



FACTORS AFFECTING ONLINE SHOPPING BEHAVIOR OF INTERNATIONAL COLLEGE STUDENTS IN CHINA

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Abstract—This study takes a closer look at decision and consumer factors that influence consumer's online shopping behavior in China from an international college student perspective and to understand what motivates this behavior. To explore the influences of decision factors it was imperative to consider the role of Chinese Language barrier in a cross cultural context. To address the objectives of this study, a conceptual model is proposed along with research propositions. A self-administered questionnaire was used to collect data from 101 international college students. Findings identify and rank key decision factors; price, product variety, convenience, Chinese language barrier to have the most influence on international college students' online shopping behaviour. The results suggest that e-retailers should provide more personalization and consumer socialization options on their websites to target different consumers.

Keywords— Online shopping; Behavioural characteristics, Shopping Motivation, China

I. INTRODUCTION

Since the China Open Door Policy 1978, to attract foreign talents, China has seen an increase in Foreigners coming to China. China used to be known as a tourist destination with people fascinated with the Culture and Chinese food but however foreigners now come to China for different reasons. Cities like Beijing, Shanghai, Guangzhou and Shenzhen are top destinations for foreigners coming to China. One reason that has been favored by foreigners is coming to China is to study. For the last decade students have favored countries like the USA, UK, Canada, Australia and New Zealand as top study destinations. These countries have high tuition fees and high cost of living and this has led to students being attracted to Asia to continue their studies. One attractive country is China. According to the China Scholarship Council (China Scholarship Council, 2016) it has provided Scholarship to a lot of students for the past ten years.

Online Purchasing Behaviour has attracted the interests of scholars [1]. There is need to further understand online purchasing behaviour of consumers [2]. With the growing number of international students in China one cannot simply ignore that it is indeed a niche market and calls for study. The focus of this research is to critically examine international students' online shopping behavior in China. Previous study in China has focused on Online Shopping adoption by Chinese consumers [3] other studies have also focused on Chinese students online shopping attitude and gender differences in the influence of online communication on e-commerce purchase decision strategies [4], but however neglects the emerging role of international students in the markets So, this study seeks to understand factors that influence their online shopping behavior. In a Dual Country Perspective study between U.S and Irish Students, [5] find that language has an impact on online

shopping, so it is important in this study that we find out to what extent Chinese language affects international students' online shopping behavior.

II. LITERATURE REVIEW

Consumer Online Shopping Behavior

The buying behaviour of consumers is very appealing to marketers, due to the increase of online shoppers more than internet users [6] online retailers have focused their attention on what affects the buying decisions of consumers when they shop online. Such knowledge can help marketers and researchers understand what customers think and what affects their purchase decisions [7]. A consumer buying behaviour is impacted by different factors such as social, cultural, psychological and personal factors [8]. Previous studies argue that traditional competitive factors, e.g., price, significantly influence the purchasing decisions of online customers [9]. In addition, however, customer demand may be influenced by more factors such as trust [10] in online shopping than in physical shopping.

Perceived Trust

Shopping online can be hard especially if you do not trust the website and provided information.

[11] and [12] have shown that fraudulent sellers artificially enhance their reputations by trading positive feedback ratings on eBay. Whether or not trust is important can vary between those who buy online frequently and non-frequent buyers [13]. Online shoppers will probably buy from a website they trust. This trust can be influenced by past online shopping experience or the publicity related to the site [14]

H1: Perceived Trust will have a positive relationship with online shopping behaviour.

Price

The current research is based on college students in a host country. Income of international students varies according to different factors such as economic stability of country of origin, whether the student is self-funded or is on scholarship other factors can be family background and income spending trends. Customers' decisions of which means or shopping medium to use can be affected by the price [15]. Due to restricted income level students are likely to look for price information as to make the most favorable financial decisions therefore the following Hypothesis is formulated.

H2. There is a positive relationship between low prices charged by online retailers and online shopping behavior.

Product Variety & Guarantee

According to [16], product variety is of paramount importance when consumers conduct online shopping transactions. Product Variety has a positive impact on perceived brand quality and re-purchase intentions [17]. Online shoppers are not only interested in the variety online shopping has to offer but also consider the guarantee of a product after purchase decision is made. [18] maintain that consumers will reduce their purchases from the internet if they cannot receive their orders from online retailers within the guaranteed time. Buying things in China can be very frustrating for expatriates in China, due to high notion that there are a lot of Chinese counterfeits available on the market. Thus, it becomes hard to know whether you are buying an original or a Chinese copy. Regarding the product variety and guarantee the following hypothesis is proposed

H3. There is a positive relationship between product variety and online shopping behavior

H4. There is a positive relationship between product guarantee and online shopping behavior

Convenience

Living in China, can be very difficult, uncomfortable and inconvenient for foreigners to shop in physical stores especially when you can't speak Chinese. [19] adds that some shoppers will favor online shopping as to avoid from face to face interaction with sellers because it's more stressful to deal with salespeople and such shoppers evade the control and manipulation in the market. So, shopping online can save international college students from manipulation by sellers who might want to take advantage of the communication barrier. According to [20], convenience plays a significant role in willingness to shop online. Shopping online provides a platform where one can shop anywhere and at any time.

