Consumers' Satisfaction for Cross Border Online Shopping : Based on the End-User Computing Satisfaction Model

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해외직구에 대한 고객 만족도 : 최종사용자 만족 모형을 기반으로

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While the term online shopping refers to all online transactions, cross-border online shopping means shopping activities purchasing products or services over the internet for the customers abroad. As Internet use for the international shopping activity increasing, cross border online shopping has grown substantially for last decade. This study is about the problem regarding the cross border online shopping for two different countries and the variables that influence their shopping behavior. The cross border online shopping has been increased by the growth of Internet access. However, the growth of the Internet use does not guarantee a successful development of cross border e-commerce for every country. To find out the perception for cross-border online shopping for two different cultures, shoppers from two countries with different cultural background were chosen, and the perception for cross-border online shopping from each culture is contrasted. For statistical Analysis, ANOVA is used to find the relationship between a single non-metric independent variable, and multiple metric dependent variables. Hofstede's cultural dimensions model is adopted for this study as a tool to find out the patterns of cross border online shopping. This study showed what the variables would affect the perception in cross border online shopping. The results of this study indicated that cross border online shoppers with different culture were notably different on two variables identified-timeliness and ease of use.

Keywords : Cross Border Online Shopping, Cultural Differences, Consumers' Satisfaction

1. Introduction

Cross border online shopping, Which is the online shopping across the border, has grown substantially during the last decade. Cross-border online shoppers spend twice as much as consumers who shop online domestically, according to a recent report by PayPal and research firm Ipsos. The

study examined data from 175,000 consumers in 22 countries, analysing their cross border shopping habits [5]. Globally, U.S. goods account for 26% of cross border purchases, with Chinese goods accounting for 18%. US products are favored by North Americans, The Middle East and Africa has the highest percentage of cross border online purchases. 50 percent of goods bought online are imported from other regions. United Arab Emirates is the key region for imports, with 58 percent of online purchases imported. 80% of these cross border imports come from Asia, North America and Western Europe. Latin America was the second highest region for

cross border trade, with 44 percent of its online purchases coming from other regions. North America was its main supplier accounting for 60 percent of cross border online imports.

Asian countries like Indonesia, Japan and India were only importing 12 percent or less of their online purchases from outside of Asia. However, e-Commerce hot spots like Hong Kong, Singapore and Vietnam saw imports percentages of 31, 43 and 55 respectively. The average among Asian countries for cross border purchases online was 21 percent. China sources 20 percent of its online purchases outside of Asia.

The cross border online shopping has been increased by the growth of Internet access. However, it does not guarantee a success of cross border online shopping for every country. The cultural difference can can influence the development of online shopping. Hofstede [8] described that people with one culture might act unaccordingly to the people with different cultural background for the identical stimulus.

For examining the effect of cultural background on the perception for cross border online shopping, shoppers from U.S. and S, Korea-were selected, and the perception for cross border online shopping of U.S. shoppers is contrasted with those of Korean shoppers. Using the end-user computing satisfaction variables identified by Doll's study [3], this research would fetch the particular variables that influence the cross border online shoppers.

This study will investigate the perception of cross border online shopping by conducting the survey among the shoppers for the factors from the EUC instrument. Using the factors identified, a research model is developed to measure the online shoppers' satisfaction in cross border shopping environment.

2. Research Background

The diffusion of cross border online shopping can be different by the culture of each country. Hofstede [8] stated that people with one culture could react differently with another culture to the identical stimulus. Thus, culture plays important role in determining the factors which affect the cross border online shopping behavior. Hofstede [8] also discussed four dimensions of national culture. Those were power distance, uncertainty avoidance, individualism, and masculinity.

According to the Press [14], large quantities of product

information to be transported and retrieved by the wide diffusion of the Internet. By the diffusion of Internet use for commercial purpose, the areas such as cross border online shopping is hot subjects. However, studies on the factors influencing cross border online shopping behavior have been given little attention [11, 18].

Additionally, most of research on cross border online shopping have been done for U.S. subject. However, theories in the field of social sciences indicate that theories that applies in one nation does not necessarily apply in other nation [7]. Thus, it is suggested that the research on cross border online shopping should look the impacts of the Internet technology in different nations with different cultural backgrounds.

