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Integrating Technology Readiness into the Expectation–Confirmation Model: An Empirical Study of Mobile Services

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Abstract

The aim of this study was to integrate technology readiness into the expectation–confirmation model (ECM) for explaining individuals' continuance of mobile data service usage. After reviewing the ECM and technology readiness, an integrated model was demonstrated *via* empirical data. Compared with the original ECM, the findings of this study show that the integrated model may offer an ameliorated way to clarify what factors and how they influence the continuous intention toward mobile services. Finally, the major findings are summarized, and future research directions are suggested.

Introduction

THE DIFFUSION AND POPULARIZATION of mobile communications shows that user demands have overcome spatial and temporal obstacles and have led to unprecedented growth in mobile services.[1] Various mobile devices, including smart phones, tablets, personal digital assistants, and mobile Internet devices, are now used by users as principal or alternative ways to engage in e-commerce, banking, gaming, positioning, and chatting via 2.5G, 3G, or WiMAX telecommunication networks.[2]

The expectation–confirmation model (ECM), which was developed by Bhattacherjee[3] as a way to understand and predict the users' continuance intention toward new technologies/systems, now has many studies in the extension of ECM.[4–10] Until now, however, few studies have combined applications of personality-based and cognitive antecedents to understand the continuance of mobile service usage. Because of the growing use of emerging information technologies/information systems (IT/IS), a clear understanding of customer readiness to use mobile- and Internet-based services is critical.[11–15] The impact of technology readiness must be clearly understood to determine user preferences and perceptions.[11,14,16] Therefore, this study used technology readiness as an antecedent of psychological traits to elucidate the cognitive dimensions of ECM.

Applications of mobile services are affected by complex and contextual factors. To discriminate this study from existing literature on the extended ECM,[4,9,10,17,18] this study investigated the effects of technology readiness, perceived usefulness, and confirmation of expectations on continuance intention *via* satisfaction. Based on the technology readiness and the ECM proposed earlier, this study attempted to develop an integrated model to explain and predict the continuance intention toward mobile data services.

Literature Review

ECM of information systems continuance

The ECM was first developed by Bhattacherjee[3] based on the expectation–confirmation theory (ECT) developed by Oliver.[19] The ECM is based on ECT concept including three dimensions of user intention to continue accepting information technologies: perceived usefulness, confirmation of expectations, and satisfaction. Hayashi et al.[20] argued that the principal difference between ECT and ECM is that ECM examines the related constructs of postacceptance, whereas ECT focuses on pre- and postconsumption factors. Additionally, ECM examines the effect of postconsumption expectations rather than the effects preconsumption expectations, and ECM improves the ECT by considering perceived usefulness.[7] According to the ECM, an individual has intention to continue using an IT/IS after developing expectations about the IT/IS.

Hence, the use of varied models, such as technology acceptance model (TAM) by Davis,[21] theory of planned behavior by Ajzen,[22] and unified theory of acceptance and use of technology by Venkatesh et al.,[23] has resulted in inconsistent or inappropriate explanations of IT continuance.[24] In mobile services, a high perceived usefulness and confirmation are expected to foster a positive satisfaction after using an IT/IS, which

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increases. The aim of ECM is to model the individual intention to continue using an IT/IS. The next section presents how this study expands the ECM by focusing on individual propensity concerns since this aspect is critical in technology readiness.

Technology readiness

Parasuraman[11] defined technology readiness as "personality traits that increase adoption of novel technologies in order to accomplish private or work-related goals."[25,26] Technology readiness is a multifaceted construct that can be divided into four components, two of which are drivers, and two of which are inhibitors.

Parasuraman and Colby[27] classified technology users according to their technology readiness differences as explorer, pioneer, sceptic, paranoid and laggard, and consumers. Each classification of user has drivers and inhibitors. Meuter et al.[13] suggested that a part of people reveal certain degree of technophobia or technology pessimists. Recent studies have examined emergent technologies and applications such as self-service technology (SST) and online stock trading systems from a technology readiness perspective.[14,25,26,28] The above literature show that the impact of technology readiness on intention to continue using mobile services is worthy of further study.

