive emotional experience (Babin et al., 1994). Kim and Eastin (2011) stated HSV is more effective than utilitarian shopping value because the former is linked to pleasure and entertainment. Shukla and Babin (2013) discussed consumers who are more likely to purchase in a new system often shop for fun. It is the same in online shopping environments, where there are no time and location limitations, resulting in consumers being more likely to make unplanned purchases, such as impulsive buying (LaRose, 2011). Thus, it is proposed HSV will significantly affect perceived enjoyment.

H6: Hedonic shopping values (HSV) will have a significant effect on perceived enjoyment (PE).

According to S-O-R framework, an individual's emotional response to the environment will determine their behavior (Mehrabian & Russell, 1974). In other words, a consumer will change his or her decision when they receive affective reactions. The extant literature on impulse buying indicates hedonic shopping value has a direct effect on consumer impulse buying behaviors (Kukar-Kinney et al., 2015). Affective reactions have been stated to positively affect the urge to buy impulsively; this relationship was replicated in traditional shopping contexts (Beatty & Ferrell, 1998), as well as in online impulse buying (Adelaar et al., 2003; Parboteeah et al., 2009; Parboteeah et al. 2016). Thus, based on previous premises, the following hypothesis are proposed:

H7: Hedonic Shopping Values (HSV) will positively affect the urge to buy impulsively.

H8: Perceived enjoyment (PE) will positively affect the urge to buy impulsively.

Figure 1. Conceptual Model
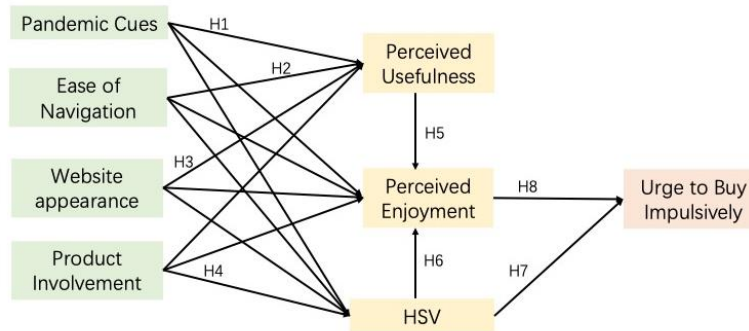
Product Categories

There literature indicates consumers evaluate a product based on its category (i.e., Bearden & Etzel, 1982; Fetscherin, et al., 2014; Chapa, et al., 2006). There are numerous consumer reports addressing the most popular products purchased during the pandemic, yet a lack of empirical research exists in relation to the products consumed impulsively during a pandemic. Therefore, the following research questions are presented:

RQ1: What kind of products are more likely to be purchased online because of COVID-19 during the post-pandemic era in China?

RQ2: What kind of variations across product categories can be observed though online impulsive shopping due to the COVID-19 during the post pandemic are in China?

RESEARCH DESIGN AND METHODOLOGY

This was a multi-stage, multimethod study. First, a focus group was conducted to identify the item selection for the "pandemic cues" measure and for the product categories selection. At this stage, group of 10 college students participated in the item identification. Then, an online survey was designed test the conceptual model using a convenience sample in China. This survey was was available for one week from September 15th to 21st of 2020. As of September 22, positive cases of COVID-19 stably increased under 30 cases each day last 30 days. This means that roughly at the time of data collection, the COVID-19 pandemic was typically under control in China.

A total sample of 322 was collected. After cleaning the data, a total of 232 comprises the available sample of this study. Of there, 79.3 percent of sample were from middle area of China, 20.3 were from south and east area of China. The sample was 53.9 percent female; and 50.53 percent were between 25 and 40 years, 38.8 percent between 41 and 60 years, and 9.5 percent younger than 25 years.

