The use of high-speed internet as a platform for compulsive online buying: A case of study of post-graduate students in Malaysia

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Abstract

Online compulsive buying is chronic buying phenomena in which the consumer feels unable to stop or significantly moderate the behavior of buying. In other words, it is an addiction of buying things through the Internet .This study investigates differences in demographic factors that could explain the profile of online compulsive buyers, and examines the influence of high speed Internet connection on compulsive online buying behavior. A hundred respondents of post-graduate students at Universiti Utara Malaysia were selected to participate in the study. Questionnaires were distributed randomly to obtain the data. The findings showed that all demographic factors examined are insignificant in differentiating the profile of compulsive online buyers. Also, the study found that the high-speed Internet connection did not significantly influence compulsive online buying behavior. Nevertheless, it was recommended that marketers introduce cash card as an alternative mode of payment apart from the credit card as the many Malaysians still do not possess credit cards. For future research endeavors, larger sample sizes and more diversified aspects of compulsive online buying would certainly improve results.

Keywords: compulsive online buying, compulsive online profile, consumer behaviour, demographic factors, high-speed internet, internet access

Introduction

Online buying is a growing phenomenon all over the world, especially among countries with well-developed infrastructure for Internet marketing since the late 1980s study that has discussed by Rock and Hoch (1987) followed by introduction measurement has done by Valence, d'Astous, and Fortier (1988) and then followed by empirical study that has conducted by d' Astous, and Tremblay (1988). Some researchers as well as O'Guinn, and Faber (1989); Li, Kuo and Russell (1999); Lion and Cheung (2001); Park and Burns (2005); and Sorce, Perotti, and Widrick (2005) conducting some related study on this topics. To date, advances in information and communication technology, such cited discussed by Kyees, McConnell and Sistanizadeh (1995) and Schneider (2002) have changed the face of business–to-business marketing process and here, online purchasing is growing rapidly. Most of researchers now are highlighted online buying issues with specific attention on every aspects of it. Scholars such as Ahn and Lee (1998) discusses about satisfying factors; Dellaert and Kahn (1999) on customer evolution on the Internet; Donthu and Garcia (1999) on Internet shopper; Kim and Park (1999) on Purchasing Decision Factors; Goldsmith and Flynn (2004) on Psychological and Behavioral Drivers; Hansen (2005) on Online Grocery Buying; and many more.

For compulsive online buyers the inability to control an overpowering impulse to buy pervades their lives and results in significant and sometimes severe consequences. Compulsive online buyers' buys not only to obtain utility or service from purchased commodity, but to achieve gratification through the buying process itself. The compulsive buyers cannot shop less or control their negative buying behavior

because they are acting from a deeper need. According to Wolfinbarger and Gilly's informativeness dimension of goal-oriented shoppers, the Internet also provides a rich source of information for many products (Evan & Wurster, 1999). Online shoppers are using the high speed Internet as one of many sources of information in their pre-purchase search activities. Ramaswami, Strader, and Brett (2001) reported that online shoppers of financial products used both online channels and personal channels (e.g. a broker) in their information search activities. Further, in a study of new car buyers, Ratchford, Telukdar, and Lee (2001) found that heavy users of high speed Internet sources were also heavy users of printed sources of information such as car ratings books and dealer brochures. In addition, some impact studies of high speed Internet on compulsive buying is conducted and tested, as done by O'Guinn and Faber (1989); Faber and O'Guinn (1992); Swaminathan, Lepkowska and Rao (1999); and Cho, Byun and Sung (2003).

Theoretically, online buying utilizes high speed Internet as a means of purchasing products/services. Beside that the emergence of insatiable society (Schmookler,1991) has some implication on the online purchasing activities. In practice, it is being accepted in Malaysia as an alternative mode of buying products and services. Compulsive online buying is also related with spending more than what is necessary with the undesirable aftermaths of guilty feeling after purchase, financial problems and stress. In marketing, individuals with compulsive online buying attitude are the primary target market for companies to maximize their profit hence the increasing use of online marketing by companies .