Research hypotheses development

The positive enablers of technology readiness, optimism and innovativeness, inspire users to adopt emerging technological products and services. However, the other two inhibitors, discomfort and insecurity, make users disinclined to adopt new technologies or services. Owing to the role of technology spreading in service delivery, it is essential to probe users' readiness to adopt technology-mediated products/services such as mobile service.[11,12,29] Lin et al.[26] developed and empirically examined an integrated Technology Readiness and Acceptance Model (TRAM). TRAM demonstrated that technology readiness is significantly associated with perceived usefulness and behavioral intention in the e-service context. Related studies have shown a positive correlation between technology readiness and satisfaction.[26,28,30,31] An empirical study by Meuter et al.[13] empirically confirmed a correlation between technology anxiety and satisfaction with SSTs. In addition, Oliver[19] proposed a theoretical perspective drawn from psychological characteristics and expectation–disconfirmation theory. Based on the above literature, this study proposes four hypotheses:

H1: Technology readiness positively affects confirmation of expectations of mobile service users.

H2: Technology readiness positively affects perceived usefulness of mobile service users.

H3: Technology readiness positively affects satisfaction of mobile service users.

H4: Technology readiness positively affects continuance intention of mobile service users.

This study defines satisfaction in a mobile service context as a psychological state resulting from an assessment of the perceived difference between expectation and performance. Shin et al.[9] empirically confirmed that satisfaction depends on user confirmation in the ubiquitous learning context. Similar studies of Thong et al.[32] and Recker[6] consistently showed that confirmation positively affects satisfaction. Related ECM studies have reported that perceived usefulness correlates positively with confirmation.[17,33,34] Hung et al.,[35] in a study of satisfaction in the mobile commerce context, indicated that satisfaction is positively influenced by confirmation. Thus, the following hypothesis is proposed.

H5: Confirmation of expectations positively affects satisfaction of mobile service users.

H6: Confirmation of expectations positively affects perceived usefulness of mobile service users.

End user satisfaction is principal to successful IT/IS implementation.[36] On the basis of ECM model, continuance intention is influenced by satisfaction. Related studies on IT/IS agreed that the continuance intention of users is mainly determined by their satisfaction with previous usage.[37–40] Thus, the following hypotheses are proposed.

H7: Satisfaction positively affects continuance intention of mobile service users.

Brown et al.[41] identified perceived usefulness as an important determinant of system usage. In a study of online learning systems, Liao et al.[4] empirically confirmed that satisfaction and continuance intention are affected by perceived usefulness. In SST environments, Chen et al.[14] validated the positive correlations among perceived usefulness, satisfaction and continuance intention. Similarly, other studies have consistently shown that perceived usefulness is a determinant of satisfaction and continuance intention.[8,18,33,40] Thus, the following hypotheses are proposed.

H8: Perceived usefulness positively affects continuance intention of mobile service users.

H9: Perceived usefulness positively affects satisfaction of mobile service users.

In sum, we link technology readiness of users with usage perceptions of mobile service as well as continuance intention. These mediator constructs (in particular, confirmation of expectations, perceived usefulness, satisfaction) play the role as explanatory variables for understanding the indirect effects. That is, we aimed to establish the relationships between the main predictors (e.g., technology readiness) and the outcome variables (e.g., satisfaction and continuance intention toward mobile service) before further analysis of mediating processes. On the basis of our theoretical model, we make the following predictions:

H10a: Perceived usefulness mediates the relationship between technology readiness and continuance intention toward mobile service.

H10b: Satisfaction mediates the relationship between technology readiness and continuance intention toward mobile service.

H10c: Confirmation of expectations mediates the relationship between technology readiness and perceived usefulness toward mobile service.

