

A Study on Behavioral Intention and Use Behavior of Sharp (#) Mail Initial Experienced Users

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Abstract

In this research, to analyze acceptance factor for Sharp (#) Mail solution and service with initial experienced users. unified theory of acceptance and use of technology (UTAUT) suggested by Venkatesh (2003) was used as the base and use intention influential factor and factors of security, habit, and law/system were added.

Research result showed more or less difference with influential factors on behavioral intention and use behavior as suggested by Venkatesh (2003) and, according to analysis, the reason may be that security factor is handled importantly from the aspect that Sharp Mail is used for work purpose and internet-based.

Keywords: #-Mail, Authorized Electronic Address, UTAUT, Security

1. Introducing and Related Studies

Unified Theory of Acceptance and Use of Technology (UTAUT) was announced in Venkatesh et al.'s article in MIS Quarterly in 2003. With a theoretical background of UTAUT aiming to explain the use intention and use behavior of information system users, the theory considers 8 models related to technology acceptance, suggesting 4 core construct concepts (i.e. performance expectancy, effort expectancy, social influence, and facilitating conditions) by integrating 32 construct concepts revealed significant in the existing research out of 8 models [1]. UTAUT is applied to many different areas such as information technology and ICT areas. Although many different preceding research on information technology and service using UTAUT models, no or few research [2, 3, 4] was conducted regarding Sharp(# Mail.

2. Research Model

2.1 Conceptual Research Model and Hypotheses

To answer the question “What factors affect use intention of experienced users of Sharp (#) Mail and what causal relations exist between these?”, this research introduced the unified theory of acceptance and use of technology (UTAUT) suggested by Venkatesh (2003), through literature review, along with fundamental measurement variables and security, habit and law/system improvement factors to be suitable for the purpose of this research. And, to verify if behavioral intention is affected, a research model was set up as in [Figure 1].

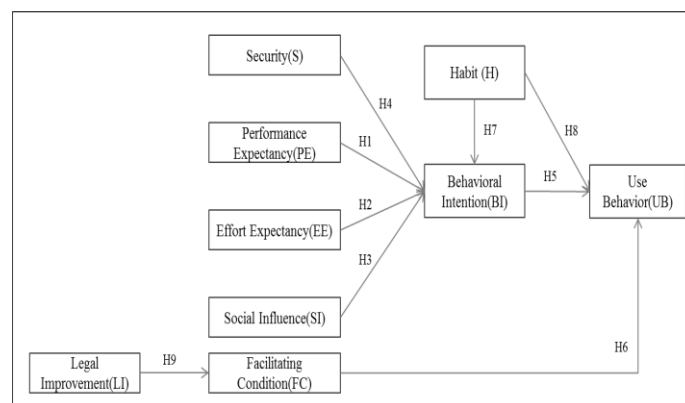


Fig. 1. A research model for analysis of use intention of Sharp (#) Mail

2.2 Hypotheses

In this research, hypotheses of the model this research intended to verify were constructed as below to analyze the purpose of the research:

H1. Performance expectancy will have positive (+) effect on use intention of Sharp (#) Mail solution and service.

H2. Effort expectancy will have positive (+) effect on use intention of Sharp (#) Mail solution and service.

H3. Social influence will have positive (+) effect on use intention of Sharp (#) Mail solution and service.

H4. Acceleration condition will have positive (+) effect on use behavior of Sharp (#) Mail solution and service.

H5. Behavioral intention will have positive (+) effect on use behavior of Sharp (#) Mail solution and service.

H6. Security will have positive (+) effect on behavioral intention of the Sharp (#) Mail solution and service users.

H7. Habit will have positive (+) effect on behavioral intention of the Sharp (#) Mail solution and service users.

H8. Habit will have positive (+) effect on use behavior of the Sharp (#) Mail solution and service users.

H9. Law/system improvement is the acceleration condition for the Sharp (#) Mail solution and service users to use Sharp (#) Mail actively, and will have positive (+) effect with acceleration condition.

2.3 Definition of Research Variables

The composition concepts used and measured in this research used measurement items whose reliability and feasibility were verified in the preceding researches and, in this section, Performance expectancy, Effort expectancy, Social influence, Acceleration condition and Security were set as independent variables to analyze the relation between states of certain variables and variables.