Internet users with a high–speed Internet connection tend to have attitude towards purchasing online by utilizing the convenience that the Internet offers. In particular, younger generations, who are more acquainted with the latest information and telecommunication devices, are inclined to place more value in its use for their personal needs, and lead online consumption by participating in e-shopping and e-auctions. High-speed Internet subsequently becomes a platform for compulsive online buying. High-speed Internet connection provides convenience to users such as reduction in shopping time, timing flexibility, saving of physical effort, saving of aggravation, and provides opportunity to engage in impulse buying or directly responding to online advertisements. However, internet buying carries with it the risk of creating certain technical problems such that of spam (Cranor and LaMacchia,1998) and some ethical related issues (Cavana, Delahaye & Sekaran, 2001).

The progress to high-tech Internet has creates more interesting topics on the Internet platform. Ranganathan and Ganapathy (2002) for examples identified websites as store houses of information. Based on researchers at Netcraft Computer Survey and other sources (see for example, Schneider, 2002) the number of websites is currently estimated to be over 30 million. As more people gain access to the web online business will increase. Consequently, compulsive online buying will be part of a new problem especially among young internet users to whom internet using is part of their newly acquired lifestyle. As this compulsive tendency may lead to disastrous situations such as bankruptcy it is important to understand the onset of this phenomenon among young people such as post-graduate students since they are avid internet users, working and owning at least one credit card.

This study seeks to gain this understanding with regard to UUM post-graduate students. The objectives are twofold, namely, to investigate the high speed Internet connection as an antecedent for compulsive buying, and to examines the relationship between several demographic factors influencing online buying.

Data and method

Research design

This research is a quantitative data study and uses statistic as a medium to interpret the data. The main design in this study is to examine respondent's demographic factors and speed of Internet connection with compulsive online buying. The research design enables the researcher to gather data from a selected sample of the population. This study used questionnaires as the major instruments for gathering data.

Survey

The population of the research is among post-graduate students, consisting of masters and PhD/DBA students in Universiti Utara Malaysia. A hundred (100) questionnaires have been distributed to post-graduate students at University Utara Malaysia who further their study in either Master or PhD/DBA programs from various faculties. The questionnaires are distributed randomly to post-graduate students and they are conveniently handpicked to participate in the study. So, convenient sampling was applied for sample selections. The respond rate is 50% and analysis is done by utilizing 50 return questionnaires.

Questionnaires design

Questionnaires are divided into two parts, Part A and Part B. Part A is containing general demographic information (respondent's profile). Part B is a set of question about compulsive buying that has introduced by Valence, d' Astous and Fortier 1988. It has 13 questions as appears in Table 1. Scale measurement are using is 5-point scale.

Table 1. Items of compulsive online buying

Items	
1	When I have credit card, I cannot help but spend part or the whole of it.
2	I am often impulsive in my online buying behavior.
3	For me, online shopping is a way of facing the stress of my daily life and of relaxing.
4	I sometimes feel that something inside pushed me to go online buying.
5	There are times when I have strong urge to online buying (clothing, books, etc)
6	At times I have felt somewhat guilty after online buying a product, because it seemed unreasonable.
7	There are some things I buy that I do not show to anybody for fear of being perceived as irrational in my online buying behavior ("a foolish expense")
8	I often have an unexplainable urge, a sudden and spontaneous desire, to go online buying something in a web.
9	As soon as I enter online, I have an irresistible urge to go into online shop and buying something.
10	I am one of those people who often respond to advertisement online.
11	I have often bought a product that I did not need, while knowing that I have a credit card.
12	I am a spendthrift.
13	I have sometimes thought "If I had to do it all over again, I would not repeat what I did or said".

Hypothesis setting

Age
Ho1: There is no significant difference between age and compulsive online buying.
Ha1: There is significant difference between age and compulsive online buying.