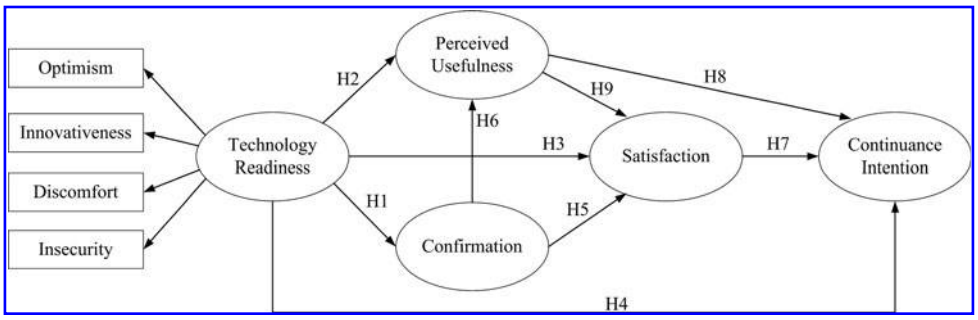

FIG. 1. Research model.

H10d: Satisfaction mediates the relationship between perceived usefulness and continuance intention toward mobile service.

H10e: Perceived usefulness mediates the relationship between confirmation of expectations and satisfaction toward mobile service.

Research Design

Measures of the constructs

The hypothesized research model integrated technology readiness into ECM that empirically tested using survey data collected from users regarding their continued intention toward mobile data service (Figure 1). The questionnaire items in this study used prevalidated scales applied in earlier studies to ensure content validity and appropriate revisions were made to fit the context of mobile services.[3,11,28] Three procedures were performed to refine the questionnaire items for improved measurement accuracy. First, items selected from prior studies were translated into Chinese. Second, a focus group including two professors and six graduate students who were familiar with mobile data services was invited to check the Chinese wording of each item in the measurement to ensure that they were readable and comprehensible. Third, the measurement items were evaluated and refined in a pilot study to ensure content validity.

In the first part of the two-part questionnaire, nominal scales were used to collect basic data, including sex, age, education, occupation, and experience in using mobile services. The definition and classification of mobile data services assumed that users are willing to adopt specific mobile services *via* smart phones or mobile devices for purposes such as sending/receiving e-mail, browsing news or blogs, Internet auctions, and interacting with friends on Facebook. This definition is conducive to flourish a generalized model for understanding users' continuance intention toward a set of mobile services. The second part included three ECM measurements and technology readiness. Each item was measured on a seven-point Likert scale anchored from strongly disagree (1) through neutral (4) to strongly agree (7). The questionnaire items of the constructs and sources are shown as follows:

- Technology readiness: 18 items adopted from Parasuraman[11] and Yen[28]; sample item: Technology gives me more freedom of mobility.
- Perceived usefulness: three items modified from Davis et al.[42] and Bhattacherjee et al[38]; sample item: Using the mobile service in my job/life will make me more effective.
- Confirmation of expectations: three items derived and slightly modified from Bhattacherjee[3] and Recker[6]; sample item: My experience with using mobile service is better than what I expected.
- Satisfaction: four items adapted from Thong et al.[32] and Premkumar and Bhattacherjee[18]; sample item: My overall experience of mobile service use was very satisfied.
- Continuance intention: four items derived and slightly modified from Bhattacherjee[3] and Liao et al.[4]; sample item: I will use the mobile service regularly in the future.

The list of measurement items in the questionnaire is shown in the Appendix.

Sampling and subjects

The synthetic effect of the ECM and technology readiness was assessed by performing an online survey of the experience of mobile service users in Taiwan. Compared with paper-based data collection, the advantages of online investigations include the quick response, low costs, and the lack of geographical restrictions.[43]

Table 1. Demographics of Respondents

Characteristics	*Frequency*	*Percent (%)*
Sex		
Male	220	59.8
Female	148	40.2
Age		
Under 20	47	12.8
21–25	153	41.6
26–30	126	34.2
31–35	27	7.3
Above 35	15	4.1
Education level		
High school certificate or below	58	15.8
Technical school	11	3.0
Undergraduate degree	231	62.8
Master or higher degree	68	18.4
Occupation		
Student	159	43.2
Business	41	11.1
Information	48	13.0
Manufacturing	35	9.5
Service	37	10.1
Self-employed	32	8.7
Others	16	4.4
Mobile service experience		
Under 1 year	72	19.6
1–3 years	134	36.4
Above 3 years	162	44.0

