

An Empirical Study of Online Shopping in Mainland China¹

¹Moez Limayem and ²Lei Zhu

Information Systems Department, City University of Hong Kong

¹Tel: (852) 2788-8530, Tel: (852) 2784-4338, ^{1,2}Fax: (852) 2788-8694, ¹ismoez@is.cityu.edu.hk, ²50095084@student.cityu.edu.hk

Frantz Rowe

Faculté des sciences économiques et de gestion, Université de Nantes, rowe@sc-eco.univ-nantes.fr

INTRODUCTION

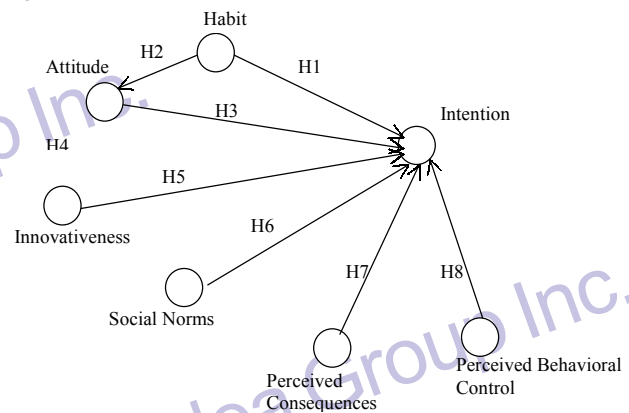
The Internet has developed rapidly in China in recent years. According to a report published by the China Internet Network Information Center (CNIC) [1] in July 2001, there were 26.5 million Internet users in China. 73.9% of these people visited Web stores and 31.9% of them had purchased products or paid for services on the Web. The growth is significant when compared to the data from July 2000, when there were only 16.9 million Internet users, 72.46% of whom had visited Web stores, and 16.28% had purchased products or paid for services on the Web. These statistics indicate an opportunity to businesses around the world to enter the Chinese electronic commerce (EC) markets. This huge potential market has already attracted the attention of big names in B2C EC such as yahoo and AOL. Chinese consumers possess cultural traits that are different from those of the westerner. According to Ackerman and Tellis [2], culture differences have an impact on online consumer's shopping behavior. However, few previous studies on EC have taken the culture issues into consideration. Moreover, there is little research on the Chinese consumers' intentions and attitudes to online shopping. The purpose of this research is to investigate the factors that affect the Chinese consumers intention to buy from the Internet. Specifically, this research has two main objectives. The first objective is to use current behavioral theories to elaborate a model that can identify key factors influencing intention to buy online. The second objective is to conduct an empirical study of Chinese consumers to test the validity of the proposed model. This study may also contribute to future research in the comparison of online shopping behavior between Chinese and other national cultures.

RESEARCH MODEL

Online Shopping is a voluntary individual behavior that can be explained by the theory of planned behavior (TPB) proposed by Ajzen [3]. We chose to base our research model (depicted in Figure 1) on the TPB not only because the TPB's constructs are easy to operationalize, but also because this theory has received substantial empirical support in information systems and other domains as well. We also enriched the TPB with three new constructs: personal innovativeness, habit and perceived consequences. Hence, our research model includes all the hypothesized links of the TPB with the new links that we would like to explore in this research. The old links deal with the impact on intention of attitude, social norms and perceived behavior control. The new links represent the effects of personal innovativeness, habit and perceived consequences.

Rogers and Shoemaker [4] and Rogers [5] conceptualize the "personal innovativeness" construct as the degree and speed of adoption of innovation of an individual. Shopping on the Internet is an innovative behavior that is more likely to be adopted by innovators than non-innovators. It is thus important to include this construct in order to account for individual differences. Its inclusion has important implications for both theory and practice.

Figure 1: Theoretical model



We hypothesize that personal innovativeness has both direct and indirect effects, mediated by attitude, on intention. The indirect effect implies that innovative individuals are more likely to be favorable toward online shopping, which in turn affects positively their intentions to shop on the Internet. The direct link between innovativeness and intentions, on the other hand, is meant to capture possible effects that are not completely mediated by attitude.

We also add to the TPB a construct that represents the potential effects of "perceived consequences." This construct is borrowed from Triandis' [6] model. According to Triandis, each act or behavior is perceived as having a potential outcome that can be either positive or negative. An individual's choice of behavior is based on the probability that an action will provoke a specific consequence. We decided to include this construct because we are interested in identifying the specific consequences of online shopping that drive individuals to perform this behavior. We believe that perceived consequences have both direct and indirect effects on intentions of Chinese consumers, the indirect effect being mediated by attitude. An innovative individual may be favorable toward online shopping, but will not adopt it if he/she perceives some important negative consequences. This view is consistent with the technology acceptance model [7], which posits perceived usefulness as an antecedent to both attitude and intentions. Finally, Triandis [8] argues that the extent to which a behavior becomes automatic (i.e. habit) influences both attitude and intention to perform the same behavior. We therefore hypothesize a positive relationship between habit and intention and between habit and attitude.

METHODOLOGY

We conducted a survey, which was aimed at measuring intention to shop online, attitude, innovativeness, perceived consequences, so-

cial factors, habit and facilitating condition. 101 Mainland Chinese consumers were chosen randomly in Shanghai, the biggest city in Mainland China. The analysis of the data will be done in a holistic manner using partial least squares (PLS). The PLS procedure [9] has ability to model latent constructs under conditions of non-normality and small to medium sample size [10]-[12]. It allows the researchers to both specify the relationships among the conceptual factors of interest and the measures underlying each construct. The result of such a procedure is a simultaneous analysis of 1) how well the measures relate to each construct and 2) whether the hypothesized relationships at the theoretical level are empirically confirmed. Thus, PLS-Graph version 2.91.02 [13] will be used to perform the analysis.