Gender
Ho2: There is no significant difference between male and female in compulsive online buying.
Ha2: There is significant difference between male and female in compulsive online buying.

Status
Ho3: There is no significant difference between status and compulsive online buying.
Ha3: There is significant difference between status and compulsive online buying.

Sector of occupation
Ho4: There is no significant difference between sector of occupation and compulsive online buying.
Ha4: There is significant difference between sector of occupation and compulsive online buying.

Income per month
Ho5: There is no significant difference between income per month and compulsive online buying.
Ha5: There is significant difference between income per month and compulsive online buying.

Number of credit card
Ho6: There is no significant difference between number of credit card and compulsive online buying.
Ha6: There is significant difference between number of credit card and compulsive online buying.

Spend on credit card
Ho7: There is no significant difference between amounts spend on credit card and compulsive online buying.
Ha7: There is significant difference between amounts spend on credit card and compulsive online buying.

Religion
Ho8: There is no significant difference between religions and compulsive online buying.
Ha8: There is significant difference between religions and compulsive online buying.

Frequency to access internet
Ho9: There is no significant different between the frequency of Internet use with compulsive online buying behavior.
Ha9: There is significant different between the frequency of Internet use with compulsive online buying behavior.

Findings

Descriptive analysis

From the total 50 respondent, results has shows that majority of them are Muslim which is about 33 (66%), followed by Buddha 10 (20%), Hindu 4 (8%) and Christian 3 (6%). In term of age, who is age 29-33 shows the highest count of 15 person (30%) and followed by respondents aged 34-40 (28%), aged 23-25 (13%), and 26-28 (16%). Also, the study shows that there are 27 person (54%) female respondents and 23 male respondents (46%) from a total of 50 respondents. On side of status, there are 26 persons married respondents (52%) and 24 single respondents (48%). Based on their program, finding indicates that there are 27 (54%) respondents doing PhD/DBA, while 23 (46%) respondents are master students. Specifically, majority of the respondents are semester 3 students which consist of 15 people (30%), and followed by semester 4th and 5th semester students which have 11 people (22%). There are only 7 (14%) respondents in Semester 2 and 6 (12%) respondents in Semester 1.

Unfortunately, most of the respondents are have work experience The findings showed that there are 29 (58%) respondents working with government and followed by private sector 13 (26%) and self-employed 8 (16%). For that, the result shows that majority of the respondents (15, 30%) earn between RM3001-RM4000 per month, followed by RM2501-RM3000 (14, 28%) and RM2001-RM2500 (13, 26%). There are only 8 persons (16%) who earn RM4001-RM5000 per month. Beside, all respondents have credit card. In term of number of credit card, the result shows that majority of respondents have 2 credit cards which accounted for 23 persons (46%), followed by 5 (30%) respondents who have only 1 credit card, 10 (20%) respondents have 3 credit cards, and finally only 2 have 4 credit cards (4%). Because there are able to do some spending on their credit card, Result shows that 21 respondents spend around RM501-RM1000 on credit card which accounted for 42%. 17 respondents (34%) spent around RM1001-RM1500 per month, and 12 (24%) respondents spent around RM1501-RM2000 monthly.

The result shows that the majority of the respondents access the Internet " a few times a week" accounted to 19 (38%) of the respondents. 16 (32%) respondents reported that they access the Internet "a ew times a month", 13 (26%) respondents access the Internet "daily", and 2 persons (4%) reported that they access the Internet "a few times in several months". No respondents reported that they never use the Internet. Also, the result shows that majority of the respondents surf the Internet at their faculty (17, 34%), followed by at home (16, 32%), office (10, 20%), residential colleges (5, 10%), and cybercafé/hotspots (2, 4%). In addition, the result shows that the high-speed internet connection used by the majority of the respondents is the Streamyx (26 respondents, 52%), and the rest (24 respondents, 48%) used the ISDN connection. Streamyx is the high-speed Internet connection used at home, meanwhile the ISDN is the high-speed Internet connection normally used at offices/organizations.