Table 2. Standardized Loadings and Reliabilities

Construct	*Indicators*	*Standardized loading (t)*	*Cronbach's α*	*Composite reliability*
Technology Readiness (TR)	OPT	0.60 (11.63)	0.78	0.80
	INNO	0.75 (15.48)	—	—
	DIS	0.76 (15.80)	—	—
	INS	0.71 (14.55)	—	—
Perceived Usefulness (PU)	PU1	0.93 (23.30)	0.94	0.94
	PU2	0.94 (23.64)	—	—
	PU3	0.89 (21.68)	—	—
Confirmation of Expectations (CONF)	CONF1	0.81 (18.34)	0.87	0.88
	CONF2	0.87 (20.26)	—	—
	CONF3	0.81 (18.76)	—	—
Satisfaction (SAT)	SAT1	0.82 (18.44)	0.88	0.88
	SAT2	0.81 (18.03)	—	—
	SAT3	0.81 (17.85)	—	—
	SAT4	0.79 (17.77)	—	—
Continuance intentions (CI)	CI1	0.94 (23.49)	0.91	0.91
	CI2	0.90 (22.00)	—	—
	CI3	0.83 (19.32)	—	—
	CI4	0.72 (15.84)	—	—

Online questionnaires were published by a survey agent to collect samples from telecom service providers in Taiwan. To ensure that participants would not complete the questionnaire more than once, each participant was required to provide an e-mail address. After eliminating invalid responses through data filtering, convenience sampling obtained a final population of 368 subjects. Table 1 presents the sample demographics data for the sample.

Data Analysis and Results

This study followed the two-step approach of Structural Equation Modeling proposed by Anderson and Gerbing[44] to estimate the measurement and structural model. The first step examined construct reliability and validity from the measurement model using Confirmatory Factor Analysis (CFA), while the second step focused on the path effects and significance using the structural model. Besides, the mediator variables were also examined to understand the linking relationships in the theoretical model.

Measurement model testing

The measurement model was estimated in four procedures. First, the technology readiness measurements were parceled into four indicators by summarizing and averaging the scale items from four different dimensions of technology readiness. Little et al.[45] suggested that the unit-weighted factor score has the advantages such as higher reliability and community, more parsimonious, fewer chances for residuals to be correlated, or dual loadings to emerge. All final values for composite reliability and Cronbach's alpha exceeded 0.7, indicating satisfactory reliability and internal consistency after item parceling (Table 2).[46]

Second, goodness-of-fit criteria for the measurement model should confirm that the model adequately explains the empirical data. Table 3 shows that the estimates of the overall goodness-of-fit criteria exceeded their respective acceptable levels suggested in the relevant literature, which confirmed that the measurement model exhibited a fairly good fit with the data gathered.

Table 3. Goodness-of-Fit Indices for the Measurement Scales

Fit index	*Recommended value*	*Measurement model*	*Structural model*	*Source*
$\chi^2/d.f.$	≤ 5	3.44	3.51	Loo and Thorpe[47]; Schumacker and Lomax[48]
GFI	≥ 0.90	0.88	0.88	Doll et al.[49]
CFI	≥ 0.92	0.94	0.94	Hair et al.[50]
NFI	≥ 0.90	0.92	0.92	Hu and Bentler[51]
IFI	≥ 0.90	0.94	0.94	Bentler[52]
TLI	≥ 0.90	0.93	0.93	Hair et al.[50]
RFI	≥ 0.90	0.90	0.90	Bentler and Bonett[53]; Bentler[54]
PGFI	≥ 0.50	0.64	0.65	Bentler and Bonett[53]; Bentler[54]
PCFI	≥ 0.50	0.77	0.77	Bentler and Bonett[53]; Bentler[54]
PNFI	≥ 0.50	0.75	0.76	Bentler and Bonett[53]; Bentler[54]
SRMR	≤ 0.08	0.04	0.03	Hair et al.[50]; Hu and Bentler[51]
RMSEA	≤ 0.08	0.08	0.08	Henry and Stone[55]

GFI, goodness-of-fit indices; CFI, comparative fit index; NFI, normed fit index; IFI, incremental fit index; RMSEA, root-mean-squared error of approximation; TLI, Tucker-Lewis index; RFI, relative fit index; PGFI, parsimony goodness of fit index; PCFI, parsimony comparative fit index; PNFI, parsimony normed fit index; SRMR, standardized root mean square residual.

