

Influence of E-commerce Environment Characteristics on Consumers' Online Impulse Purchase

Zhuopeng Li¹ and Wasin Phromthiphakkul²

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Abstract

This research article aims to analysis influence of e-commerce environment characteristics on consumer's online impulse purchase. Impulsive buying is a very common form of consumption in our daily lives. Since the 1950s, method of this study and the needs of testing, the statistical analysis software SPSS 15.0 and AMOS 7.0 This study used multiple regression analysis to process the data. The online impulse purchase behavior integration model established in this study helps to better understand online consumer behavior and has certain guiding significance for network marketers. Result found Consumers motivate consumers to generate buying motives and then impulse purchases. In addition, existing online shopping research shows that trust is the reason many consumers give up online purchases. Therefore, this study adds trust variables to explain consumers, especially those with less online shopping experience. In the high-risk environment of the Internet, the phenomenon of impulse purchase is not implemented after the purchase impulse. The significant findings1) environmental characteristics of the e-commerce platform as a stimulus to trigger the emotional response of online consumers 2) Consumers motivate consumers to generate buying motives and then impulse purchases. 3) Existing online shopping research shows that trust is the reason many consumers give up online purchases the high-risk environment could be barriers of impulsive shopping.

Keywords : 1. E-commerce, 2. Online Impulse Purchase, 3. Trust, 4. Mood

1. Introduction

Impulsive buying is a universal and special way of consumption for humans (Parboteeah et al., 2008). In the traditional business context, impulse purchases account for a large proportion of sales in different retail formats (Kollat & Willet, 1967; Bellenger, Robertson & Hirschman, 1978; Weinberg & Gottwald, 1982; Rook & Fisher, 1995). For example, DuPont and others According to a survey conducted by commercial organizations, between 1945 and 1959, the proportion of impulse purchases by consumers in

^{1,2}Ph.D. Candidate, School of Management, Shinawatra University, Thailand

Email : 402036046@qq.com

supermarkets rose from 38% to 51%. Food, medicine, health and beauty care products were unplanned purchases, and even 80% of certain commodities. Sales are dependent on impulse purchases (DuPont Studies, 1978); in addition, more than 39% of department store shoppers and more than 62% of discount shop shoppers say they will experience at least one impulse purchase (Prasad, 1975). In the purchase of shopping centers, up to 50% of purchases are impulse purchases (Dittmar, Beattie & Friese, 1995), and this percentage is increasing (Dittmar, Beattie & Friese, 1996). A study by Iyer (1989) shows that almost all consumers have experienced at least one unplanned purchase, while new product purchases are mostly made by impulse purchases (Sfiligoj, 1996). In China, 53% of consumers buy clothing without seldom planning, usually like to buy, is an impulse shopping consumer group. A study of Chinese college students' consumption and lifestyle patterns in 2015 pointed out that 37% of college students admit that they often impulse to buy something they don't need. Obviously, impulse buying behavior is common in everyday life. Traditional retailers have recognized its importance through store appearance, in-store layout and display, Product packaging and in-store promotions create a shopping environment that attempts to motivate consumers to purchase impulses (Dholakia, 2000).

With the development of the Internet, Internet access has become an indispensable part of many people's lives. According to the "Statistical Report on the Status of China's Internet Development" issued by China Internet Network Information Center (CNNIC): as of December 2018 The number of netizens in China reached 829 million, with a penetration rate of 59.6%, an increase of 3.8 percentage points from the end of 2017, and a total of 56.53 million new netizens. The number of mobile Internet users in China reached 871 million, and the proportion of Internet users accessing the Internet through mobile phones was as high as 98.6%. The scale of Chinese netizens still maintains a rapid growth trend, while online shopping has grown rapidly.

In addition, the "43th Statistical Report on Internet Development in China" shows that as of December 2018, the number of online shopping users in China reached 610 million, with an annual growth rate of 14.4% and a netizen usage rate of 73.6%. The number of mobile phone network payment users in China reached 583 million, with an annual growth rate of 10.7%, and the mobile Internet user usage rate reached 71.4%. The first law of the e-commerce field, the "Electronic Commerce Law", was officially introduced, which is of great significance to promoting the sustainable and healthy development of the industry. And the report shows that the average online shopping frequency of Chinese IT netizens has remained at 4.8 times/month, which is basically once a week. It can be seen that online shopping has become an increasingly important sales channel.