H5. There is positive relationship between convenience and online shopping behavior

Chinese Language

The evolution of Chinese language has three main features: the total number of characters is gradually increasing, new words are generated in the existing characters, and some old words are no longer used in daily-life language [21]. Chinese language is a difficult language to learn, although China has been trying its best to attract foreign talents into China, English has not been adopted as an official Language, most if not all of online shopping websites are available only in Chinese e.g Taobao and JingDong which are currently the largest online shopping websites. But as the Romans say, When in Rome do as the Romans do & if you can't beat them, join them. A lot of international students have to join other Chinese Consumers when buying and also making use of the resources available. It can never be easy to shop online in Chinese if you have never learnt the language before. Thus this study seeks to identify the role of Chinese Language on Online Shopping behaviour of International Students. The following Hypothesis is put forward:

H6: Chinese language barrier will have a positive relationship with online shopping behaviour.

III. RESEARCH METHODOLOGY

Questionnaire Design & Measures

Online shopping experience, program of study, program medium of teaching and Level of Chinese language proficiency are controlled in this study. The available scales were chosen from existing literature because they have been used in past research and applied to different contexts. Although the study focused on the view from an international college student perspective in a host country, when no measure existed in the literature measurements were constructed by searching previous literature for comprehension. Regarding the measure of Chinese Language barrier consistent with [22] items were generated from the preconceptions that emerged from communication literature see [23]. All the constructs and measures are valid and reliable because they have been used and tested by past scholars in the study area. The scales have been presented in tabular form in Table 1.

Table 1: Operational Definitions of Variables, Survey Items, and Source

VARIABLE	ITEM	QUESTIONS	SOURCE
PERCEIVED TRUST	T1	Product as shown on online shopping websites are reliable.	[24]
	T2	This website is authentic and dependable in its claims.	[25]
	T3	Online website offers secure personal privacy.	[24] [25]
CONVENIENCE	C1	Online shopping saves me time.	[26]
	C2	I Can shop online whenever I want.	[27]
	C3	I Can save the effort of visiting physical stores	

PRICE	P1	I always compare prices between different brands before I choose one, when I shop online	[28]
	P2	I compare prices to take advantage of special offers, when I shop online	[28]
	P3	I visit different online shops to take advantage of the best prices	[28]
PRODUCT VARIETY	PV1	I think online shopping has the advantage of wide selection of products.	[29]
	PV2	Online Shopping provides a number of product offerings.	[29]
	PV3	Online Shopping provides product features that suit the my needs	[29]
PRODUCT GUARANTEE	*PG1	Might not get what I ordered through online Shopping	[30]
	*PG2	Might receive a malfunctioning product	[30]
	PG3	Hard to judge the quality of products when shopping online	[30]
CHINESE LANGUAGE BARRIER	CL1	When I interact with Chinese online sellers, they are always clear and easy to understand.	[31]
	CL2	I am familiar with online shopping on Chinese Websites and I find it very easy	[31]
	CL3	Learning how to shop online in China is easy.	[31]
BUYING BEHAVIOR	BB1	I intend to continue using online shopping for purchasing a product or service in the future	[32] [33]
	BB2	I would strongly recommend others to use online shopping	[34]
	*BB3	I will no longer transact in online shopping iin the near future	

*Indicates that the items are coded in reverse.

The questions were measured on a 7-point Likert scale ranging from 1 - Very Strongly Disagree; 2 - Strongly Disagree; 3 – Disagree; 4 – Neutral; 5 – Agree; 6-Strongly Agree; 7 – Very Strongly Agree.

Sample & data collection

According to the Ministry of Education in China an international student for visa purposes is defined a foreign citizen(non-Chinese passport holder) who comes to China for the purpose of study for a period of six or more months and is issued a student visa (x-visa). This study focused on foreign students who are studying in higher education institutions in China.

To collect the data, this study made use of an online survey using <https://www.surveymonkey.com/> . We performed a pre-test with 5 students, all from different countries to see if the questionnaire was well understood from speakers of other languages besides English. The questionnaire was slightly

modified and some questions were paraphrased with respect to the level of knowledge required and the wording of the questions.