Table 4. Correlation Coefficient Matrix

Construct	*Mean*	*SD*	*TR*	*PU*	*CONF*	*SAT*	*CI*
TR	4.54	1.02	**0.50**				
PU	4.67	0.91	0.70	**0.85**			
CONF	4.67	0.79	0.61	0.75	**0.70**		
SAT	4.44	0.96	0.70	0.82	0.84	**0.65**	
CI	5.01	0.79	0.65	0.72	0.67	0.78	**0.73**

Diagonal elements in boldface are the values of average variance extracted. Off-diagonal elements are the correlation coefficients.

TR, technology readiness; PU, perceived usefulness; CONF, confirmation of expectations; SAT, satisfaction; CI, continuance intention.

Third, convergent validity is acceptable if the following criteria are met:[50,56] (a) the statistical significance of each factor loading is confirmed by a p of 0.5, (b) construct reliability exceeds 0.7, and (c) average variance extracted exceeds 0.5. Tables 2 and 4 show that this study achieved the general requirement of reliability and convergent validity for measurement model.

Fourth, the discriminant validity of paired constructs was assessed by calculating a series of χ^2 difference tests for the constrained and unconstrained measurement models.[50,57] All constructs were allowed to co-vary freely in the unconstrained model. The constrained model is identical to the unconstrained model except that the correlations of one paired constructs are fixed at 1, whereas the remaining are allowed to co-vary freely. A 10.83 critical ratio of the χ^2 was obtained when applying the Bonferroni method at 99% confidence level. Since the χ^2 difference statistics for all paired constructs exceed 10.83, discriminant validity is fully supported (Table 5).

Finally, this research collected responses using self-reported surveys in a single setting, which required assessment of common method bias (CMB), which can potentially limit internal validity. The CMB is a major concern when a single latent factor accounts for most manifest variables.[58,59] To address the CMB issue at the measurement level, the Harman one-factor test was applied in a CFA setting. The CFA was performed by entering all measurement items into a one-factor model, which revealed a deteriorated model fit with χ^2/d.f. = 10.32, goodness of fit index (GFI) = 0.67, comparative fit index (CFI) = 0.76, normed fit index (NFI) = 0.74, and root-mean-squared error of approximation (RMSEA) = 0.16. The above diagnostic analysis confirmed that CMB is unlikely in the analyzed data.

Table 5. χ^2 Difference Tests for Examining Discriminant Validity

Constructs constrained	χ^2	*Degrees of freedom*	χ^2 *difference*
None	430.1	125	—
(TR, PU)	480.0	126	49.9[a]
(TR, CI)	502.6	126	72.5[a]
(TR, SAT)	475.0	126	44.9[a]
(TR, CONF)	529.8	126	99.7[a]
(PU, CONF)	512.5	126	82.4[a]
(PU, SAT)	463.1	126	33.0[a]
(PU, CI)	497.5	126	67.4[a]
(CONF, CI)	536.2	126	106.1[a]
(CONF, SAT)	495.7	126	65.6[a]

[a]χ^2 difference was significant at $p < 0.01$ by using the Bonferroni method.

Structural model testing

Structural model testing is performed to test the hypothesized relationships in the proposed model. The literature shows that a good model fit for a structural model is indicated by ratio of χ^2 to the degree of freedom smaller than 5.0; a GFI larger than 0.8; CFI, NFI, incremental fit index (IFI), and relative fit index (RFI) values larger than 0.9; parsimony goodness of fit index (PGFI), parsimony comparative fit index (PCFI), and parsimony normed fit index (PNFI) values larger than 0.5; and standardized root mean square residual (SRMR) and RMSEA values smaller than 0.08. Table 3 shows that all goodness-of-fit indices of the structural model are all satisfactory. Table 6 shows the properties of the research hypotheses, including standardized path coefficients and hypotheses testing results.