RESULTS AND CONCLUSION

The purpose of this study was to investigate the factors affecting online shopping intentions of Chinese consumers. The overall results indicate that the Theory of Planned Behavior provides a good understanding of these factors. The results of our study show strong support for perceived consequences' influence on Chinese consumers' intentions of online shopping. Facilitating condition also has significant effects on the intentions. The finding also shows a significant influence of habit on attitude. Moreover, innovativeness was found to have both direct and indirect effects on intentions of online shopping. Nevertheless, we did not find support to social factors and attitude' effects on Chinese consumers' intentions of online shopping. Further research should add more antecedent factors to test their influence. In addition, future research should measure the actual online shopping behaviors of Chinese consumers and assess the number of purchases as well as the number of products bought over time.

ENDNOTES

1 The work described in this paper was fully supported by a grant from the Research Grants Council of the Hong Kong Special Administrative Region, China. (France/HK Joint Research Scheme: project no. CityU 9050144).

REFERENCES

- [1] China Internet Network Information Center (2001, July) China Internet Report, [online]. Available: <http://www.cnnic.org.cn>
- [2] D. Aekerman, and G. Tellis, "Can culture affect prices? A cross-cultural study of shopping and retail prices" *Journal Of Retailing* vol.77, no.1, pp: 57-82 spr. 2001
- [3] I. Ajzen, The theory of planned behavior: *Some unresolved issues, in Organizational Behavior and Human Decision Processes*, vol. 50, pp. 179-211, 1991
- [4] E.M. Rogers and F.F. Shoemaker, *Communication of Innovations*. New York: The Free Press, 1971.
- [5] E.M. Rogers, *Diffusion of Innovations*, 4th ed. New York: The Free Press, Macmillan Publishing Co., 1995.
- [6] C. H. Triandis, " Value, attitudes and interpersonal behavior," *in Nebraska Symposium on Motivation, 1979: Beliefs, Attitudes and Values*. Lincoln, NE: Univ. Nebraska Press, 1980, pp. 159-295.
- [7] F. D. Davis, R. Bagozzi, and P. R. Warshaw, "User acceptance of computer technology," *Manage. Sci.*, vol. 35, no. 8, pp. 982-1003. Aug. 1989.
- [8] C. H. Triandis, " Value, attitudes and interpersonal behavior," *in Nebraska Symposium on Motivation, 1979: Beliefs, Attitudes and Values*. Lincoln, NE: Univ. Nebraska Press, 1980, pp. 159-295.
- [9] H. Wold, "Introduction to the second generation of multivariate analysis," in *Theoretical Empiricism*, H. Wold, Ed. New York: Paragon, 1989, pp. vii-xi.
- [10] W. W. Chin, The partial least squares approach for structural equation modeling, Lawrence Erlbaum Assoc., pp. 295-336, 1998.
- [11] D. R. Compeau and C. A. Higgins, "Application of social cognitive

theory to training for computer skills," *Inf. Syst. Res.*, vol. 6, no. 2, pp. 118-143, 1995.

- [12] W. W. Chin and A. Gopal, "Adoption intention in GSS: Importance of beliefs," *Data Base Advance*, vol. 26, no.2&3, pp. 42-64, 1995.
- [13] W. W. Chin, PLS-Graph Manual, 1994.

0 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:
www.igi-global.com/proceeding-paper/empirical-study-online-shopping-mainland/31814

Related Content

Increase the Diffusion Rate of Emergent Technologies

Sven Seidenstricker and Antonino Ardilio (2015). *Encyclopedia of Information Science and Technology, Third Edition* (pp. 5381-5391).

www.irma-international.org/chapter/increase-the-diffusion-rate-of-emergent-technologies/112987

An Efficient Image Retrieval Based on Fusion of Fast Features and Query Image Classification

Vibhav Prakash Singh, Subodh Srivastava and Rajeev Srivastava (2017). *International Journal of Rough Sets and Data Analysis* (pp. 19-37).

www.irma-international.org/article/an-efficient-image-retrieval-based-on-fusion-of-fast-features-and-query-image-classification/169172

Modified LexRank for Tweet Summarization

Avinash Samuel and Dilip Kumar Sharma (2016). *International Journal of Rough Sets and Data Analysis* (pp. 79-90).

www.irma-international.org/article/modified-lexrank-for-tweet-summarization/163105

Cryptanalysis and Improvement of a Digital Watermarking Scheme Using Chaotic Map

Musheer Ahmad and Hamed D. AlSharari (2018). *International Journal of Rough Sets and Data Analysis* (pp. 61-73).

www.irma-international.org/article/cryptanalysis-and-improvement-of-a-digital-watermarking-scheme-using-chaotic-map/214969

A Comparative Analysis of a Novel Anomaly Detection Algorithm with Neural Networks

Srijan Das, Arpita Dutta, Saurav Sharma and Sangharatna Godbole (2017). *International Journal of Rough Sets and Data Analysis* (pp. 1-16).

www.irma-international.org/article/a-comparative-analysis-of-a-novel-anomaly-detection-algorithm-with-neural-networks/186855