

THE ROLE OF PSYCHOLOGICAL BURDEN IN MATURE CONSUMERS TO ADOPT THE INTERNET

Haeyoung Jeong
Korea Advanced Institute of Science and Technology
291 Daehak-ro(373-1 Guseong-dong), Yuseong-gu, Daejeon
305-701
byut88@kaist.ac.kr

Semi Han
Korea Advanced Institute of Science and Technology
291 Daehak-ro(373-1 Guseong-dong), Yuseong-gu, Daejeon
305-701
saemee3232@naver.com

Euehun Lee
Korea Advanced Institute of Science and Technology
291 Daehak-ro(373-1 Guseong-dong), Yuseong-gu, Daejeon
305-701
euehunlee@kaist.ac.kr

ABSTRACT

The main goal of this study is to examine the effects of the extrinsic and intrinsic motivation, and the psychological burden on mature consumers regarding their Internet usage. "Psychological burden" refers to the emotional constraints such as anxiety and fears that make using technology uncomfortable. Here, we developed a research model and formulated hypotheses based on the Technology Acceptance Model (TAM). A survey of mature Internet users was conducted and the proposed model was tested using a Structural Equation Modeling (SEM) technique.

Keyword: Internet Adoption, Mature Consumer, Psychological Burden, TAM, TRA

1. INTRODUCTION

As the number of Internet users has increased significantly, the gap between those who do and do not have access to computers and the Internet is also increasing. The aged or those who are disabled usually belong to the inferior group. This phenomenon is known as the 'digital divide'¹. Due to the aging of society, more mature groups are becoming a larger proportion of the total population. Policy makers may need to find ways to encourage the acceptance of new technologies by mature consumers to alleviate the digital divide between generations. In addition, if companies do not consider the societal impact of these mature groups, they may lose a large potential market. This study investigates the adoption of new IT services by a mature-aged group. To do this, an investigation is undertaken of the factors which positively or negatively influence mature consumers' intentions to use the Internet. In this study, the term, "mature consumers" is defined as people who are 40 years old or older. This age group covers both middle-aged and older people who are both potential and current mature users of the Internet.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

We developed a research model and hypotheses based on the Technology Acceptance Model (TAM)². Motivations to use IS are divided into extrinsic (perceived usefulness, and perceived ease of use) and intrinsic perspectives (perceived enjoyment)³. Referring to related earlier studies, we modified the original model and proposed several hypotheses related to the use of the Internet by mature groups, as follows:

H1-1: Perceived usefulness is positively related to the intention to use the Internet of mature consumers.

H1-2: Perceived ease of use is positively related to the intention to use the Internet of mature consumers.

H1-3: Perceived enjoyment is positively related to the intention to use the Internet of mature consumers.

H1-4: Subjective norm is positively related to the intention to use the Internet of mature consumers.

After developing the basic theoretical framework, we considered the factors which constrain the Internet adoption, especially mature-specific constructs. The elderly people commonly show anxiety initially when faced with using a computer⁴. It is considered a major barrier to innovation adoption by mature-aged people^{5, 6}. This psychological burden has a negative effect on TAM-related variables⁷. Referring to the prior studies,

this study investigated the psychological burden and proposed related hypotheses to examine the effects of the psychological burden on perceived usefulness, ease of use and enjoyment.

H2-1: The psychological burden associated with using the Internet is negatively related to perceived usefulness by mature consumers.

H2-2: The psychological burden associated with using the Internet is negatively related to perceived ease of use by mature consumers.

H2-3: The psychological burden associated with using the Internet is negatively related to perceived enjoyment by mature consumers.