Test of mediating effects

To understand the synthetic effect of the ECM and technology readiness on intention to use mobile-related services, indirect effects must be tested. Sobel test was used to test the significance of mediating effects.[60] Besides, the product-of-coefficient method proposed by MacKinnon et al.[61] was also applied, to generate the asymmetric confidence intervals by using PRODCLIN2. Mediating effects were assessed using five equations (Table 7). For example, H10b (TR-SAT-CI) was set to estimate the mediating path from technology readiness to continuance intention *via* satisfaction. Table 7 shows that Sobel test revealed five significant mediating effects ($p < 0.05$). Additionally, 95% confidence intervals for the five mediating paths did not involve a zero, which confirmed the significance of mediating effects.

Discussion and Research Findings

The findings of this study have several managerial implications. First, technology readiness is significantly associated with intention to continue using mobile services. Compared with the original ECM by Bhattacherjee,[3] this study increased the total variance explained in continuance intention from 41% to 63%. Additionally the trickle-down process in the psychological perceptions of consumers who adopt mobile services were presented and validated *via*

Table 6. Summary of Hypotheses Testing Results

Hypotheses	*Paths*	*Standardized path coefficients*	*t*	*Supported*
H1	TR→CONF	0.61***	9.019	Yes
H2	TR→PU	0.39***	6.405	Yes
H3	TR→SAT	0.17**	2.830	Yes
H4	TR→CI	0.17*	2.397	Yes
H5	CONF→SAT	0.49***	7.689	Yes
H6	CONF→PU	0.52***	9.105	Yes
H7	SAT→CI	0.51***	5.313	Yes
H8	PU→CI	0.19*	2.195	Yes
H9	PU→SAT	0.34***	5.084	Yes

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table 7. Mediation Tests

Equation	*Relationship*	*Unstandardized regression weights*	*Standard error*	*Sobel test (z)*	*95% asymmetric confidence interval*
H10a: TR-PU-CI	TR-PU	0.41	0.05	2.32*	(0.01, 015)
	PU-CI	0.17	0.07		
H10b: TR-SAT-CI	TR-SAT	0.18	0.06	2.65**	(0.02, 0.17)
	SAT-CI	0.46	0.08		
H10c: TR-CONF-PU	TR-CONF	0.49	0.05	6.94***	(0.22, 0.47)
	CONF-PU	0.69	0.07		
H10d: PU-SAT-CI	PU-SAT	0.34	0.06	3.68***	(0.07, 0.27)
	SAT-CI	0.46	0.08		
H10e: CONF-PU-SAT	CONF-PU	0.69	0.07	4.91***	(0.13, 0.37)
	PU-SAT	0.34	0.06		

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

mediation testing, and the integrated model migrate the concern on service systems to end-users, as technology readiness is a psychological- and individual-specific construct. This research finding indicates that integrating the psychological construct of technology readiness into ECM evidently increases the precision of the proposed model in modeling and predicting user intentions.

Second, technology readiness, perceived usefulness, and confirmation of expectation positively affect intention to use mobile services through the mediating effect of satisfaction. While some empirical studies have removed the role of satisfaction in predicting usage intention,[26,62,63] this study indicated that the effect is significant ($B = 0.51$). Given the mediation test results and the theoretical relevance of satisfaction as a critical mediator in the ECM and its instituted role as a predictor of satisfaction across a wide range of IT/IS adoption behaviors, we suggest that it may be inconsiderate to drop satisfaction from IT/IS usage models.

Third, among the three postadoption beliefs, the impact of confirmation on satisfaction and intention to continue mobile services usage is strongest. On the basis of a postadoption experience, the initial user expectation might shift. The updated expectation in turn has vital influence on the consequent processes, such as the perceptions of usefulness and satisfaction.[3] In addition, perceived usefulness is the dominant factor in user satisfaction and intention to continue using mobile services. This finding is applicable for improving the competitive advantages of service providers and for helping to understand the values of mobile service users.

