Exploring Determinants and the Moderating Role of Shopping Orientation of Purchase Intention of Cross-Border Online Shopping

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ABSTRACT
Cross-border online shopping has become a worldwide trend. Enterprises are interested in what makes consumers go cross-border online shopping. To assist enterprises to make better cross-border e-commerce marketing strategies and expand the area of e-commerce online shopping, this study aims to explore and examine determinants that may affect purchase intention of consumers or not. This study proposes a new model for purchase intention of cross-border online shopping with 4 dimensions of deterministic factors. We examine what moderators significantly affect the relationships between deterministic factors and purchase intention. In addition, we collect data from at least 56 different cross-border e-commerce websites. “Price sensibility”, “trust”, “shopping convenience” and “price of product” are the most influential determinants in cross-border online shopping. Moderators do have moderating effects on the relationship between purchase intention and some specific constructs. Besides, we divided data into groups by types (B2C/C2C) of platforms, and found that the significant determinants differed by types of platforms. This study provides suggestions to enterprises for their cross-border e-commerce strategies because we found significant determinants of purchase intention. Since we also examined moderating effects, enterprises can improve their market segmentation according to those moderators.

KEYWORDS: Cross-border Online Shopping, Unified Theory of Acceptance and Use of Technology, Purchase Intention, Determinants of Purchase Intention

INTRODUCTION
Online shopping has broken geographical barriers, and Internet continues to generate new business models. Due to the characteristics such as ubiquitous, and borderless, the trend of cross-border online shopping has been going upward. According to European Commission (2013), the amount of consumers who go cross-border online shopping has doubled from 2006 to 2013. Taobao (short for Taobao.com) annually launches 1111 sales festival (Singles’ Day sales), which is a huge promotion campaign held on November 11th. In 2015, it was worth $14.3bn, a 60% increase in such one year (Yan 2016). Cross-border online shopping is the international trade between enterprises or individuals from different nation, paid and completed via online platforms, and goods delivered by cross-border logistics. Although information exchange became faster thanks to the Internet, due to its nature of international trade, there are difficulties in communication, delivery and regulatory issues in the development of cross-border e-commerce. Purchasing brokers has always been popular by means of solving consumer’s problems of buying goods that cannot be bought in his/her nation. Brokers help consumers by communicate with sellers, or “gathering” goods, which is similar with group buying, for multiple consumers to reduce the cost of international delivery. However, cross-border e-commerce is that enterprises deliver goods directly to where consumers are. To deal with communication barriers, enterprises adapt website localization for foreign markets with “local language” versions, so that they can approach more consumers. On the other hand, in order to deliver goods directly to consumers, enterprises look for cooperation with local third-party logistics. They may offer promotional shipping cost to attract consumers to come to them.

Since the complexity of cross-border online shopping is much higher than traditional domestic online shopping, understanding what added value can cross-border online shopping give to consumers is the critical success factor. If an enterprise intends to develop cross-border market, it is necessary to know the behavior and decision process to make good business strategy. Previous research related to cross-border online shopping mostly focus on auction websites purchasing brokers to study the behavioral intention of consumers. This paper focuses on independent purchase that consumer can complete by oneself instead of going through purchasing brokers or group buying.

Recently, cross-border online shopping shows vigorous growth, and it has become new engine for economic activities and international trade. The faster the nation develops cross-border online shopping, the higher its speed of increasing international trades is. Cross-border online shopping gradually becomes prevalent among consumers and they encounter with the topic recurrently in their daily life, this is hence an important trend for enterprises. It is a big challenge about how to attract more consumers to use. The importances of cross-border online shopping are concluded as follows:

Cross-border online shopping is the new trend of e-commerce: Purchasing agency has become an industry since a long time; even individual brokers can grow into well-established agent websites. However, under the huge waves of globalization, process of international trade becomes smoother, and consumers are more familiar with ways of cross-border online shopping. Except purchasing brokers, leading e-commerce enterprises such as Amazon and eBay has started their cross-border e-commerce. Individuals or small to medium size enterprises also try hard to seize the opportunity. The activeness of such business activity also shows that cross-border online shopping is a new trend in e-commerce.