Data were collected from 3 Universities located in Suzhou, Jiangsu Province China. A total of 300 international students were initially identified and contacted online (via email) through the help of the respective universities' international education departments who forwarded the questionnaire to their peers. The email invited them to participate in the study and contained a link to the online survey.

The procedure for the data collection was done in two phases. Participants were asked if they had shopped online before as a filter question. The study only targeted students who had previous online shopping experience. Emails were sent out, guaranteeing anonymity and confidentiality for the respondents, and informing them that the study was voluntary and all that the gathered data was for academic purposes only. The survey ran for 2 weeks and one follow up email was sent out in a gap of 14 days. A total of 154 surveys were returned (accounting for a 51% response rate). However, further data inspection revealed surveys with high missing values, hence, they were removed. After that process, 101 usable responses were retained and used for data analysis.

IV. RESULTS

The analyses were in three parts. The first part involved demographic profile while the second and third parts involved preliminary analysis and test of hypotheses in the study.

Demographic Profile of Respondents

The demographic profile describes the various relevant features the researcher collected about the respondents and are categorized as; gender, nationality, program of study, program medium of teaching, Chinese language proficiency, number of years of living and studying in China and living and spending fee per month. These categories are detail described in the Table 2.

Table 2: Demographic profile of respondents

Variables	Category	Frequenc y	Percentage (%)
Gender	Male	57	56.4
	Female	44	43.6
Nationality	African	33	32.7
	Asian	37	36.6
	European	13	12.9
	North American	6	5.9
	South American	3	3.0
	Australia/Oceania	9	8.9
Program of study	Bachelor program	59	58.4
	Master's program	30	29.7
	PHD program	1	1.0
	Postdoctoral fellowship	0	0.0
	Non Degree Chinese Course	11	10.9
Program medium of teaching	English Language	83	82.2
	Chinese Language	18	17.8
Chinese Language	HSK Level 1	17	16.8

proficiency	HSK Level 2	11	10.9
	HSK Level 3	24	23.8
	HSK Level 4	23	22.8
	HSK Level 5	10	9.9
	HSK Level 6	0	0.0
	None	16	15.8
	The number of years respondents have been studying in China	Less than a year	24
1-2 years		30	29.7
3-4 years		33	32.7
5-6 years		11	10.9
7-8 years		2	2.0
More than 8 years		1	1.0
Living and spending fee per month in RMB	1000-1999 RMB	17	16.8
	2000-2999 RMB	39	38.6
	3000-3999 RMB	30	29.7
	4000 or more RMB	15	14.9

From the Table 2, 56.4% of the respondents are male while the remaining 43.6% are females. The Table 2 also indicates that, 32.7% of the respondents are Africans, 12.9% are Europeans, 36.6% are Asians, 5.9% are North Americans, 3% are South Americans and 8.9% are Australian/Oceania. On the respondents' program of study, the results of the study revealed that 58.4% read bachelor program, 29.7% read master's program, only 1% read PHD program and 10.9% read non-degree Chinese course. The Table 2 also revealed that 83.2% of the respondents' program medium of teaching is English language while 16.8% of them are taught in Chinese language. It can be observed from the Table 2 that 23.8% of the respondent have been studying in China for less than a year, 29.7% have been in China for 1-2 years, 32.7% have been in China for 3-4 years, 10.9% have been in China for 5-6 years, 2% have been in China for 7-8 years and only 1% have been in China for more than 8 years. Finally, the result shows that 16.8% of the respondents 1000-1999 RMB, 38.6% spend 2000-2999 RMB and 29.7% spend 3000-3999 RMB per month.

Online Shopping Experience of the Respondents

This section also presents the findings on the respondents' online shopping experience they have had in China as well as in their home countries. The results are presented in the Table 3.

Table 3: Online Shopping Experience of the Respondents

Statement	Not rich (%)	Very least rich (%)	Least rich (%)	Neutral (%)	Quite rich (%)	Very rich (%)	Extremely rich (%)	Total (%)
China	4.0	4.0	4.0	25.7	30.7	15.8	15.8	100
Home country	15.8	5.0	15.8	25.7	18.8	12.9	5.9	100

Respondents Online Shopping Practice

This section of the study present findings on the number of hours they spend on online shopping per week, how frequent the respondents shop online and most visited online shopping websites. The results are presented in the Table 4.