Conclusions and Future Work

The contribution of this research is the development of an integrated model that synthesizes the essence of technology readiness and ECM to explain the continuance intention of mobile service users in terms of systemic and personal factors. On the basis of existing theoretical streams and the system characteristics of mobile services, this research integrated technology readiness into the ECM toward mobile services, and theorized that the impact of technology readiness on continuance intention is mediated by the perceptions of usefulness, confirmation and satisfaction.

Accumulating empirical data confirm the roles of perceived usefulness, confirmation, and satisfaction as strong predictors of continuance intention in users of emerging IT/IS.[9,10,33,37,38] However, this study mainly argues that the ECM tends to have a limited viewpoint to predict mobile service adoption because it may neglect an individual's personalities in which a technology is being adopted or refused. On the basis of the verification and discussion in this study, the integration of ECM and technology readiness contributes to the literature on IS continuance.

Several limitation of this study should be addressed in the future. First, the extended ECM was evaluated in a single-country setting, which limits generalizability. Additional empirical validation across different regions or countries would enhance the generalizability of the proposed model. Second, this study did not consider the divergence between voluntary and mandated usage, and the potential issue of assessing acceptance in these two different circumstances. For the mandated users, the usage of specific system may be highly dependent on job tasks or performances. Therefore, further development and evidence from the extended ECM in different service environments are needed.

Author Disclosure Statement

No competing financial interests exist.

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Appendix

Questionnaire Items

Technology readiness (scaling from "strongly disagree" to "strongly agree" on a seven-point scale)

Optimism	
TR1	Technology makes me more efficient in my occupation.
TR2	Technology gives me more freedom of mobility.
TR3	Learning about technology can be as rewarding as the technology itself.
TR4	I find new technologies to be mentally stimulating.
TR5	I prefer to use the most advanced technology available.
Innovation	
TR6	Figure out new high-tech products and services without any help.
TR7	Others come to me for advice on new technology.
TR8	Be among the first in my circle of friends to acquire new technology.
TR9	Have fewer problems than others in making technology work.
TR10	Keep up with the latest technological development that I am interested in.
Discomfort (reverse scored)	
TR11	Manual for a high-tech product or service is hardly written in plain language.
TR12	Technical support lines are not helpful because they don't explain things in terms that I understand.
TR13	When getting technical support, I feel as if being taken advantage of by someone who knows more than me.
TR14	Embarrassed to have trouble with a high-tech gadget while people are watching.

(*continued*)

Questionnaire Items (Continued)

Technology readiness (scaling from "strongly disagree" to "strongly agree" on a seven-point scale)	
Insecurity (reverse scored)	
TR15	I worry about that the information I send over the Internet may be seen.
TR16	It's not safe to do any kind of financial business online.
TR17	It's not safe to give the vendor a credit card number over a computer.
TR18	I don't feel confident doing business with a place that can only be reached online.
Perceived usefulness (scaling from "strongly disagree" to "strongly agree" on a seven-point scale)	
PU1	Using the mobile service in my job/life will increase my productivity.
PU2	Using the mobile service in my job/life will make me more effective.
PU3	I find the mobile service to be useful in my job/life.
Confirmation of expectations (scaling from "strongly disagree" to "strongly agree" on a seven-point scale)	
COM1	My experience with using mobile service is better than what I expected.
COM2	The service level provide by mobile service is better than what I expected.
COM3	Overall, most of my expectations from using mobile services are confirmed.
Satisfaction (scaling from "strongly disagree" to "strongly agree" on a seven-point scale)	
SAT1	My overall experience of mobile service use was very satisfied.
SAT2	My overall experience of mobile service use was very pleased.
SAT3	My overall experience of mobile service use was absolutely delighted.
SAT4	My overall experience of mobile service use was very contented.
Continuance intention (scaling from "strongly disagree" to "strongly agree" on a seven-point scale)	
CI1	I intend to continue using mobile service on my job/life.
CI2	I will use the mobile service regularly in the future.
CI3	My intentions are to continue using mobile service than use any alternative means.
CI4	If I could, I would like to continue using mobile service as much as possible.

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