The complexity of cross-border online shopping makes itself an important issue: in the past online shopping occurred domestically, so e-commerce studies were in the context of domestic online shopping. In order to develop cross-border e-commerce, enterprises
are exposed to new challenges of cash flow, logistics, and information flow at the same time. Previous success model may not cover all of the problems generated by cross-border trading obstacles.

The purpose why consumers go cross-border online shopping: previous e-commerce research tried to understand the reason why consumers adopt new shopping channel(s) from different perspectives. The development of cross-border online shopping is so rapid and prosperous, so that asking about what factors are behind such consumer behavior brings out new possibilities for research. Thus, this study aims to look for determinants that impact purchase intention and behavior of consumers when they use cross-border online shopping service.

This study considers cross-border online shopping as a new technology service, so we adapted the perspective of technology acceptance to discuss determinants of consumer’s purchase intention. Moreover, due to the complexity of context of cross-border online shopping, it is expected that a bigger model is necessary. In the past, the Unified Theory of Acceptance And Use of Technology (Venkatesh et al. 2003) is an interdisciplinary model that combined several behavioral and intention models. It was the basis principle of our study and we explored more factors in other e-commerce issues to expand the dimension of determinants. In the process of cross-border online shopping, we can see four roles that interact with each other. They are consumer, service provider, others around one consumer, and environment such as institution. In order to clarify these four forces that affect consumer’s choice and their interaction among each other, our research questions are around these four roles in cross-border online shopping.

This paper has the following objectives:
To explore factors about online consumers, and whether those factors impact purchase intention of cross-border online shopping.
To explore factors about cross-border online shopping platforms and whether those factors impact purchase intention of cross-border online shopping.
To explore factors about interpersonal interaction around consumers and whether those factors impact purchase intention of cross-border online shopping.
To explore factors about environment and institution and whether those factors impact purchase intention of cross-border online shopping.
To see whether different types of platforms relate to purchase intention of cross-border online shopping.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Related study of cross-border e-commerce

Global sourcing has become important for manufacturing products at a lower cost. Products made overseas can be seen around our lives. Meanwhile, the rise of e-commerce significantly reduced the cost of information exchange. In previous marketing research, “shopping” is the behavior of consumer that make retail purchase outside the area they live (LaForge, Reese, and Stanton 1984), and whether or not the consumer purchase outside the community is critical (Riecken & Yavas 1988). Broekemier and Burkink (2004) found that rural consumers utilized Internet to make efficient shopping, and they intended to increase this behavior. Via Internet, consumers can now search and purchase cross-border products by just clicking. Besides enterprises, European Union(EU), which wants to create single digital market, focus on cross-border e-commerce, for instance. Gomez-Herrera et al. (2014) used gravity model to study the drivers and impediments for cross-border e-commerce in EU.

The exhibition of having preferences for particular shopping patterns by consumers is defined as “shopping orientation” in past research, but there are still no common standards for defining shopping orientation. Classification for shopping orientation is fragmented. However, Yen et al. (2008) indicates that shopping orientation can be roughly divided into two kinds: goal-focused and recreational shopping orientation. The former is that consumers aim to purchase goods or service by an efficient and easy way, under the least probability of being interrupted. The later is that consumers with high recreational shopping orientation go shopping for fun and enjoyment induced by the purchase process itself. These two kinds of consumers are differentiated by their behavior of either chasing for utilitarian or hedonic shopping value. To consumers, online shopping provides benefits including convenience, flexibility and reduction of cost and effort (Cho 2004). The capability of interaction and displaying vast variety of various goods let e-commerce generate more economic values and increase more shopping efficiency than traditional retailing.

Cross-border online shopping behavior under perspective of technology acceptance

Theory of Reasoned Action (TRA) proposed by Fishbein and Ajzen (1975) assumed most behavior of an individual is able to take actions on his/her own will, and behavioral intention has impact on taking real action. Behavioral intention is affected by individual’s attitude toward the action and Subjective Norm. Ajzen (1985) added Perceived Behavior Control as a new determinant of TRA model, and proposed Theory of Planned Behavior (TPB). These two models have been widely applied to understand acceptance behavior of an individual. Technology Acceptance Model (TAM), focused on information system usage in an organization, was proposed by Davis (1989), which indicates that Perceived Usefulness and Perceived Ease of Use are two determinants that affects individual whether intent to use the technology or not. Perceived Usefulness means an individual in an organization think if using specific program or system can improve his/her job performance. Perceived Ease of Use is defined as the degree of how easy an individual thinks learning to use a specific program or system. The rise of online shopping relied on the improvement of communication technology, and the perspective of technology acceptance is used much in previous research to explain the behavior of online shopping of consumers (Ge芬 & Straub 2000; Pavlou 2003; Koufaris 2002).