Analysis of hypotheses

The results of all tested hypothesis is appears in Appendix 1. Here, specific discussion on every result of items is shows in brief.

Age
Ho1: There is no significant difference between age and compulsive online buying.
Ha1: There is significant difference between age and compulsive online buying.
The results find there is no significant difference between age groups and compulsive online buying because p (0.685) > 0.05. So that, people from different age groups are not different in term of compulsive online buying.

Gender
Ho2: There is no significant difference between male and female in compulsive online buying.
Ha2: There is significant difference between male and female in compulsive online buying.

The result shows no significant different between male and female in compulsive online buying behavior since p (0.332) > 0.05. So, male and female are similar in their intention to buy online.

Status
Ho3: There is no significant difference between status and compulsive online buying.
Ha3: There is significant difference between status and compulsive online buying.
There is no significance difference between single persons and married persons in online compulsive buying behavior sine p (0.22) > 0.05.

Sector of occupation
Ho4: There is no significant difference between type of occupation and compulsive online buying.
Ha4: There is significant difference between sector of occupation and compulsive online buying.
There is no significant difference between sector of occupation and compulsive online buying since p (0.378) > 0.05. Actually, those who works in government, private or self-employed there are similar intention to buy online.

Income per month
Ho5: There is no significant difference between income per month and compulsive online buying.
Ha5: There is significant difference between income per month and compulsive online buying.
The results shows there is no significant different between income groups with 'compulsive online buying' since p (0.087) > 0.05. So, post graduate students from different income group are similar in term of compulsive online buying.

Number of credit card

Ho6: There is no significant difference between number of credit card and compulsive online buying.

Ha6: There is significant difference between number of credit card and compulsive online buying.

There is no significant different between the numbers of credit card owned with compulsive online buying behavior, with p (0.134) > 0.05. So, the person with more credit cards is not different from the person who has lesser credit cards in compulsive online buying behavior.

Spend on credit card

Ho7: There is no significant difference between amounts spend on credit card and compulsive online buying.

Ha7: There is significant difference between amounts spend on credit card and compulsive online buying.

Finding indicates there is no significant difference between amounts spends on credit card and compulsive online buying since p (0.790) > 0.05. There is no significant difference between amounts spends on credit cards whether low or high towards compulsive online buying.

Religion

Ho8: There is no significant difference between religions and compulsive online buying.

Ha8: There is significant difference between religions and compulsive online buying.

For the table one-way ANOVA it shows there is no significant difference between religion and compulsive online buying since p (0.305) > 0.05. So, post graduate students from different religions are not different in term of compulsive online buying.

Frequency of internet access

Ho9: There is no significant different between the frequency of Internet use with compulsive online buying behavior.

Ha9: There is significant different between the frequency of Internet use with compulsive online buying behavior.

There is no significant different between the frequency of Internet use and 'online compulsive buying behavior' since p (0.663) > 0.05. So, no matter how frequent a person access the Internet, their tendency towards compulsive online buying is the same.

Analysis of results regression

Overall, analysis of regression is appears in Table 2 as shows below.

Table 2. *Regression* demography

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1,900	1,433		1,326	,193
	age	,031	,326	,048	,096	,924
	gender	,221	,350	,149	,631	,532
	status	-,528	,470	-,356	-1,123	,268
	program	,776	,486	,522	1,598	,118
	Sec of occupation	,179	,250	,181	,717	,478
	income	-,393	,278	-,548	-1,414	,165
	no. of credit card	,197	,223	,216	,884	,382
	spend	,191	,352	,204	,542	,591
	religion	-,202	,129	-,239	-1,570	,125
	access	,188	,182	,234	1,031	,309
	speed	-,272	,219	-,183	-1,238	,223

a. Dependent Variable: compbuying

Age
Ho10: Age does not significantly influence the compulsive online buying behavior.
Ha10: Age does significantly influence the compulsive online buying behavior.
The results *regression* table above shows that age is not significantly influence compulsive buying behavior attitude since P (0.924) > 0.05.