Measurements

Except for the measure of the pandemic cue, which was created for this study, seven already developed and validated scales were adapted to measure the variables in the model. Taylor et al.'s (2010) task-relevant cues scale was used to measure the perceived ease of navigation and appearance of the website. The hedonic shopping value (HSV) was measured using a 7-item scale adapted from Babin et al., (1994) and Griffin et al., (2000). Product involvement was measured using the Zaichkowsky's (1994) scale. Perceived usefulness was measured by adapting the 4-item scale from Davis, et al., (1989). Perceived enjoyment was measured by using a 3-item scale adapted by Chang & Cheung (2001). A 3-item scale measuring purchase impulsivity was adapted from Rook & Fisher (1995). A scale to measure the presence of the pandemic cue on consumers' purchases was created for this study; a 3-item construct using a 7-point Likert scale (1 for strong agree, 7 for strong disagree) was developed and tested. Finally, the demographics questions were included as well. Items are listed in Table 1.

Table 1. Standardized loadings and reliability coefficients for each construct.

Item	Item Loading	Cronbach's α
Factor 1: Pandemic cues (self-developed)		
I bought the product(s) listed above because of the COVID-19 pandemic.	0.87	0.87
I bought the product(s) listed above primarily because of the COVID-19 pandemic.	0.94	
I would not have bought the product(s) listed above if it was not for the COVID-19 pandemic.	0.87	
Factor 2: Ease of navigation (adapted Taylor et al., 2010)		
Navigating these web pages where I purchased the item mentioned above was easy for me.	0.82	0.93
I found that my interaction with the website where I purchased the item was clear and understandable.	0.88	
It is easy for me to become skillful at navigating the pages of this website where I purchased the item.	0.86	
Overall, I find the pages where I purchased the item easy to navigate.	0.89	
It was pleasant to follow the overall flow of the website where I purchased the item.	0.86	
It is pleasant to follow and use the menu structure of the site where I purchased the item.	0.85	
Factor 3: Website appearance (adapted Taylor et al., 2010)		
The shopping site where I purchased the item was visually pleasing.	0.82	0.95
The shopping site where I purchased the item displayed visually pleasing design.	0.87	
The shopping site where I purchased the item was visually appealing.	0.92	
The images and typographies used in the shopping sites where I purchased the item were stylish.	0.92	
The overall atmosphere and screen displays of the shopping sites where I purchased the item were well coordinated.	0.91	
It was pleasant to see the provided information on each screen of the shopping site where I purchased the item.	0.86	
Factor 4: Hedonic shopping value (adapted Babin et al., 1994; Griffin et al., 2000)		
This online shopping experience was truly a joy during this hard time.	0.72	0.88

Compared to other things I could have done, the time spent online shopping was truly enjoyable.	0.84	
I enjoyed the online shopping for its own sake, not just for the items I may have purchased.	0.87	
During my online shopping, I felt the excitement of the hunt.	0.88	
While I was online shopping, I felt a sense of adventure.	0.75	
Factor 5: Product involvement (adapted Zaichkowsky, 1994)		
To me, the product(s) I purchased online important.	0.76	0.9
To me, the product(s) I purchased online is interesting.	0.79	
To me, the product(s) I purchased online is exciting.	0.79	
To me, the product(s) I purchased online means a lot to me.	0.80	
To me, the product(s) I purchased online is appealing.	0.85	
To me, the product(s) I purchased online is fascinating.	0.87	
Factor 6: Perceived usefulness (adapted Davis et al., 1989)		
Using the these product(s) I purchased online, I can improve my performance in life during the COVID-19 pandemic.	0.87	0.86
Using the these product(s) I purchased online, I can increase my productivity during the COVID-19 pandemic.	0.84	
Using the these product(s) I purchased online, I can enhance my effectiveness in daily life during the COVID-19 pandemic.	0.91	
I would find product(s) I purchased online useful in my life during the COVID-19 pandemic.	0.76	
Factor 6: Perceived enjoyment (adapted Chang & Cheung, 2001)		
My interaction with the product(s) purchased online during the COVID-19 pandemic is enjoyable.	0.93	0.92
My interaction with product(s) purchased online during the COVID-19 pandemic is exciting.	0.92	
My interaction with product(s) purchased online during the COVID-19 pandemic is pleasant.	0.93	
Factor 7: Urge to buy impulsively (adapted Rook & Fisher, 1995)		
During the COVID-19 pandemic, I had the urge to purchase items other than or in addition to my specific shopping goal.	0.91	0.90
During the COVID-19 pandemic, I had a desire to buy items that did not pertain to my specific shopping goal.	0.93	
During the COVID-19 pandemic, I had the inclination to purchase items outside my specific shopping goal.	0.91	

Note. N = 232.