Venkatesh et al. (2003) empirically compare 8 user acceptance models, formulate the Unified Theory of Acceptance and Use of Technology (UTAUT), and validated it. After empirically comparison, several constructs were found to be direct determinants of intention or usage, and those were theorized into a model with four constructs: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions. There are also four moderators: Gender, Age, Experience and Voluntariness of Use. The variance explained by UTAUT is high, and it was interdisciplinary because it was validated among different human behavior models. UTAUT gave us ideas and basis of combinig root constructs and determinants of behavioral intention. We were going to explore more factors in e-commerce context and look for what’s new in cross-border online shopping.
Hypothesis development

Based on previous research and UTAUT model, we tried to employ four dimensions from UTAUT together with other factors we found into a new model. We organized determinants that will influence purchase intention into: (1) consumer’s perception of online shopping, (2) consumer’s perception of online stores, (3) influence from people around the consumer, and (4) environmental factors that facilitate or limit consumer’s behavior. We named these four dimensions as: (1) buyer factors, (2) seller factors, (3) social factors and (4) environmental factors.

These leads us to the following hypotheses:
H1a: Consumer’s attitude toward price of product and its changes has significant influence on purchase intention.
H1b: The degree that consumer think about motivation and behavior of cross-border online platforms are trustworthy has significant influence on purchase intention.
H1c: The degree that consumer is willing to take a risk to use innovative cross-border online shopping service has significant influence on purchase intention.
H1d: Judgement of consumer’s own ability to go cross-border online shopping has significant influence on purchase intention.
H2a: Consumer’s attitude toward goods that is available via cross-border online shopping has significant influence on purchase intention.
H2b: Efficiency of cross-border online shopping has significant influence on purchase intention.
H2c: Consumer’s perception of how good about the website overall operation, appearance or comparison to other websites has significant influence on purchase intention.
H2d: The degree whether consumer thinks the goods he/she bought via cross-border online shopping is a good deal and reasonable has significant influence on purchase intention.
H3a: The degree to which going cross-border online shopping can promote his/her image or status in one’s social system has significant influence on purchase intention.
H3b: The degree consumer’s perception of others think he/she should go cross-border online shopping has significant influence on purchase intention.
H3c: The influence of consumer’s commitment and esteem to groups he/she belong to on purchase intention has significant influence on purchase intention.
H4a: The degree that cross-border online platform has protective structure to ensure consumer’s data security in online transaction has significant influence on purchase intention.
H4b: Consumer’s attitude toward third-party payment system on cross-border online platforms has significant influence on purchase intention.
H4c: The stereotypes come from the language of cross-border platform has significant influence on purchase intention.
H5a: Gender moderates the influence of determinants on purchase intention
H5b: Age moderates the influence of determinants on purchase intention.
H5c: Income moderates the influence of determinants on purchase intention.
H5d: Product type moderates the influence of determinants on purchase intention.
H5e: Hedonic or goal-focused shopping orientation moderates the influence of determinants on purchase intention.

RESEARCH METHODOLOGY

Research model

According to our classification of four dimensions of determinants, the goal of this study is to examine if the determinant has significant influence on purchase intention of cross-border online shopping. The research model and hypotheses are shown in Figure 1.

Research design

This study was designed as a survey research. Data were collected from consumers who had ever committed cross-border online shopping. Each item of the questionnaire was measured by the Likert-7 point scale except the basic information of the respondents. All of the items were listed on Appendix 1.

For data analysis, we used partial least square (PLS) method, which is used to analyze the latent construct. This study used SmartPLS (Ringle, Wende & Will 2005), the tool which based on structural model, to run and validate the model.