Table 4: Respondents Online Shopping Practice

Variables	Category	Frequency	Percentage (%)
The number of hours respondents spend on online shopping per week	Less than an hour	27	26.7
	1-3 hours	43	42.6
	4-6 hours	13	12.9
	More than 6 hours	18	17.8
How frequent respondents shop online	Once per week	16	15.8
	More than once per week	31	30.7
	Not sure but very frequent	22	21.8
	Not sure but less frequent	32	31.7
Most visited online shopping websites	Taobao	62	61.4
	JingDong JD.com	17	16.8
	GuoMe	1	1.0
	YiHaoDian (YHD)	3	3.0
	Tmall	14	13.9
	Suning	0	0.0
	Aliexpress	4	4.0

Significant respondents representing 61.4% revealed that most visited shopping site is Taobao. While 16.8% and 13.9% visit is JingDong JD.com and Tmall.

Summary of Descriptive Statistics, Reliability Analysis and Skewness and Kurtosis of the Variables in the Study

This section of the study analysed and discussed the descriptive statistics, reliability, skewness, kurtosis analysis and correlations among the independent, control and dependent variables.

Table 5: Summary of descriptive statistics, reliability analysis and skewness and kurtosis of the variables in the study

Variables	N	Means	SD	Skewness	Kurtosis	Alpha
Perceived Trust (PT)	101	12.73	3.36	-.59	.05	.68
Convenience (CONV)	101	17.39	3.07	-1.14	1.79	.76
Price (Prc)	101	17.25	3.52	-.85	.36	.83
Product Variety (PV)	101	16.88	2.50	-.09	-.72	.60
Product Guarantee (PG)	101	10.25	3.77	.45	.37	.61
Chinese Langue Barrier (CHLGB)	101	19.21	2.84	.15	.29	-.37
Online Shopping behaviour (OSB)	101	18.02	2.68	-.63	-.64	.78
Online shopping	101	8.75	2.54	-.47	.79	.37

experience (OSEp)

To determine the fit of these variables, test of normality of the main variables was conducted. Normality of a variable is established when skewness and kurtosis values fall within the acceptable values for psychometric purposes such as ± 2 [35] [36]. Test of normality in this study revealed that most of the variables in this study were normally distributed based on the assumption by [36]. In addition, descriptive statistics and reliability analysis of the variables in this study were conducted and almost all the scales used in this analysis yielded acceptable reliability coefficients (0.60) [37]

Correlational Analysis of the Independent, Dependent and Control Variables in the Study

Pearson’s correlation or zero-order correlation analysis was conducted to test the relationship between independent variables and dependent variable. This correlation analysis was done without controlling any third variables before partial correlation analysis was conducted (see, Table 6). The Partial Correlations table shows the correlation between independent variables and dependent variable controlling for the effects of online shopping experience, program of study, program medium of teaching and Level of Chinese language proficiency (see, Table 7).

Table 6: Pearson’s Correlation among the Independent, Dependent and Control Variables in this Study

Variable	1	2	3	4	5	6	7	8	9	10	11
Control variables											
1. Program	-										
2. Medium of teaching	.32**	-									
3. Chinese language proficiency	-.08	-.21*	-								
4. Online shopping experience	.04	.09	.17	-							
5. Perceived trust	.29**	.14	-.01	.24*	-						
6. Convenience	.18	-.02	-.18	.37**	.43**	-					
7. Price	-.18	-.06	.03	.07	.17	.46**	-				
8. Product variety	.16	.00	.29**	.31**	.24*	.38**	.25*	-			
9 Product guarantee	-.02	.06	.05	-.04	-.17	-.06	.06	.16	-		
10. Chinese language barrier	.28**	.20*	-.05	.13	.22*	.26**	.36**	.20*	.11	-	
11. Online shopping behaviour	.13	-.02	.04	.24*	.26**	.41**	.36**	.37**	.04	.30**	-

*p<.05, & **p<.001

Table 7: Partial Correlational Analysis of the Independent and Dependent Variables

Control Variables	1	2	3	4	5	6	7
Independent Variables							
1. Perceived Trust	-						
2. Convenience	.354**	-					
3. Price	.240*	.532**	-				
4. Product Variety	.140	.261*	.320**	-			
5. Product Guarantee	-.152	-.056	.046	.209*	-		
6. Chinese Language Barrier	.147	.210*	.423**	.190	.112	-	
Dependent Variable							
7. Online Shopping Behaviour	.197	.343**	.376**	.333**	.046	.249*	-

* $p < .05$ & ** $p < .01$

The Table 6 indicates that online shopping behaviour relates significantly with perceived trust ($r = .26, p < .01$), convenience ($r = .41, p < .01$), price ($r = .36, p < .01$), product variety ($r = .37, p < .01$) and Chinese language barrier ($r = .30, p < .01$). However, there is no significant relationship between online shopping behaviour and product variety ($r = .04, p > .05$). The above results indicate that when no variable is controlled the dependent variable (online shopping behaviour) relates positive significantly with all the independent variables (perceived trust, convenience, price, product variety, and Chinese language barrier) except product guarantee which has no relationship.