The increase in consumer online shopping inevitably leads to more impulse purchases in the online context. Adelaar (2003) pointed out that the online environment does have impulse purchases, 34% of online shopping is achieved through impulse purchases (Spool, วารสารปรัชญาปริทรรศน์



2002), and online shoppers are more aggressive than non-network shoppers (Donthu & Garcia, 1999), some Scholars began to recommend a re-examination of impulse buying in the network environment. In the industry, online marketers have also begun to notice that impulsive consumers account for 25%-80% of total e-commerce consumers (Angus Reid Group, 2000), while college students called the Internet era spend an average of 12%. Is the Lord Focus on online impulse purchases of clothing, music, and books (Pastore, 2000). Impulsive purchases that may exist in the network have been valued by more scholars and online marketers.

In traditional marketing channels, impulsive buying accounts for almost half of the buying behavior. It is mainly affected by the shopping environment, leading to unpredictable purchasing behavior of consumers (Engel et al.; 1986). Today, with the rapid development of e-commerce, more and more enterprises are considering adopting the Internet as a marketing channel for their products or services, and hope to seek various means and measures to stimulate the impulse of shoppers who browse the website to generate purchases. But for these online retailers, various marketing methods are implemented through the web interface. They don't know how to use the website to create an online shopping environment (Wu et al., 2008), usually learning and imitating some other websites. Successful experience, however, practices vary from practice to practice and often occur Contradictory (Rosen et al., 2004). In this case, how to create an online shopping environment through website design to stimulate consumers' impulse shopping has become a matter of great concern to online retailers.

In addition, with the improvement of social living standards, people's consumption concepts and consumer tastes have undergone great changes, seeking excitement, chasing fashion has become the trend of contemporary consumers, and consumption has become a pursuit of happiness. In a novel and curious way, more and more consumers are paying more attention to self-enjoyment and emotional release. This change in concept has caused an increase in impulse buying behavior. The industry has also noticed this change in consumers, and more and more attention to the mood and mood of consumers when shopping. Then, the Internet-based shopping environment has an impact on consumers' inner feelings.

Finally, it is worth noting that despite the rapid development of the online shopping market, many consumers are still on the sidelines, they are through the Internet to master fashion information, compare product prices, browse various advertisements, read product descriptions and buyer reviews. Or have already had good communication with the seller, but when it comes to the final purchase stage, he is hesitant, and may eventually give up the online purchase and transfer to the physical store transaction. This can happen even when the shopper is already in a state of extreme excitement or has an impulse to buy. In the past impulse research of traditional business background, it is considered that self-

control (Baumeister, 2002) and ability to pay (Beatty and Ferrell, 1998) are impulsive to limit the impulse to purchase. Factors of purchase behavior. Then, in the network environment, whether there are other reasons hinder the impulse purchase behavior of the network consumers.

2. Literature Review

2.1 Impulse Purchase Definition

The study of impulsive purchases began in the 1950s and lasted for more than half a century. Based on different research backgrounds and research purposes, scholars have different definitions of impulsive purchases and have not reached consensus (Jeon, 1990). Despite the differences in definitions, it is useful to understand the advancement of impulse buying research, so it is necessary to briefly review the definitions of impulse purchases given by different scholars.

Early research suggests that impulsive purchases are unplanned purchases. The DuPont study first proposed the definition of impulse purchases, treating impulse purchases as unplanned purchases, that is the difference between the goods that consumers plan to buy before entering the store and the goods actually purchased (Dittmar et al., 1995). For some time thereafter, researchers basically equated impulse purchases with unplanned purchases, such as Clove (1950), West (1951), and Cox (1964).

Kallat and Willett (1967) divide the relationship between impulsive and unplanned purchases by comparing the combination of pre-purchase intentions with actual purchase behavior. The willingness to purchase is divided into five categories according to the degree of planning of product attributes, product categories and brands. The actual purchase results are divided into three types, as shown in Table 1. The 9 in the table is the impulse purchase. The author believes that impulse purchase is an unplanned, impulsive purchase, but it is also an effective way to make purchase decisions.