This study is designed to identify the model of cross border online shopping between the shoppers with different cultures. This research is also to find out the factors that facilitate or hinder the cross border online shopping behavior of the shoppers in each culture. To achieve these objectives, questions were asked. First, what are the factors that influence the diffusion of the cross border online shopping for shoppers? Second, are there any differences between American and Korean cross border online shoppers in the way that they perceive each factor for their cross border online shopping activity.

The results of the study are supposed to show how the factors would affect the shoppers' perception in cross border online shopping environment.

3. Literature

Building the research construct is an important topic on information systems user satisfaction. The concerns were an inappropriate construct development [1, 3, 9, 12]. Woodroof and Kaspen [17] also discussed that by their research searching the relationship between IS success and user satisfactions, They discussed that the shortage of progress in the information systems field is the shortage of conceptual development offered . Even though the proper constructs had been made, a single construct, will not help prediction and therefore contributes a little to science [12]. In addition to that, multiple studies have explained that the importance of making standardized tools for measuring user satisfaction [2].

For describing the information systems user satisfaction and checking the fit of each hypothesized mode, the con-

firmatory factor analysis (CFA) could be employed [3]. Based on the theory and previous research, they proposed several models. One model was selected for showing the underlying factor structure. After checking the higher order factors and model-data fit. CFA was employed to check items in the selected mode and the validity of the factors and reliability. By the results of this study, the end user computing (EUC) model was developed. This model could be used as a standardized instrument measuring the user satisfaction with a specific application.

The cross validation showed the proof that EUC satisfaction model should be a multi-constructed model consisting of five sub-scales which were accuracy, contents, format, timeliness and ease of use. This results prove that managers and researchers could use theses sub-scales.

The relationships were used for developing the hypothesis on the cross border online shopper's behavior. The model of cultural difference by Hofstede [7] was also employed for comparing the difference of perception for each cross border online shoppers with different culture.

According to the study by Doll et al. five external variables were collected.
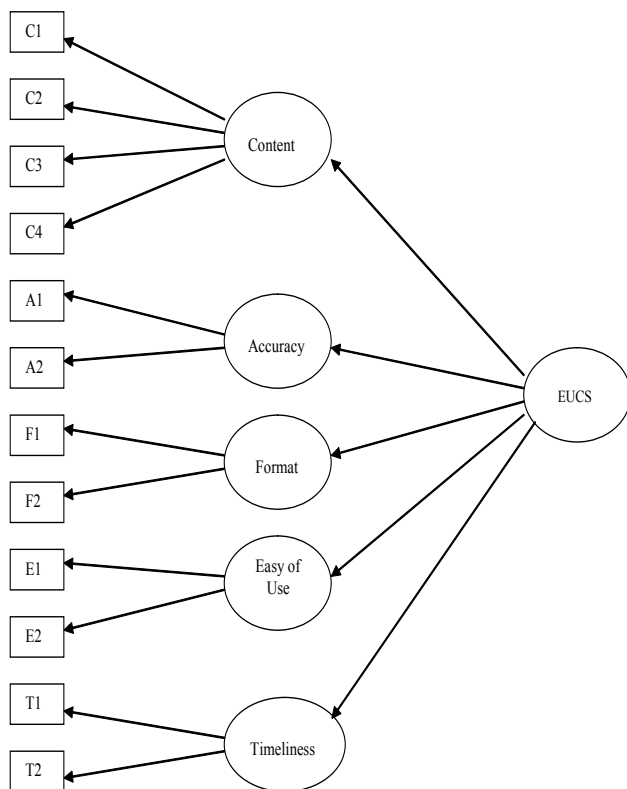
Source : Doll et al. [3].

〈Figure 1〉 End User Computing (EUC) Satisfaction Model

4. Methodoloy

To create a survey for cross border online shoppers presents a problem. The problem come from the methodology which employed to collect answers from each cross border online shoppers. Because there is no central registry of cross border online shoppers, to contact every user of the shoppers is not possible. Therefore, surveys had done by picking up a subset of cross border online shoppers.

For reaching a proper subset of cross border online shoppers, more than hundred shoppers for both U.S. and S. Korea were chosen. University students at the University of North Carolina at Chapel Hill were chosen for U.S. survey, and students at Dankook University were chosen for Korean survey. Selecting university students for the sample were employed since it is easy to collect sample. University students are the good population for online shoppers according the survey by GVU Center at Georgia Tech. University.