Stages of analysis of this study are (1) descriptive statistics, (2) reliability (3) validity and (4) verification of hypothesis. Descriptive statistics analysis includes demographic information of the data and calculation of frequency of used cross-border platforms and bought product types. We use composite reliability (CR) and Cronbach’s a value to see if this model has enough reliability, and test factor loading of each item. Validity analysis includes content, convergence, and discrimination. The items listed in our survey were modified from previous study and reviewed to ensure content validity. Convergence and discriminant validity will be checked by average variance extracted (AVE) and factor loadings of each determinant. The last stage we use PLS algorithms to see the path coefficients and explanatory power of this model, and bootstrap method to test the significance of hypotheses.

DATA ANALYSIS AND RESULTS

Demographic information, used platforms and purchased products by consumers

Nearly 69% of the respondents were female, and 31% were male. The biggest age group is between 18 and 25. 22.7% have monthly
income below NT$5,000, and 19.8% earns between NT$5,001 and NT$10,000 per month. Most of the respondents (33.7%) make cross-border online purchase every half year. It is noteworthy that we had 14% respondents that had made only one cross-border online purchase ever.

We received names for at least 56 different cross-border e-commerce websites that consumers have used. If more than one consumer answered a particular brand official website, we counted as one name. The most popular platform is Taobao. Frequency of visit to popular websites are listed below. Besides, those who have been used only once are: Pinkoi, SSENSE, SIZE, Sephora, okwei, Tmart, USC, EAST DANE, luisaviaroma, travel agent, hotel reservation, HMV, Brandy Melville, Meikido, Toranoana, Surugaya, CDJapan, inspiring wave, Urban Outfitters, Farfetch, beautyexpert, VitaSprings, eVitamins, mercari, Alibaba, Mytheresa, Net-a-port, Juicy Couture, KoreaDepart, FashionWalker, Matches fashion, OUTNET, and Selfridges.

We also calculated the quantity of products that consumers bought. Most purchased products are clothing, shoes, bags and books. Products and frequency are listed below. In analysis stage of this study, we referred to classification of product type by Nelson (1970), distinguished them into search goods and experience goods.

**Verification of reliability and validity**

Next we have to verify the reliability and validity of this model. Validity includes three considerations: (1) content, (2) convergence and (3) discrimination. We modified our questionnaire from previous developed items and discussed with experts to make sure we have enough content validity. Then we checked if AVE of each item is over 0.5 and factor loadings is over 0.5. After analysis, some of the determinants do not satisfy these thresholds. We deleted some items, and made this model comply with convergent validity.

To examine discriminant validity of each determinant, we should compare square root of AVEs and correlations. If all the square root of AVE is bigger than any other correlation of this determinant and other one, this model has enough discriminant validity. The result listed below shows our model does have enough discriminant validity. Suggested by Numally (1978), if every Cronbach's a value of each item is between 0.5 and 0.6, then there's enough reliability. Every item, and that every Cronbach's a value is over 0.6. Furthermore, all of the composite reliability of each item is over 0.7, suggested by Fornell & Larcker (1981). It means that this model reached internal consistency, and therefore it has good reliability.

**Hypotheses testing**

We used PLS algorithms and Bootstrap method to calculate path coefficient and significance of every item. We first tested the original model, then we added moderator one at a time to test the moderating effects. The explanatory power (R2) of original model is 54.2%. Results of hypotheses testing are listed below:

<table>
<thead>
<tr>
<th>Path</th>
<th>Path coefficient</th>
<th>P</th>
<th>Testing result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price sensibility → purchase intention</td>
<td>0.291899</td>
<td>0.000***</td>
<td>H1a supported</td>
</tr>
<tr>
<td>Trust → purchase intention</td>
<td>0.131066</td>
<td>0.014 **</td>
<td>H1b supported</td>
</tr>
</tbody>
</table>
Under 99% confidence level, “price sensibility”, “convenience” and “price of product” has significant impact on purchase intention. Trust has significant influence on purchase intention under 95% confidence level.