Table 1 Purchase Intention / Actual Purchase Result Matrix

Purchase Intention	Purchase of Goods and Brands	Didn't Buy	Goods Purchased Brand not Bought
Commodities and Brands	1	2	3
Only Goods	4	5	
Only type of Goods	6	7	
Know Your Needs	8		
Your Needs Are Unknown	9		

Source: Kollat, D. T., & Willett, R. P. (1967). Customer impulse purchasing behavior. *Journal of marketing research*, 4(1), 21-31.

Wood (1998) regards impulse buying as lack of willpower (akrasia) or (weakness Of will). Impulse buying, he argues, is unplanned, ill-thought-out and accompanied by intense emotion Status-quo, non-coercive, and the consumer's best judgment. Omar and Kent (2001) believed that impulse buying would present consumers in various specific ways. The thinking and consumption tendency of consumer is the consumption tendency of consumers' spontaneity, reactivity, immediacy and anytime and anywhere. Madhavaram(2004) proposed on the basis of previous studies that impulse buying is the immediate reaction behavior of consumers who are stimulated by the external environment and have hedonic dominant emotional tendency. Impulse buying occurs based on the change of shopping preference before and after stimulation, which comes from product elements or non-product elements.

Based on the review of the above definition, it can be seen that the early definition of impulse buying was based on simple behaviors. The characteristic carries on the definition, is one kind of non-plan, the decision time is short behavior. Then psychological elements were added, it is believed that consumers experience a strong emotional reaction and purchase desire, and there is a failure of self-control. Late to learn others think impulse buying may be a psychological need. This study suggests that impulse buying involves the following Elements: unplanned purchase, drive by stimulus, quick decision making, lack of awareness and emotional body Check.

2.2 Emotional Theory

In traditional economics and marketing, consumers are often seen as "rational," in which people choose products that give them the most impact after careful consideration of all choices (Schiffman & Kanuk, 2000). However, in real life, many shopping consumers make purchasing decisions in the mall. The time may be as fast as seconds, and they often have little patience to collect large amounts of information for processing (Engel, Blackwell & Miniard, 2001, p81), impulsive buying behavior. Cognitive models do not adequately explain such purchasing decisions and phenomena (Eewvelles, 1998), and therefore, in impulse buying behavior studies. This variable is introduced in the mood.

2.3 Related Research on e-Commerce Website Environment

In the network context, the product display is supported by information technology, through the human-machine interface as a medium. Therefore, online impulse purchases are not only affected by product characteristics, but also by the characteristics of the shopping environment (Madhavaram & Laverie, 2004).

According to the theory of environmental psychology, consumers' perceptions of their environment affect their browsing and shopping behavior in retail stores, so traditional วารสารปรัชญาปริทรรศน์



retailers attach great importance to the design of the store environment. Similarly, online consumers are shopping through browsing websites. When choosing, it is also in a shopping environment provided by the network. The appearance of the website interface, the design of the network environment, the layout of the layout and the overall presentation will make consumers feel different impressions. Jennings (2000) pointed out that the feeling of pleasure is very important, because they can create a good first impression, let users explore further, and use in e-commerce can stimulate users to achieve the ultimate consumption goals. The website environment in this study refers to the shopping website environment.

2.4 Trust Theory

The development of e-commerce in the world has been very rapid, but the goal of e-commerce popularization still exists for a distance. The main reason is that the average person has insufficient trust in the network environment (Kini & Choobineh, 1998). This section will introduce the definition of trust, the elements, and the current state of research in online shopping.

3. Research Methodology

Data Analysis Method

According to the purpose of this study and the needs of testing, the statistical analysis software SPSS 15.0 and AMOS 7.0 will be used to analyze and process the collected questionnaire data. In the process of data analysis and processing, the following statistical methods will be mainly used: descriptive statistical analysis, reliability analysis, validity analysis and regression analysis. According to the China Internet Network Information Center, China's online shopping users are mainly between 18 and 30 years old, with a monthly income of 1,000 to 3,000 yuan, and are mainly white-collar workers and students. They are a group of people of higher social level, and most of them are highly educated. Those with a master's degree and online shopping account for more than half of all online users. Therefore, this study selected college students as the main object of the survey, and in order to make the sample more representative, part of the sample was distributed among white-collar workers with working experience.