From Table 7 which is the Partial Correlations table, the study revealed that there was a significant positive correlation between convenience and online shopping behaviour which was statistically significant ($r = .197, N = 101, p = .053$). However, in the Table 6, the zero-order correlation showed that there was a statistically significant, moderate, positive correlation between convenience and online shopping behaviour ($r = .408, n = 101, p = .000$). The study revealed that the zero-order correlation between price and online shopping behaviour is, indeed, a statistically significant and moderate ($r = .356, n = 101, p = .000$). The correlation after controlling for the third variables, however, is moderate and statistically significant, ($r = .376, n = 101, p = .000$). Also, the study revealed that the zero-order correlation between product variety and online shopping behaviour is moderate and statistically significant ($r = .368, n = 101, p = .000$). The correlation after controlling for the third variables, however, is moderate and statistically significant, ($r = .333, n = 101, p = .001$). The study further revealed that the zero-order correlation between Chinese language barrier and online shopping behaviour is moderate and statistically significant ($r = .295, n = 101, p = .003$). However, the correlation after controlling for the third variables is moderate and statistically significant, ($r = .249, n = 101, p = .014$). Furthermore, the study revealed that the zero-order correlation between perceived trust, product guarantee and online shopping behaviour is respectively moderate and statistically significant ($r = .258, n = 101, p = .005$) and negligible and statistically insignificant ($r = .041, n = 101, p = .684$). However, the correlation after controlling for the third variables is not statistically significant ($r = .197, N = 101, p = .053$) and ($r = .046, n = 101, p = .652$) respectively.

V. DISCUSSION

The interpretation of the findings is that the observed positive "relationship" between convenience, price, product variety and Chinese language barrier and online shopping behaviour and the null

relationship between perceived trust and product guarantee and online shopping behaviour is due to underlying relationships between each of those variables and the respondents' online shopping experience, program of study, program medium of teaching and Level of Chinese language proficiency. The findings first confirmed our predictions that there is a significant positive relationship between convenience, price, product variety and online shopping behaviour after controlling for the effects of online shopping experience, program of study, program medium of teaching and Level of Chinese language proficiency. Further, the findings refute the prediction that perceived trust and product guarantee links positively and statistically significant and Chinese language barrier links negatively with online shopping behaviour after controlling for the effects of online shopping experience, program of study, program medium of teaching and Level of Chinese language proficiency.

The results were consistent with existing theories and past studies on factors affecting online shopping behaviour. Stream of researchers such as [20] [38] [39] discovered positive relationship between convenience and online shopping behaviour. There is a significant statistical positive link between price and online shopping behaviour [39] Another group of scholars and researchers revealed that there is a significant statistical positive relationship between product variety and online shopping behaviour of online shoppers [17] [40]

VI. CONCLUSIONS

Managerial Implications

In particular, this study has contributed to existing literature by adding to the existing limited knowledge on factors affecting international students' online shopping behaviour. This study found a significant positive relationship between price, product variety, convenience and Chinese language barrier. This suggests to online shop owners and potential online shop owners that some of the best means to improve their customers behaviour are that they have to always provide different assortment of products on their websites for the online shoppers to choices and buy at a reasonably lower price. Also, they should design their websites to attractive and more convenience to use. The findings of the study must inform the online shop owners to create language options for customers to choose the type of language they use to communicate better on the site and this will definitely boost the customers buying behaviour.

Limitations & Future Research

The purpose of this research was to know to what extent Chinese language affects international students' online shopping behaviour. The findings of the study revealed that the most important factors that affect international college students' online shopping behaviour are price, product variety, convenience, Chinese language barrier. Secondly, the study revealed that there is a significant statistical positive relationship between price, product variety, convenience, Chinese language barrier and international college students' online shopping behaviour. Also, the study discovered that there is no relationship between perceived trust, product guarantee and international college students' online shopping behaviour.

One major limitation is the limited geographical coverage and the small sample size. This study was restricted to international students in Suzhou Area. It is therefore suggested that future studies should be extended to cover large number of universities. Again, 101 international students were sampled for the study. However, future study should cover large sample size. This study only investigated self-reported consumer behaviour, which may not always translate to the actual behaviour. Hence, future studies could investigate consumers' actual behaviour in terms of buying and other consumption-related behaviour.

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