3. METHODOLOGY AND RESULTS

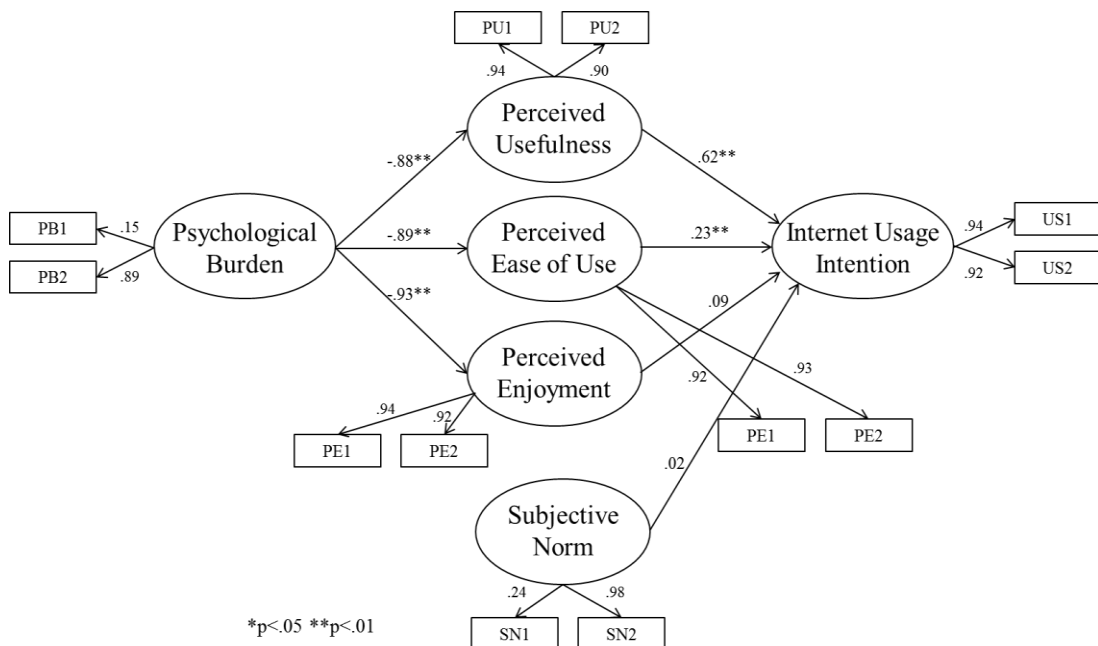


Figure 1. Results of processes for estimation of measurements and model

To verify the proposed research model, survey instruments were constructed based on prior research. Data was collected through personal interviews with mature-aged Internet users. Over 500 responses were collected through the survey. Subsequently, data analysis using LISREL method was conducted. The reliability and validity testing, the assessments of the measurement model, and the assessment of the structural model were performed. Figure 1 shows the model and the results. According to the results of the analysis, all of the hypotheses except H1-3 and H1-4 were accepted. The hypothesized model also provided an acceptable fit to the data ($\chi^2=147.28$; $df=46$; $RMSEA=0.073$; $GFI=0.91$; $NNFI=0.97$; $CFI=0.98$).

4. CONCLUSIONS

Based on the results of this study, managerial implications and policies are suggested. Psychological burden makes negative impact on mature consumers' Internet usage. Therefore, for encouraging their usage, the Internet service providers had better find ways to reduce their psychological burden. It would be helpful to enlarge the market size. In terms of policy makers, they should try to reduce the elderly's psychological burden by education and related promotion for reducing the digital divide. Future research needs to find out effective ways to decrease the psychological burden.

5. REFERENCES

- [1] P. Norris, *Digital divide? Civic engagement, information poverty and the internet in democratic societies*. New York: Cambridge Univ. Press, 2001. <http://dx.doi.org/10.1017/CBO9781139164887>.
- [2] F.D. Davis, A technology acceptance model for empirically testing new end-user information systems: Theory and results. Doctoral dissertation, *Sloan School of Management*, Massachusetts Institute of Technology, 1986.
- [3] F.D. Davis, R.P. Bagozzi, and P.R. Warsahw, Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology*, 22(14), p1111-1132, 1992. <http://dx.doi.org/10.1111/j.1559-1816.1992.tb00945.x>.
- [4] G.R. Whitcomb, Computer games for the elderly. *ACM SIGCAS Computers and Society*, 20(3), p112-115, 1990. <http://dx.doi.org/10.1145/97351.97401>.
- [5] J.L. Dyck, and J.A. Smither, Older adults' acquisition of word processing: The contribution of cognitive abilities and computer anxiety. *Computers in Human Behavior*, 12(1), p107-119, 1996. [http://dx.doi.org/10.1016/0747-5632\(95\)00022-4](http://dx.doi.org/10.1016/0747-5632(95)00022-4).
- [6] W.C. Phang, J. Sutanto, A. Kankanhalli, Y. Li, B.C.Y. Tan, and H.H. Teo, Senior citizens' acceptance of information systems: A study in the context of e-Government services. *IEEE Transactions of Engineering Management*, 53(4), p555-569, 2006. <http://dx.doi.org/10.1109/TEM.2006.883710>.
- [7] M. Ryu, S. Kim, and E. Lee, Understanding the factors affecting online elderly user's participation in video UCC services. *Computers in Human Behavior*, 25(3), p619-632, 2009. <http://dx.doi.org/10.1016/j.chb.2008.08.013>.