Gender
Ho11: Gender does not significantly influence the compulsive online buying behavior.
Ha11: Gender does significantly influence the compulsive online buying behavior.
Gender also shows no significant influence on compulsive online buying attitude since P (0.532) > 0.05. So, there is no evidence to suggest that gender causes compulsive online buying behavior.

Status
Ho12: Status does not significantly influence the compulsive online buying behavior.
Ha12: Status does significantly influence the compulsive online buying behavior.
Respondents status also shows no sign of significant influence towards compulsive online buying attitude since P (0.268) > 0.05. Thus, status will not cause compulsive online buying behavior.

Study program
Ho13: Study program does not significantly influence the compulsive online buying behavior.
Ha13: Study program does significantly influence the compulsive online buying behavior.
Study programs also shows no significant evidence that they influence compulsive online buying behavior since the results show P (0.118) > 0.05.

Sector of occupation
Ho14: Sector of occupation does not significantly influence the compulsive online buying behavior.
Ha14: Sector of occupation does significantly influence the compulsive online buying behavior.
Sectors of occupation show no significant influence on compulsive online buying since P (0.478) > 0.05. Thus, there is no significant relationship between the sectors of occupation and compulsive online buying behavior.

Income per month
Ho15: Income per month does not significantly influence the compulsive online buying behavior.
Ha15: Income per month does significantly influence the compulsive online buying behavior.
Post graduate students' monthly income also shows no significant relationship with compulsive online buying since P (0.165) > 0.05. Thus, there is no significant relationship between the incomes per month and compulsive online buying behavior.

Number of credit card
Ho16: Number of credit card does not significantly influence the compulsive online buying behavior.
Ha16: Number of credit card does significantly influence the compulsive online buying behavior.
The number of credit cards owned also shows no significant relationship with compulsive online buying behavior since P (0.382) > 0.05. Thus the number of credit card owned is not an indicator for compulsive online buying.

Spend on credit card
Ho17: Spend on credit card does not significantly influence the compulsive online buying behavior.
Ha17: Spend on credit card does significantly influence the compulsive online buying behavior.
Amounts spent on credit card show that P (0.591) > 0.05. Thus, there is no significant evidence that it causes compulsive online buying behavior.

Religion
Ho18: Religion does not significantly influence the compulsive online buying behavior.
Ha18: Religion does significantly influence the compulsive online buying behavior.
Religion shows the result of P (0.125) > 0.05 indicating no significant relationship between religions and compulsive online buying behavior.

Frequency of internet access
Ho19: Frequency of Internet access does significantly influence the compulsive online buying behavior.
Ha19: Frequency of Internet access does not significantly influence the compulsive online buying behavior.
Frequency to access the Internet also shows no significant influence on compulsive online buying since P (0.309) > 0.05. Thus, there is no significant relationship between frequencies of access the Internet with compulsive online buying behavior.

High-speed internet
Ho20: High-speed Internet does not significantly influence the compulsive online buying behavior.
Ha20: High-speed Internet does significantly influence the compulsive online buying behavior.
Data analysis of 'High-speed of Internet connection' shows that it has no significant influence on'compulsive online buying behavior' since P (0.223) > 0.05. Thus, there is no significant evidence to suggest that Internet speed will cause compulsive online buying behavior.

Summary of the results

The overall of result is summarised in Table 3 . Most of the hypotheses tested indicate no significant relationships with compulsive online buying behavior as depicted by the P Values.