4. Results and Discussion

4.1 Relationship between Environmental Characteristics and Pleasure

This paper studies the environmental characteristics of the website, that is, website knowledge, website economy, website interaction and website vision. It can cause the pleasure of online consumers, stimulate the impulse buying desire of consumers, and then impulse buying behavior occurs. Therefore, first of all, regression analysis of the antecedent variables website environment characteristics and pleasure. The results are shown in Table 2.

Table 2 Regression Analysis Results of Ante-dependent Variables and Pleasure

	Non-standardized coefficient		Standardized coefficient					
Model	B	Standard error of	Beta value	T value	Sig.	R ²	Adj.R ²	The F value
(Constant)	2.53	0.209		12.09	0.00			
Informative	0.37	0.054	0.21	6.92	0.00			
Economy	0.27	0.042	0.18	6.35	0.00	0.46	0.45	43.61**
Interactive	0.33	0.046	0.24	7.19	0.00			
Visual Sex	0.35	0.058	0.15	6.12	0.00			

Note: ** indicates significance level P <0.01.

Dependent variable pleasure

Table 2 shows that the characteristics of website environment have a significant impact on pleasure ($F=43.61$, $P<0.01$) The environmental characteristics of the station can explain that the variation proportion of the dependent variable is 45%, which indicates that the regression equation fits well and the linear relationship of the regression equation is significant.

4.2 The Relationship between the Characteristics of Website Environment and Arousal

The characteristics of website environment can cause consumers to wake up in different degrees, and the consumers in the excited and excited state. In this part, we will analyze the influence of the knowledge, economy, interaction and vision of the website on the arousal. The analysis data are shown in Table 3

Table 3 Regression Analysis Results of Ante-dependent Variables and Arousal

	Non-standardized coefficient		Standardized coefficient					
Model	B	Standard error of	Beta value	T value	Sig.	R ²	Adj.R ²	The F value
(Constant)	2.31	0.209		11.07	0.000			

Informative	0.28	0.046	0.22	6.01	0.000			
Economy	0.47	0.042	0.28	8.24	0.00	0.52	0.51	55.96**
Interactive	0.32	0.054	0.13	6.01	0.00			
Visual Sex	0.09	0.068	0.02	1.31	0.20			

Note: ** indicates significance level $P < 0.01$.

Dependent variable pleasure

Table 3 shows that the characteristics of website environment have a significant impact on arousal ($F = 55.96$, $P < 0.01$), and the variation rate of happiness of the dependent variable can be explained by the characteristics of website environment is 51%, which indicates that the regression equation fits well and the linear relationship of the regression equation is significant.

4.3 Relationship between Emotion and Purchase Impulse

In this study, hierarchical multiple regression method is used to analyze the data with two models. Model 1 explains the effects of control variables, such as website knowledge, website economy, website interactivity and website visually, on impulse buying desire. Model 2 adds the effects of variable pleasure, arousal and website browsing on impulse buying desire on the basis of model 1. The analysis results are shown in Table 4.

Table 4 Results of Stratified Regression Analysis of Emotion and Buying Impulse

variable	Model 1		Model 2	
	β	T value	β	T value
Control variables				
Informative	0.13	2.16*	0.11	1.98*
Economy	0.19	3.04**	0.17	2.91**
Interactive	0.22	4.56**	0.18	3.01**
Visual Sex	0.08	1.424	0.06	1.24
The Independent Variables				
Pleasure			0.38	8.53**
Wake up the			0.27	6.40**
R^2	0.16		0.52	

Adj.R ²	0.15	0.51
F	13.31**	28.21**
ΔR ²		0.36
Partial F		17.68**
N	603	603

Note: * indicates significance level $P < 0.05$, ** indicates significance level $P < 0.01$.

The dependent variable is impulse buying

Table 4 shows that in model 1, the control variable website environment characteristics have an impact on the dependent variable purchase impulse ($F=13.31$, $P<0.01$), which could explain the variation rate of purchasing impulse of dependent variable was 15% ($P<0.01$). In model After adding the independent variables of pleasure and arousal in type 2, the proportion of variation explaining purchasing impulse was 51% ($P<0.01$). The proportion of impulse buying variation was 36% (partial $f=17.68$, $P<0.01$), partial F value was 0.01. It shows that the influence of independent variable on dependent variable is statistically significant.