CONCLUSION AND DISCUSSION

Price sensibility and Trust

Our study found that consumers who preferred low price had higher purchase intention, and this is empirically proved by the fact that consumers who go cross-border online shopping look for lower price of the product. Past research of e-commerce proved that trust toward online shopping is an important issue. In cross-border e-commerce, it is also important to build the bridge of trust between buyer and seller. Consumer’s trust toward cross-border online shopping significantly affects purchase intention. Innovativeness, another buyer factor we examined, has negative path coefficient toward purchase intention because the questionnaire is set in a such way that the higher the consumer scores, the more conservative this consumer will be. This finding met our expectation for innovativeness. Although self-efficacy didn’t have significance influence on purchase intention, its p-value is so close to the threshold. We think that the process of cross-border online shopping is usually more complex than domestic online shopping, so that also met our expectation.

Convenience and Price of Product

We found that convenience and price of product have significant impact on purchase intention in cross-border online shopping. We inferred that if cross-border online shopping provides more shopping efficiency for consumers, then consumers will have higher cross-border online shopping intention. On the other hand, if consumers think transactions via cross-border online shopping are good deals, they will purchase more. Website quality and product availability, two other factors under seller factors, have no significant influence on purchase intention, but the path coefficients are positive. We inferred that consumers focus more on whether they can complete their purchase order when they use cross-border online platforms.

Social factors and Social Identity

In this study, we organized three social factors: image, normative belief and social identity. All of these have no significant influence on purchase intention. We inferred that in recent context of cross-border online shopping, social influence doesn’t play an important role on affecting individual purchase intention. However, there’s still possibility that the form of social influence has changed, or the way that consumers will be affected by others is different from traditional domestic e-commerce. For instance, we didn’t include the concept of “word-of-mouth” in our study. In order to expand social influence in cross-border context, areas such as word-of-mouth can be taken into consideration to explore new ways of interpersonal interaction that affect consumer purchase intention. Incidentally, social identity, for some of the specific platform users, has significant influence on purchase intention. We inferred that social identity has more power in cross-border context than the other two factors.

Environmental factors and Country-of-language Effect

This study hopes to provide a model which combined existing institution, technology and cultural factors. For that we put structural assurance, third-party payment and country-of-language effect into environmental factors for the study. Overall, environmental factors have no significant impact on purchase intention, however for some of the specific platform users, country-of-language effect has significant influence on purchase intention. We inferred that cultural and lingual factors still have influence in cross-border online shopping context.

Moderating effects

According to our analysis, gender, income, age, experience goods and shopping orientation have significance moderating effects in the relationship between some specific determinants and purchase intention. For female, normative belief has significant influence on purchase intention. We inferred that female consumers perceive important take others’ opinion more seriously, and then be affected by it more easily. Income and age have moderating effects on the influence of third-party payment to purchase intention. It showed that consumers with different social and economic status have different opinion about using third-party payment while going cross-border online shopping. Impact of social identity on purchase intention is significant for those respondents who didn’t buy any experience goods. It meant that these consumers bought search goods via cross-border online, and their purchase intention is affected by the degree they devoted to social group they thought they were affiliated to. Moderating effects of hedonic/goal-focused shopping orientation are interesting findings of our study. Hedonic shopping orientation moderated the influence of third-party payment on purchase intention, and both orientations have significant moderating effects on the impact of trust on purchase intention. We thought that shopping orientation represents the shopping value that consumers look for, so the relationship among
shopping value, trust, and existing system can be taken into a deeper discussion in the future.

Determinants and Platform types
Our study found that if consumer use different types of platforms, the determinants that may cause significant influence will differ. Price sensibility was significant in all of the groups. Taobao-only users and C2C-only users had determinants in common: social identity and country-of-language effect. However, most of C2C-only users were also Taobao-only users, so it was expected the results are similar. Both B2C and C2C users scored similarly to the overall sample, except that trust for both B2C and C2C users had no significant influence on purchase intention. For B2C-only users, self-efficacy had significant impact on purchase intention, while convenience didn’t. We inferred that B2C platforms include brand official websites and online retailers, which may have much difference from each other. This may be the reason that self-efficacy will impact purchase intention. Although we found that the significance of the determinants differs by the types of platforms, it is noteworthy that we used B2C/C2C for the basis of classification. The result may differ if basis is changed.

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