Validation of the measures

To validate the measure for the pandemic cue scale, an exploratory factor analysis (EFA) was conducted across measures. The purpose was to identify the items as unidimensional measures, testing for convergence and discriminant validity. The convergent validity of the data was tested using the Fornell and Larcker (1981) criteria. The loadings of individual items in each scale are above 0.7 after removed these item as following: four items from the scale of product involvement, one item from the scale of website appearance, two items from HSV scale.

Next, Cronbach's alphas were estimated across constructs for reliability testing. The results revealed reliability levels were above the recommended 0.7, as recommended in the literature (Nunnally & Bernstein, 1994). The results in Table 1 show all items meet this criterion. Finally, the average variance extracted (AVE) by each variable was confirmed. All variables satisfied the

criteria of 0.50. That is, the measures demonstrated that each construct share more variance with its indicators than with error variances (Fornell and Larker, 1981). See Table 2.

Table 2. Construct correlations and AVEs.

	AVE	PE	PC	EV	WA	HSV	PI	PU	IB
PE	0.797	**0.893**							
PC	0.709	0.148	**0.842**						
EV	0.691	0.625	0.148	**0.831**					
WA	0.751	0.711	0.268	0.837	**0.867**				
HSV	0.611	0.716	0.310	0.434	0.543	**0.782**			
PI	0.594	0.573	0.220	0.391	0.415	0.584	**0.771**		
PU	0.631	0.710	0.435	0.638	0.679	0.611	0.445	**0.794**	
IB	0.758	0.506	0.292	0.155	0.365	0.712	0.419	0.367	**0.870**

Hypotheses Testing

In order to test the conceptual model and hypotheses, structural equation modeling (SEM) was ran using AMOS. Following the suggestions from Hu and Bentler (1999) and Steenkamp and Baumgartner (1998): $\chi2/df \leq 3.0$, comparative fit indices (CFI), goodness of fit index (GFI) and Tucker-Lewis index (TLI) ≥ 0.90, and root mean square error of approximation (RMSEA) $\leq$ 0.80. These values indicate a good fit. However, the theoretical model fit indexes did not reach recommended levels: $\chi2/df = 28.249$, CFI = 0.661, GFI = 0.768, TLI = 0.209, RMR = 0.330 and RMSEA = 0.343. Therefore, an alternative model was explored and tested using the modification index. All of the values meet the recommendation criteria: $\chi2/df = 1.851$, CFI = 0.992, GFI = 0.983, TLI = 0.975, RMR = 0.043 and RMSEA = 0.061.

The alternative model proposes several new relationships between pandemic cues to website appearance and product involvement, website appearance to ease to navigation and product involvement, HSV to perceived usefulness, product involvement to urge to buy impulsively, and the negative relations between ease to navigation to urge to buy impulsively. The results indicate ten hypotheses are accepted (H1a, H1b, H1c, H2a, H3c, H3b, H3c, H4b, H4c, H5, H6, H7). The model rejects four relationships: ease of navigation to perceived enjoyment (H2b) and HSV (H2c), product involvement to perceived usefulness (H4a) and perceived enjoyment to urge to buy impulsively (H8) in which coefficient paths were not significant. The results are shown in Figure 2.

