

웹 기술을 활용한 서비스 혁신: 패밀리 레스토랑 웹사이트 소비자 수용 사례[†]

(Services Innovation Using Web Technology: A Case of
Consumer Adoption of Family Restaurant Web Sites)

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요 약 오늘날 웹사이트는 기업의 경영목표를 달성하기 위한 전략적 수단으로 활용되고 있다. 특히, 최근 다양한 계층의 소비자들에게 관심을 얻고 있는 패밀리 레스토랑에 있어서도 웹사이트의 운영은 소비자에게 만족감을 제공해 주기 위한 서비스로 이용되고 있다. 최근 패밀리 레스토랑을 운영하는 기업들은 전략적 차원의 웹사이트 운영을 시도하고 있고, 이를 통해 패밀리 레스토랑의 홍보 및 마케팅을 수행하고 있다. 이러한 노력은 패밀리 레스토랑의 경영성과 개선에 영향을 미친다. 본 연구에서는 성별에 따라 소비자들의 패밀리 레스토랑 웹사이트의 이용에 대한 분석을 하였다. 연구모델은 기술수용모델을 확장해 성별에 따라 패밀리 레스토랑 웹사이트의 이용용이성과 유용성이 이용의도에 미치는 영향과 실제이용과 추천에 미치는 영향관계를 분석하였다. 본 연구결과는 패밀리 레스토랑 운영 기업들이 소비자들을 대상으로 마케팅 전략을 수립하는데 유용한 시사점을 제시해 줄 것으로 기대한다.

핵심주제어 : 기술수용모델, 패밀리 레스토랑 웹사이트, 성별, 비교

Abstract Today, a web site is used as a strategic method to fulfill a company's objectives. In particular, a web site provides a service for customers to find satisfaction in visiting family restaurants, and it recently has helped to attract the interest of a variety of customers. Currently, companies that manage family restaurants operate their Web sites as strategic tools and use them to perform public relations and marketing of their restaurants.

This effort influences management and helps to improve the business and profitability of family restaurants. The research model of this study is an expansion of the Technology

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Acceptance Model (TAM) and examines whether ease of use and usefulness of family restaurant web sites influence the relationship of intention to use, actual use, and recommendation to use by gender. The results of this research would suggest that web sites are useful in establishing a marketing strategy for companies that operate family restaurants.

Key Words : TAM, Restaurant web sites, Gender

1. Introduction

Presently, the adoption of new information technology (IT) helps to make a company's business more innovative. Currently, the use of IT in the hotel and restaurant industry is increasing at a tremendous pace. The introduction of an informational Web site makes the company's business innovative in a variety of aspects, such as customer relations management, business management, partner management, and other key areas. Recently, the increase in consumer discretionary spending has led to the establishment of a larger restaurant industry that provides a good quality of food and a pleasant atmosphere for its customers. Family restaurants constitute one of the rapid growth areas in the restaurant industry[2][49]. Family restaurants provide the customer with a variety of choice in foods, such as Korean, Chinese, or Western-style foods. Each year more and more family restaurants are appearing in Korea that provides a variety of foods and services.

Recently, the increase in the number of family restaurants has increased the competition between family restaurants, and this has served to strengthen the competitive nature of the restaurant industry. Many companies that operate family restaurants but have not focused on using the Internet to enhance customer service in the past are now creating efforts to make their various services available to customers online[26][29]. The presentation of online services strengthens the strategy of family restaurants by allowing them to

provide a variety of information through their Web sites and offer various kinds of gifts, special events, discount coupons, or other items that will promote the customers' interest in visiting family restaurants[19]. The use of family restaurants' Web sites as a marketing strategy will ultimately be shown to improve both customer satisfaction and create better results for management goals. Therefore, companies who operate family restaurants make many efforts to establish their Web sites by considering consumers' needs and intentions and encouraging customers' use of their Web sites [33][40][28].

Presently, nearly every family restaurant within or outside of the country operates its own Web site. However, a thorough and careful analysis of whether management has improved through the efficient operation of family restaurants' Web sites has been unsatisfactory until now. Moreover, some family restaurants' Web sites are not updated on a regular basis and lack new information, which has caused customers to turn away from using them. According to previous research, even though family restaurants' Web sites are strategic marketing tools, a systematic application strategy for maintaining and updating the Web sites is currently lacking. Therefore, this study has sought to analyze how customers adopt the use of family restaurant Web sites through the Technology Acceptance Model (TAM)[13]. TAM is a research model suggested by Davis (1989), which analyzes how and why customers adopt new IT and offers a systematic

explanation of the adoption process for nearly every new type of IT. Therefore, the researchers in this study would like to apply an extension of the TAM model to analyze customers' adoption of using family restaurant Web sites. Specifically, this study will analyze the influence of ease of use and usefulness of family restaurant Web sites upon the intention to use and the actual use of family restaurant Web sites, use of Web sites for information acquisition, and ultimate recommendations for use of family restaurant Web sites by customers. In addition, gender differences in perception is currently a hot issue in online customer behavior studies [10][27]. Therefore, this study will analyze the characteristics according to the gender of customers who use family restaurant Web sites and attempt to draw from the analysis information useful for establishing more successful marketing strategies.