The questionnaire was made of two parts. The questions were designed to ask shoppers' opinions on the variables in the cross border online shopping for the first part, The second part included the questions describing cross border online shoppers. A five-point Likert scale which represents "Strongly disagree" on one end and "Strongly agree" on the other.

Cross border online shopping can be described as the getting services or products through online across the border. Because there is a big difference between purchasing in traditional markets and in online, the buyers should know what alternatives the online purchase can offer to the customer that is not possible to shop at conventional market. Five variables were collected from research to fetch the variables influencing cross border online shoppers,

A few questions are asked to find these variables. The questions examine cross border online shoppers' perception with the five-point Likert scale. The content was measured by responding following statement, "The content of the cross border online shopping site can be satisfied for shopping." The statement, "Using Internet for cross border online shopping is relatively dependable for operation in shopping," was employed to check the online shopper's perception on the accuracy factor. The buyers' perception on format of the online shopping environment was measured by responding to next statement, "Format of the site for cross border online shopping is accurate." The online shopper's perception on easy of use variable was checked by next statement. "Cross

border online shopping using Internet is relatively easy," was used to measure the shoppers' perception on the easiness factor. The timeliness of cross border online shopping is to check the shoppers' perceptions on the timeliness of online shopping tool.

For the statistical analysis, ANOVA were employed to analyze the hypothesis for research variables. ANOVA is employed when a research problem searches the relationship between a dependent variable and categorical independent variables. For this study, ANOVA involves multiple metric dependent variables and single non-metric independent variable, As shown on the <Table 1>, multiple dependent variables were employed respectively to each hypothesis. To compare the cross border online shoppers' perception from both nations, a F-value with .05 level of significance was set for this analysis.

<Table 1> Dependent Variables for ANOVA

Dependent Variable	Mean Square Effect	Mean Square Error	F (df1.2)	P-level
Content	11.37652	.958765	15.47635	0.00000
Accuracy	10.78473	.857463	12.57362	0.00000
Format	24.84765	.905847	27.48376	0.00000
Easy of Use	5.47567	1.847363	4.85739	0.03298
Timeliness	20.47364	.848273	23.48576	0.00002

For finding out the variables describing the differences of the perceptions for cross border online shopping in the U.S. and Korea, ANOVA was employed to assess the variations in the two cultures. The experiment was to test the perceptions of cross border online shoppers on online access in terms of the variables identified.

The assumption-the homogeneity of the variance of the dependent variable between groups-is critical to successful ANOVA. Several tests are available for testing this assumption. A scroll sheet with the Cochran C statistic, Bartlett Chi-square test, and Hartley F-max statistic, with appropriate p-level and degrees of freedom were brought up by the option in STATISTICA package. After the investigation, the homogeneity of variances assumptions of EUC satisfaction variables were all in good range. However, it is critical to test any correlations between the means and the standard deviation. Thus, the plot of means versus standard deviations was checked, and no significant correlation had been found.

This research was to find out any differences in the per-

ceptions of cross border online shoppers on the variables. the U.S. and S. Korea represented the non-metric independent variable, and identified variables by the Doll's study represented metric dependent variables for each analysis. Each F-value on the ANOVA table verifies that there are significant differences between the cross border online shoppers in the two different countries for all variables except Accuracy and Format. Compared to Korean cross border online shoppers, the U.S. shoppers leaned to agree with that easy of use and timeliness in cross border online shopping was not good enough compare to the other variables.

5. Conclusion

Elashmawi and Harris [4] argued that Individualist societies put more empas is on being self-interested, independent, and self-motivated.

<Table 2> Summary of Research Findings

Research Hypotheses	Expected Findings	Findings
No differences in terms of their perception on the *content*	Not Supported	Not Supported
No differences in terms of their perception on the *accuracy*	Not Supported	Not Supported
No differences in terms of their perception on the *format*	Not Supported	Not Supported
No differences in terms of their perception on the *ease of use*	Not Supported	Supported
No differences in terms of their perception on the *timeliness*	Not Supported	Supported

Individualists like U.S. cross border online shoppers feels more easy with the information gathering and impersonal mode of communication that is associated with cross border online shopping. Individualism is expected to positively related to perceived usefulness of the cross border online shopping. The findings of this research showed that Korean online shoppers rated following variables favorably : timeliness of the cross border online shopping and easy of use. as expected.