Figure 2. Proposed Model
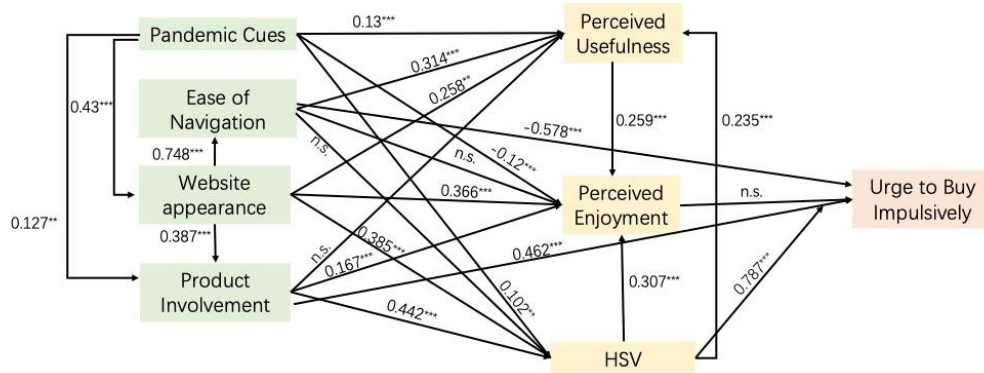
*** p-value is less than 0.001; **p-value is less than 0.01.

During the qualitative stage of this investigation thirteen product categories were identified as being purchased during the pandemic: books, electronic, cosmetics and personal care, videogames and consoles, home tools and hard ware, pet related items, CDs and DVDs, phones and tablets accessories, home appliances, kitchen tools, home gardens, clothing, and sports equipment. In order to answer the questions about relationship between product category and the pandemic cue, a correlation was run between the product categories and the pandemic cues. Clothing was significantly correlated with the pandemic cue with $r = 0.17$, $p < 0.001$.

Then, in order to explore whether the pandemic cues affected consumers' consumption across categories, the overall product consumption of the participants was estimated; a cluster analysis was created to identify product categories by the type of consumption. Three categories were created: products consumed individually (book, clothing, personal care and sports equipment); products consumed in group/family (home tools and hard ware, pet related items, home gardens, kitchen tools, and home appliances); and electronic products, which can be either consumed individually or by a family/group (such as electronic, videogames and consoles, CDs and DVDs, cellphones and tablets). Then, five product categories variations were observed in relation to the products bought online by the participants. Consumers indicated they (1) purchased products for *personal* used only, (2) purchased *electronic* products for personal use only, (3) purchased products *for family and groups* used only, (4) purchase products for *personal and family/group* use both, and (5) consumers who purchase all three kind (*personal, family/groups, and electronics*) of products categories.

An ANCOVA was tested to explore effect of impulsive shopping behavior by age - across product categories. Results shows significant difference ($p < 0.001$) among four groups indicating that the impulsive purchased products in different age group were highest across those who reported to have purchased are family items only. Followed by those who purchased items for individual use only; those who purchased items for individual and family/group both use and electronics, the last is those who purchase electronics products only. See Table 3 & 4.

Table 3. ANOVA Results – Age

	Sum of squares	df	Mean Square	F	Sig.
Between group	60.03	5	12.01	7.66	0.000
Within group	354.25	226	1.567		
Total	414.27	231			

Table 4. Product categories

	Personal use only(1)	Electronic product (2)	Family use products (3)	Personal and Family both use products (4)	All three categories products (5)
M	2.93$_b$	2.63$_b$	4$_a$	2.85$_b$	2.84$_b$
SD	1.26	1.31	1.15	1.09	1.21

$F(5, 226) = 7.66$, $p < 0.001$.
Note: Means with no subscript in common differ at $p < .05$ using Bonferroni post hoc comparisons.

Additionally, a one way ANOVA was tested using a single factor for the participants' geographic location across the four consumption categories. Results shows significant difference ($p < 0.05$) among the four groups indicating that products purchased impulsively due to the COVID-19 differ across geographic areas. That is, when participants were controlled by geographic locations (East area of China, West area of China, Middle area of China, and Northeast of China) they reported to have purchased all three kinds of categories, followed by those who purchased items for individual and family/group both use, and then is the who purchased items for family/group use only, the last two are those who purchase personal products only and electronics products. See Table 5 & 6.