Table 3. Overall results of hypothesis testing

	Hypotheses	P Value	Results
1.	There is significant different between the age and compulsive online buying behavior.	0.685	Not significant
2.	There is significant different between the male and female with compulsive online buying behavior.	0.332	Not significant
3.	There is significant different between status with compulsive online buying behavior.	0.224	Not significant
4.	There is significant different between sector of occupation and compulsive online buying behavior.	0.378	Not significant
5.	There is significant different between income per month and compulsive online buying behavior.	0.087	Not significant
6.	There is significant different between number of credit card and compulsive online buying behavior.	0.134	Not significant
7.	There is significant different between spend on credit card and compulsive online buying behavior.	0.790	Not significant
8.	There is significant different between religion and compulsive online buying behavior.	0.305	Not significant
9.	There is significant different between the frequency of Internet access and compulsive online buying behavior.	0.663	Not significant
10.	Age is significantly influence the compulsive online buying behavior.	0.924	Not significant
11.	Gender is significantly influence the compulsive online buying behavior.	0.532	Not significant
12.	Status is significantly influence the compulsive online buying behavior.	0.268	Not significant
13.	Study program is significantly influence the compulsive online buying behavior.	0.118	Not significant

	Hypotheses	P Value	Results
14.	Sector of occupation is significantly influence the compulsive online buying behavior.	0.478	Not significant
15.	Income per month is significantly influence the compulsive online buying behavior.	0.165	Not significant
16.	Number of credit card is significantly influence the compulsive online buying behavior.	0.382	Not significant
17.	Spend on credit card is significantly influence the compulsive online buying behavior.	0.591	Not significant
18.	Religion is significantly influence the compulsive online buying behavior.	0.125	Not significant
19.	Frequency of Internet access is significantly influence the compulsive online buying behavior.	0.309	Not significant
20.	High-speed Internet is significantly influence the compulsive online buying behavior.	0.223	Not significant

Conclusion

With the growing trend of online buying and the emergence of high-speed Internet connections online buying has facilitated a living-on-the-fast-lane life-style. The web is a global phenomenon and built around this standard are the servers and browsers that connect business with consumers. These facilities provide a very interesting and convenient way to do online buying as an alternative to their goals. Our study shows that this life style tends to contribute to compulsive online buying among young Malaysians as exemplified by the postgraduates studies, a trend that points to the need to pay close attention to the potential negative implications.

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Appendix 1

1. One-way ANOVA age

ANOVA

compbuying

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,866	3	,289	,499	,685
Within Groups	26,615	46	,579		
Total	27,481	49			

2. T-Test gender

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
compbuying	Equal variances assumed	,960	,332	-,546	48	,587	-,11693	,21404	-,54728	,31342
	Equal variances not assumed			-,552	47,912	,584	-,11693	,21194	-,54310	,30923

3. T-Test status

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
compbuying	Equal variances assumed	1,517	,224	,565	48	,575	,12056	,21348	-,30866	,54979
	Equal variances not assumed			,569	47,426	,572	,12056	,21182	-,30547	,54660

4. One-way ANOVA sector of occupation

ANOVA

compbuying

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1,113	2	,557	,992	,378
Within Groups	26,368	47	,561		
Total	27,481	49			

5. One-way ANOVA income per month

ANOVA

compbuying

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3,622	3	1,207	2,327	,087
Within Groups	23,860	46	,519		
Total	27,481	49			

6. One-way ANOVA number of credit card

ANOVA

compbuying

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3,103	3	1,034	1,952	,134
Within Groups	24,378	46	,530		
Total	27,481	49			

7. One-way ANOVA spend on credit card

ANOVA

compbuying

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,274	2	,137	,237	,790
Within Groups	27,207	47	,579		
Total	27,481	49			

8. One-way ANOVA religion

ANOVA

compbuying

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2,062	3	,687	1,244	,305
Within Groups	25,419	46	,553		
Total	27,481	49			

9. One-way ANOVA for frequency of Internet access

ANOVA

compbuying

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,919	3	,306	,531	,663
Within Groups	26,562	46	,577		
Total	27,481	49			