4.4 Relationship among Impulse Buying, Trust and Impulse Buying Behavior

Hierarchical regression analysis is also used to analyze impulse buying behavior. Three models are used in this study. Model 1 is the effect of control variables pleasure, arousal, impulsive traits, materialism and self-control on impulse buying, model 2 adds independent variables such as impulse buying desire and trust to model 1, while model 3 adds independent variables such as impulse buying desire and trust to model 1 on the basis of model 2, the interaction between independent variables and regulatory variables is added. In order to test the independent variable and the moderator variable In this study, the mean value of all variables is centralized. The process does not change every change but it can reduce the multicollinearity problem. The analysis results are shown in table 5

Table 5 Results of Hierarchical Regression Analysis of Impulse Buying, Trust and Impulse Buying Behavior

Variable	Model 1		Model 2		Model 3	
	β	T value	β	T value	β	T value
Control Variables						
Pleasure	0.11	2.10*	0.10	2.01*	0.09	1.99*
Wake up the	0.13	3.65**	0.12	3.45**	0.12	3.55**
The Independent						

Variables						
Impulse Purchase			0.46	16.97**	0.43	17.68**
Trust			0.32	14.02**	0.34	14.26**
Interactive Items						
Buy Impulse X Trust					0.07	2.15*
R ²	0.15		0.53		0.55	
Adjusted R ²	0.14		0.52		0.54	
The F Value	18.79**		58.89**		45.01**	
ΔR ² .			0.38		0.02	
Partial F Value			80.42**		8.61**	
N	603		603		603	

Note: * indicates significance level P <0.05, ** indicates significance level P <0.01.

The dependent variable is impulse buying behavior

As can be seen from Table 5.15, all models are significant at the statistical level of 0.01.

5. Discussion

5.1 Influence of Website Environment Characteristics on Online Consumer Sentiment

The empirical results of this study show that the features of the website environment, which is composed of the website's knowledge, economy and interactivity, significantly cause the consumers' pleasure and emotional response of arousal. Website knowledge will positively affect consumers' pleasure and arouse their emotions. That is to say, the information quality of websites plays a very important role in shaping consumers' emotion and cognition. The richer, truer and faster the information provided in the website is, the faster it can be updated and meet the needs of consumers to obtain information through the Internet. Especially when it exceeds consumers' expectations, consumers will have positive emotions. At the same time, new cognition will arouse consumers' awakening, which may stimulate their impulsive desire for consumption.

The economy of the website will positively affect consumers' pleasure and arouse their emotions. That is to say, in the network environment, price concessions, promotional means are still the main reasons for consumers to make impulse purchases. Online shopping may take this form even further. Online marketing activities that are different from traditional retail stores arouse consumers' emotions and bring them excitement, stimulation and

surprise, such as skill, auction and other activities, which stimulate consumers' shopping desire and satisfy consumers' demand for fashionable personality.

Website interaction will positively affect consumers' pleasure and arousal emotions. That is to say, the service quality provided by websites will directly affect consumers' attitudes towards online shopping. In addition, the interactive function provided by the network satisfies the needs of the consumer society, and at the same time, the exchange of shopping experience among consumers also arouses consumers' shopping desire. On the other hand, it also shows the importance of word of mouth. Website visually has a positive effect on mood, but it does not have a significant effect on mood awakening. That is, the design of the site does not arouse the emotions of consumers. According to the environmental load theory, the level of arousal depends to a certain extent on the environmental load, that is, the amount of information the individual receives to describe the environment. A high-load environment is one that conveys a lot of information, and a low-load environment is the other way around. All other things being equal, high-load environments have a stronger arousal than low-load environments. Environmental information affects environmental load from three aspects: intensity, novelty and complexity. Intensity refers to the absolute value of sensory stimuli, such as brightly colored colors, which are more likely to arouse people; Novelty refers to the familiarity of environmental information. Unfamiliar things require more attention, which usually leads to higher arousal. Complexity works as well as novelty: the more information the environment contains, the more effort is required. Therefore, the visual nature of the website does not arouse consumers' emotions, because the information intensity, novelty and complexity of the website appearance design are not enough, which is consistent with the simple interface and lack of difference of C2C online stores in real life. Therefore, online stores do not have unique appeal and cannot arouse the excitement and excitement of online shoppers.