Table 5. ANOVA Results – Area

	Sum of squares	df	Mean Square	F	Sig.
Between group	2.84	5	0.57	2.72	0.021
Within group	47.43	226	0.21		
Total	50.27	231			

Table 6. Product categories

	Personal use only(1)	Electronic product (2)	Family use products (3)	Personal and Family both use products (4)	All three categories products (5)
M	2.01$_b$	2.00$_b$	2.08$_a$	2.15$_b$	2.29$_b$
SD	0.40	0.51	0.36	0.37	0.69

$F(5, 226) = 2.72$, $p < 0.05$.
Note: Means with no subscript in common differ at $p < .05$ using Bonferroni post hoc comparisons.

DISCUSSION, LIMITATIONS AND DIRECTION FOR FUTURE RESEARCH

This study has theoretical and practical implications. Theoretically, the study provides an alternative model that explains the role of website appearance and ease of use on impulsive

buying behavior. This study proposes the latter variables relate to consumers' product involvement, which affect the hedonic value and, in turn, predicts impulsive behavior. Overall, Chinese participants indicated the most purchased products during post COVID-19 era in 2020 were clothing.

Practically, this study can serve to guide marketing practitioners about the importance of website design. In addition, the findings can serve to help understand how the participants cope post-pandemic era. That is, those who believe they made online purchases because of pandemic cues were more likely to purchase family products. These results can be used as consumer insights for creative briefs and the execution of messages.

Despite the strengths of this study, several limitations are identified preventing the generalization of the results. The sample was limited to convenience sample. The sample was majority collected in middle area in China. The product selection was limited to 13 categories. Future research should expand the sample frame, data collection technique, and product categories. Future research must investigate the role of utilitarian value, not included in this study in the proposed model.

REFERENCES

Adams, D. A., Nelson, R. R., & Todd, P. A. (1992). Perceived usefulness, ease of use, and usage of information technology: A replication. *MIS Quarterly*, *16*(2), 227–247. https://doi.org/10.2307/249577

Adelaar, T., Chang, S., Lancendorfer, K. M., Lee, B., & Morimoto, M. (2003). Effects of media formats on emotions and impulse buying intent. *Journal of Information Technology*, *18*(4), 247–266.

Amoako-Gyampah, K., & Salam, A. F. (2004). An extension of the technology acceptance model in an ERP implementation environment. *Information & management*, *41*(6), 731–745.

Babin, B.J., Darden, W.R. and Griffin, M. (1994), Work and/or fun: measuring hedonic and utilitarian shopping value, *Journal of Consumer Research*, *20*(4) , 644–656.

Bauer, H. H., Grether, M., & Leach, M. (2002). Building customer relations over the internet. *Industrial Marketing Management*, *31*(2), 155–163.

Beatty, S. E., & Ferrell, M. E. (1998). Impulse buying: modeling its precursors. *Journal of Retailing*, *74*(2), 169–191.

Bearden, W. O., & Etzel, M. J. (1982). Reference group influence on product and brand purchase decisions. *Journal of consumer research*, *9*(2), 183-194.

Beijing Business Daily, (2020). Beijing Business Report on the Fight Against the Pandemic. Available online at: http://www.bbtnews.com.cn/2020/0318/345149.shtml (accessed March 18, 2020).

Bonneux, L., & Van Damme, W. (2006). An iatrogenic pandemic of panic. *Bmj*, *332*(7544), 786–788.

Chakravarti, A., & Janiszewski, C. (2003). The influence of macro-level motives on consideration set composition in novel purchase situations. *Journal of Consumer Research*, *30*(2), 244–258.

Chapa, S., Minor, M. S., & Maldonado, C. (2006). Product category and origin effects on consumer responses to counterfeits: comparing Mexico and the US. *Journal of International Consumer Marketing*, *18*(4), 79–99.