Table 1. Research Variables

Variable	Measurement variable	References for measurement item
Performance expectancy	<ol style="list-style-type: none"> 1. Usefulness of use 2. Work (duty) productivity improvement 3. Easy handling of Work (duty) 4. Usefulness of proof 	Venkatech et al.(2003) Oye, N. D. et al.(2012)
Effort expectancy	<ol style="list-style-type: none"> 1. Easiness of adaptation 2. Easy perception of usage 3. Convenient application to work 4. Easy learning 5. Usability of foundation technology 	Venkatech et al.(2003) Oye, N. D. et al.(2012)
Social influence	<ol style="list-style-type: none"> 1. Intention to recommend 2. Awareness of convenience 3. Awareness of usefulness 4. Intention and desire to use 5. Popular generality 	Venkatech et al.(2003)
Acceleration condition	<ol style="list-style-type: none"> 1. Organizational support 2. Possession of used knowledge 3. Support to detailed guide 4. Support to problem resolution 5. Suitability of work handling style 	Venkatech et al.(2003) Oye, N. D. et al.(2012)
Security	<ol style="list-style-type: none"> 1. Safety of personal information 2. Safety of internet security 3. Safety against information invasion 4. Safety against data leakage 5. Safety of work (duty) performance 	S. H. Chon (2011) H. Cho and S. K. Lee (2012) Buelling and Woeter (2004)
Law/system improvement	<ol style="list-style-type: none"> 1. Necessity of strong law/system 2. Enforceability in application 3. Expansion of international base 4. Self-regulating competition in market 	J. J. Lee and K. S. Han(2012)
Habit	<ol style="list-style-type: none"> 1. Curiosity for new thing 2. Preference for new thing 3. Exploration for new technology 4. Adaptation for changes 5. Tendency to seek economy 6. Tendency to seek convenience 7. Unconscious acceptance of new technology 8. Methodical use of mail 	Seppo Pahnala et al. (2011) Verplanken and Orbell (2003) J. M. Lee (2012)
Behavioral intention	<ol style="list-style-type: none"> 1. Level of use intention 2. Awareness of unconscious use 3. Future plan to use 4. Acceptance of expandability 	Venkatech et al.(2003)
Use behavior	<ol style="list-style-type: none"> 1. Consistent hours of use 2. Weekly hours of use 3. Weekly frequency of use 	J. M. Lee (2012)

3. Test and Analysis

Applicability of structural model evaluates variance explanation power (R2) of structural concept, and also evaluates significance of path coefficient (β) expressing causal relationship information between two variables through structural equation analysis.

Hypotheses verification in [Table 2] shows slight differences from such factors affecting behavioral intention and use behavior as suggested by [5].

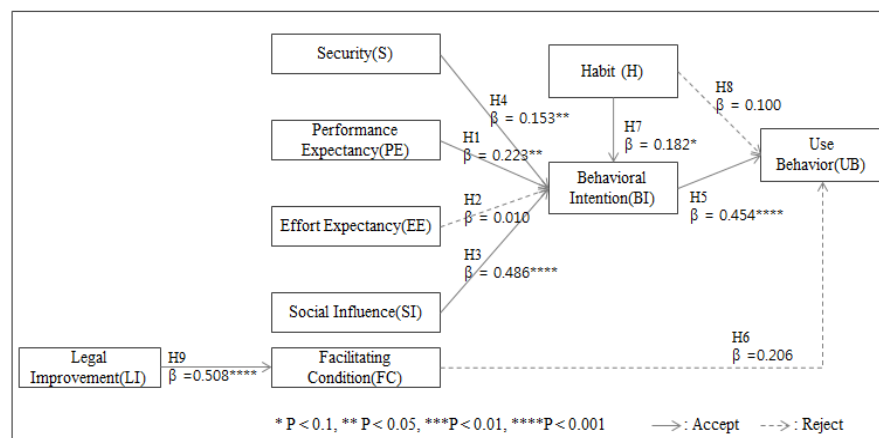


Fig. 2 Structural Model Analysis Results

Table 2. Summarized Results of the Hypotheses Verified

Hypotheses	Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics	Acceptance
H1 Performance Expectancy -> Behavioral intention	0.223**	0.218	0.100	0.100	2.220	Accepted
H2 Effort expectancy -> Behavioral intention	0.010	0.026	0.096	0.096	0.102	Rejected
H3 Social influence -> Behavioral intention	0.486****	0.470	0.125	0.125	3.906	Accepted
H4 Security -> Behavioral intention	0.153**	0.154	0.067	0.067	2.268	Accepted
H5 Behavioral intention -> use behavior	0.454****	0.442	0.110	0.110	4.114	Accepted
H6 Acceleration condition -> use behavior	0.206	0.218	0.137	0.137	1.506	Rejected
H7 Habit -> Behavioral intention	0.182*	0.179	0.096	0.096	1.896	Accepted
H8 Habit -> use behavior	-0.100	-0.107	0.133	0.133	0.751	Rejected
H9 Legal system improvement -> Acceleration condition	0.508****	0.516	0.069	0.069	7.354	Accepted

4. Conclusion

In the case of experienced users of Sharp Mail, analysis showed that unlike suggestions of [5], the social influence factor was not significant as a factor affecting use intention whereas security factor exerted significant influence on behavioral intention as a characteristic in internet. Also, analysis showed that habit factor exerted significant influence on behavioral intention, which may be explained by the reasoning that as Sharp Mail is internet-based the habit of using other internet-based solution can be applied to Sharp Mail. Considering that legal system improvement factor was a significant factor explaining acceleration condition, such conclusion that Sharp Mail use activity by users can be accelerated if legal and systematic aspect is strengthened for Sharp Mail vitalization may be derived. In conclusion, considering the media characteristics of using internet and the reality of being used in relation to work, as for Sharp Mail, such practical implication that legal and systematic support and improvement, including self-regulating competition and effort to expand international base, are necessary for vitalization of Sharp Mail may be suggested.

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