5.2 Influence of Emotion on Buying Impulse

The empirical results of this study show that the pleasure and emotion aroused by the characteristics of the website environment have a significant effect on the purchase impulse. That is to say, the occurrence of buying impulse is caused by the happy and excited mood that consumers feel after being stimulated by the outside world. And Zhang Yunlai (2006) using structural equation model, the validation of the relation between emotion and impulse purchase, found pleasure and impulse purchase positive correlation ($\beta = 0.29$), awakens and impulse purchase no correlation ($\gamma = 0.03$, $T = 0.53$). The author explains the possible reason: The objects of the survey are large supermarkets, which mainly focus on daily necessities, and the range of commodity prices does not change much, so it is not easy to change the awakening degree of consumers. In online shopping, it gathers different kinds of goods from different countries and regions, as well as the current popular clothes,

etc. At the same time, rich promotional activities constantly impact the online shoppers' eyes and stimulate consumers' purchase impulse.

5.3 Influence of Impulse Buying on Impulse Buying

The results of the empirical part of this study show that the impulse to buy is positively correlated with the impulse to buy. Therefore, the impulse to buy of online shoppers will directly affect their impulse to buy. It confirms the general law from behavioral intention to behavior in consumer behavior, and explains that the impulsive buying behavior occurs when consumers are in high emotional reaction, low cognition and strong buying impulse. The research of Beatty and Ferrell (1998) also mentioned that in the impulse buying behavior, a strong desire to buy must be generated first, thus supporting the viewpoints of this study. However, the dispersion ratio of impulse buying to impulse buying behavior explanation is relatively low, which indicates that impulse buying significantly affects impulse buying behavior, but not all impulse buying will become impulse buying behavior, and the occurrence of impulse buying behavior will also be affected by other limiting factors.

5.4 Regulatory Role of Trust

The results of this study indicate that trust plays a moderating role between impulse buying and impulse buying behavior in the network environment. That is to say, trust is still an important determinant of whether or not consumers buy online. Even if the consumer is stimulated by the online environment, arousing pleasure and arousing emotion, thus forming the impulse to buy, he will still give up the purchase because he does not trust the online store. Previous studies have explored that consumers' self-control and ability to pay limit their hesitation or even give up their impulse purchase. In the network environment, due to the separation of time and space between retailers and consumers, the uncertainty of their transactions increases, and trust will become a limiting factor for the occurrence of impulse buying behavior. Therefore, online retailers need to reduce the risk of consumers through different marketing strategies to improve their trust.

5.5 Management Inspiration

Whether in literature discussion or in real life, impulse buying is considered to be an irregular behavior, but it does account for the majority of product sales (Kollat & Willet, 1967; Bellenger, Robertson & Hirschman, 1978; Weinberg and Gottwald, 1982; Rook & Fisher, 1995). With the rise of online shopping, some scholars believe that this Internet technology improves the occurrence of consumers' impulse buying. Before the research topic was determined, the exploratory research of this study believed that most online consumers believed that they had made impulse purchases, and even accounted for a large proportion of the whole shopping behavior. In addition, more and more retailers have realized the rich business opportunities of the Internet and are entering the online retail industry one after another. At the same time, individual entrepreneurs also build their own online stores with

the help of C2C website platforms. The market of suppliers in the network is constantly expanding, creating a situation of fierce competition. However, the understanding of the psychology and behavior of online consumers is relatively deficient.

6. Conclusion

Influence of e-commerce environment characteristics on consumers' online impulse purchase have significantly as seem website visibility has a positive effect on mood but had no significant effect on emotional awakening. Environmental data affects the environmental burden from three areas: severity, novelty and complexity. In online shopping, different types of products are collected from different countries and regions including today's popular clothing, for example. The impulse to buy from online shoppers directly influences impulse to buy. Consumers are stimulated by the online environment. Stimulates happiness and stimulates mood. It is causing impulse to buy He would still stop buying because customers didn't trust the online store.

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