Chang, M. K., & Cheung, W. (2001). Determinants of the intention to use internet/WWW at work: A confirmatory study. *Information & Management*, *39* (1), 1–14.

Charters, S., & Pettigrew, S. (2006). Product involvement and the evaluation of wine quality. *Qualitative Market Research: An International Journal*, *9*(2), 181–193.

Chung, N., Song, H. G., & Lee, H. (2017). Consumers' impulsive buying behavior of restaurant products in social commerce. *International Journal of Contemporary Hospitality Management*, *29*(2), 709–731.

Cox, D. (2009). Predicting consumption, wine involvement and perceived quality of Australian red wine. *Journal of Wine Research*, *20*(3), 209–229.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, *35*(8), 982–1003.

Dholakia, U. M. (1998). Involvement-response models of joint effects: an empirical test and extension. *ACR North American Advances.*

Fetscherin, M., Boulanger, M., Gonçalves Filho, C., & Souki, G. Q. (2014). The effect of product category on consumer brand relationships. *Journal of Product & Brand Management*, *23*(2) 78–89.

Floh, A., & Madlberger, M. (2013). The role of atmospheric cues in online impulse-buying behavior. *Electronic Commerce Research and Applications*, *12*(6), 425–439.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39–50.

Gamma, A.E., Slekiene, J., Mosler, H.J. (2020). The impact of various promotional activities on Ebola prevention behaviors and psychosocial factors predicting Ebola prevention behaviors in the Gambia evaluation of Ebola prevention promotions. International Journal of Environmental Research and Public Health *16*(11).

Griffin, M., Babin, B. J., & Modianos, D. (2000). Shopping values of Russian consumers: the impact of habituation in a developing economy. *Journal of Retailing*, *76*(1), 33–52.

Holbrook, M. B., & Batra, R. (1987). Assessing the role of emotions as mediators of consumer responses to advertising. *Journal of Consumer Research*, *14*(3), 404–420.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: a Multidisciplinary Journal*, *6*(1), 1–55.

iResearch Consulting Group (2020). A Rebound in Consumption after the Pandemic, Short-term "Retaliation" or Long-term Change? Available online at: http://report.iresearch.cn/content/2020/03/317080.shtml (accessed March 3,2020).

Islam, T., Pitafi, H., Wang, Y., Aryaa, V., Mubarik, S., Akhater, N., & Xiaobei, L. (2020). Panic Buying in the COVID-19 pandemic: A multi-country examination. *Journal of Retailing and Consumer Services*, Article 102357.

Khalifa, M., & Shen, K. (2007). System design effects on online impulse buying. Internet Research, *22*(4), 110.

Kim, S., & Eastin, M. S. (2011). Hedonic tendencies and the online consumer: An investigation of the online shopping process. *Journal of Internet Commerce*, *10*(1), 68–90.

Kleiser, S. B., & Wagner, J. A. (1999). Understanding the pioneering advantage from the decision maker's perspective: the case of product involvement and the status quo bias. *ACR North American Advances*.

Kokkinaki, F. (1999). Predicting product purchase and usage: the role of perceived control, past behavior and product involvement. *ACR North American Advances*.

KuKar-Kinney, Monika, Scheinbaum, A. C., and Schaefers, T. (2015). Compulsive buying in online daily deal settings: An investigation of motivations and contextual elements. *Journal of Business Research*, 69(2), 691-699.

Laato, S., Islam, A. N., Farooq, A., & Dhir, A. (2020). Unusual purchasing behavior during the early stages of the COVID-19 pandemic: The stimulus-organism-response approach. *Journal of Retailing and Consumer Services*, *57*, 102224.

LaRose, R. (2001). On the Negative Effects of E-Commerce: A Socio-Cognitive Exploration of Unregulated On-Line Buying. *Journal of Computer-Mediated Communication*, 6(3).

Li, M., Zhao, T., Huang, E., & Li, J. (2020). How does a public health emergency motivate People's impulsive consumption? an empirical study during the COVID-19 outbreak in China. *International Journal of Environmental Research and Public Health*, *17*(14), 5019.

Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. MIT.

Mittal, B. (1995). A comparative analysis of four scales of consumer involvement. *Psychology & Marketing*, *12*(7), 663–682.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.

Palmer, J. W. (2002). Web usability, design, and performance metrics. *Information Systems Research*, *13*(2), 151–167.

Parboteeah, D. V., Taylor, D. C., & Barber, N. A. (2016). Exploring impulse purchasing of wine in the online environment. *Journal of wine research*, *27*(4), 322–339.

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.

Ramanathan, S., & Menon, G. (2006). Time-varying effects of chronic hedonic goals on impulsive behavior. *Journal of Marketing Research*, *43*(4), 628–641.

Ramayah, T., & Ignatius, J. (2005). Impact of perceived usefulness, perceived ease of use and perceived enjoyment on intention to shop online. *ICFAI Journal of Systems Management (IJSM)*, *3*(3), 36–51.

Rahman, I., & Reynolds, D. (2015). Wine: Intrinsic attributes and consumers' drinking frequency, experience, and involvement. *International Journal of Hospitality Management*, *44*(1), 1–11.

Rook, D. W., & Fisher, R. J. (1995). Normative influences on impulsive buying. *Journal of Consumer Research*, *22*(3), 305–313.

Schmitt, B. (2012). The consumer psychology of brands. *Journal of consumer Psychology*, *22*(1), 7-17.

Shiv, B., & Fedorikhin, A. (1999). Heart and mind in conflict: The interplay of affect and cognition in consumer decision making. *Journal of consumer Research*, *26*(3), 278–292.

Shukla, P. and Babin, B.J. (2013), Effects of consumer psychographics and store characteristics in influencing shopping value and store switching, *Journal of Consumer Behaviour*, *12*(3), pp. 194–203.

Taylor, D. C., Parboteeah, D. V., & Snipes, M. (2010). Winery websites: Effectiveness explored. *Journal of Business Administration Online*, *9*(2), 1–11.

Van der Heijden, H., T. Verhagen, M. Creemers. (2003). Understanding online purchase intentions: Contributions from technology and trust perspectives. European Journal of Information Systems, *12*(1) 41–48.

Zaichkowsky, J. L. (1985). Measuring the involvement construct. *Journal of Consumer Research*, *12*(3), 341–352.

Zaichkowsky, J. L. (1994). The personal involvement inventory: Reduction, revision, and application to advertising. *Journal of Advertising*, *23*(4), 59–70.

Zhang, P., & Von Dran, G. M. (2001–2002). User expectations and rankings of quality factors in different web site domains. *International Journal of Electronic Commerce*, *6*(2), 9–33.

ABOUT THE AUTHORS

Pei Wang   A currently Ph.D. student, who is from College of Communication & Information of Florida State University (FSU). She is interested in multi-cultural marketing communication, and focusing more on cross-cultural consumer behavior. She is working with her adviser, Dr. Sindy Chapa, in the center of Hispanic Marketing Communication.

Sindy Chapa   The Director of the Center for Hispanic Marketing Communication and an Associate Professor at Florida State University (FSU). She is one of the country's leading researchers on cross-cultural consumer behavior and how it relates to marketing, advertising and all other aspects of business. Dr. Chapa co-authored Hispanic Marketing: The Power of the New Latino Consumer and has been published in other books and top academic journals. Her work can be found in Journal of Advertising Research, and other journals.

revised version in a journal, post it to an institutional repository or publish it in a book), with an acknowledgement of its initial presentation at this conference.

c) In addition, authors are encouraged to post and share their work online (e.g., in institutional repositories or on their website) at any point before and after the conference.

Privacy Statement

The names and email addresses and other information entered in this conference site will be used exclusively for the stated purposes of this conference and will not be made available for any other purpose or to any other party.

We do not collect any credit card or other payment information for persons who register for our conferences. All of our transactions are processed through PayPal and we are only notified of payment completion and amounts.