Regardless of whether the technology is easy or difficult to use masculine society shows more care for the usefulness of technology [16]. The the U.S. online shoppers which is in more masculine society would show more interest on the usefulness of the cross border online shopping. Hofstede [7]

argued larger power distance implies that followers prefer to follow clear rules and directions from above and respect authority. The perception of cross border online shopping for Korean shoppers was more negatively related on the most of the variables presented in this research than american subjects due to the significant reliance on clear rules and directions in big power distance societies.

The online shopping environment creates high uncertainty avoidance. In high uncertainty avoidance culture, people are more concerns about learning new skills [7]. Because the characteristic of the Internet affects the potential online shoppers to uncertain direction, the perception on cross border online shopping was negatively related to uncertainty avoidance. As anticipated, Korean online shoppers with high uncertainty avoidance showed a lower level of preference for the variables presented, As Elashmawi and Harris [4] depicted, Individualist societies such as U.S. show more emphasis on being self-motivated, self-interested and independent. U.S. online shoppers are individualists which feel comfortable with information gathering which is associated with the online environment and the impersonal mode of communication.

The hypothesis that-Individualism is positively related to perceived usefulness of the cross border online shopping and following use of the it- is confirmed. This result explained that the perception of cross border online shoppers in two countries showed U.S. shoppers rated the following variables favorably as anticipated : content, accuracy, and format. Masculine society is supposed to show more concern on the usefulness of modern technology [16]. The expectation was satisfied by the result of this study Hofstede [7] also argued that greater power distance means that prefer clear rules and directions from above, and following people respect authorities.

The results of this study indicated that cross border online shoppers with different culture were notably different on two variables identified-timeliness and ease of use (see <Table 2>). The F-values showed there were differences between the cross border onlijne shoppers in the two groups with different cultural background for those variables. Compared to the U.S. shoppers, Korean cross border online shoppers agreed with the idea that the online shopping with timeliness and ease of use is more favorable. However, other variables did not make any difference in the level of satisfaction for cross border online shoppers. Cross border online shopping provides online shoppers with opportunities to look for products without location and time constraint. Therefore, traditional shopping environment can be impacted significantly by cross

border online shopping. The success of cross border online shopping depends on recognizing the multiplicity of online shopping behaviors, as well as identifying idea of increasing the shoppers' satisfaction in a cross border online shopping environment. Through this study of cross border online shoppers in two different culture, this study can provide marketers a better idea on how they will be able to meet shoppers' needs and to develop market platforms for cross border online shopping. Recently, enhancing the satisfaction of the online shoppers' experience came both from consumers' side and manufacturers' side. This subject are getting more attention from the industries and academics. As this study suggests, the cross border online shopping marketers can try to increase the satisfaction in cross border online shopping by changing their business platform for the suggested variables in this study. The bushiness marketers can also develop better platforms and strategies with thses variables.

There are couple of limitations to this study. First, the smaples collected for this study might not include all actual cross border online shoppers for both countries. Even if GVU study explained that the experienced Internet users were between 21 and 30 years old, the sample for this study might not include the entire population of cross border online shoppers. Second, only limited influences variables were included to predict the cross border online shopping behavior. Individual variables, such as family, social class, and situational variables were not examined for this study. Following studies are needed for looking how individual difference influence cross border online shopping behavior. Third, recreational motivations for cross border online shoppers could be associated with cross border online shopping activities. Shim and Mahoney [15] suggested that shoppers with electronic devices were more likely to be recreational shoppers, arguing that electronic shoppers consider computers to be entertaining. Thus, considering recreational motivation for the online shoppers may provide a critical understanding about cross border online shoppers. Last, Hofstede's cultural dimensions are used for this study as a paradigm to describe the effect of culture on the patterns of cross border online shopping. Hodgetts and Luthans [6]. mentioned the culture is the knowledge that people use to interpret experience, They also described culture is related to the attitudes and behaviors of online shoppers. However, the results of the study need to be implemented carefully. The cultures of the nationd are changing quickly these days. Therefore, analyzing the culture regularly may be needed for following research.

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