2. Prior Studies and hypothesis

2.1 Family restaurant Web-site strategy

Consumers are very interested in the restaurant industry. In particular, family restaurants, which are now rapidly improving, provide a variety of good quality foods and services that customers like. The majority of customers for family restaurants are of the younger generation. The recent increasing competition between family restaurants focuses on providing good quality foods and services as a way to improve customer satisfaction. Thus, the companies that operate family restaurants use various information systems to make their services more convenient for the customers.

Family restaurants, in particular, are establishing Web sites for public relations and marketing purposes. These Web sites not only provide various information about the restaurants' foods and

services but also elicit the customers' participation by offering various competitions, gifts, and incentives. This leads their public relations efforts and accomplishes the marketing[29]. Such efforts through the restaurants' Web sites encourage customers to visit the Web sites and ultimately strengthen the competitive power of family restaurants [19][26][47]. This study will analyze various relationships among family restaurant Web site strategies, such as the customers' intention to use, actual use, satisfaction, and their recommendations to others to use these Web sites. Through this, we will suggest implications for the establishment of successful e-business strategies for companies that operate family restaurants.

2.2 IT adoption and gender difference

Technology adoption is a very important issue for the innovative business efforts of companies. In 1989, after Davis suggested TAM, technology adoption studies were carried out in various fields [13]. Meta-analysis research demonstrated very well the trend of applying the TAM research [7][16][21][22][23][24][35][39][42][46][50].

Various TAM meta-studies were performed to reexamine its scientific and practical value. The results of TAM meta-research that have been published in prominent journals in the information system field are listed in the next paragraph.

First, the research of Lee et al., (2003) about TAM suggested past, present, and future trends and was published in *Communications of the AIS*[48]. Second, King and He (2006) researched whether ease of use and usefulness of TAM influence technology adoption, and the results of their analysis were published in *Information & Management*[43]. Third, Ma and Liu (2004) researched the characteristics of TAM studies and published their results in the *Journal of*

Organizational and End User Computing[31]. Fourth, Schepers and Wetzels (2007) analyzed TAM, focusing on subjective norms and the adjustment effect in *Information & Management*[20].

<Table 1> Prior Research

Researchers	contents
Liu & Louvieris (2006)	Internet banking adoption study for customer reinforcement in England
Yang (2005)	Study for finding influential factors on mobile commerce adoption in Singapore
Lai & Li (2005)	Analysis of Internet banking technology adoption model
Lee (2008)	Analysis of resource role in online learning adoption
Arning & Ziefle (2007)	PDA adoption study according to age
Han et al., (2006)	Wireless communication technology adoption study
Chen (2008)	Wireless payment service adoption study
Kim (2006)	Web-based database technology adoption
Hsu & Lu (2004)	Online game adoption: TAM expansion though social influence and flow experience
Wu & Li (2007)	The recommendation of TAM model for knowledge management system adoption from situational side

These TAM meta-studies showed an expansion in the application of TAM. The main characteristics of this model are expansion of independent and dependent variables, recommendation of the influential factors upon dependant variables, and a showing of the influence of situational variables. Recent TAM-applied studies are listed in <Table 1>. Considering the features of the following TAM studies, we can foresee that customer adoption of family restaurant Web sites could become a major object of research.

Moreover, this literature review suggested that an important research topic would be to perform a comparison analysis by gender. A comparison analysis by gender is a very important research area in the IT application area. Major studies that have been recently performed on gender comparison that show a discrepancy in online customer behavior are described as follows: Comunale and

Belanger (2002) suggested a discrepancy by gender in consumer perception in online shopping[6]. Gefen and Ridings (2005) performed a study that showed consumers' gender differences influenced differences in relationship formation [8]. Gefen and Straub (1997) suggested the importance of differences in consumer IT adoption by analyzing differences in e-mail use according to gender[10]. Simon (2001) insisted that there are online Web site use differences according to differences in gender and cultural characteristics[34]. Hupfer and Detlor (2006) showed that there is difference in on-line information searching activity according to gender[25]. Awad and Ragowsky (2008) strengthened the view that online information by word-of-mouth effect importantly influences customer trust formation, and there were gender differences mentioned in this process as well[27]. Also, Hess and others (2006) analyzed differences in the decision-making process and participation according to the gender of the participants[38]. Likewise, a study of the role of gender differences in the use of IT by enterprises and customers shows great importance for continued comparison analysis studies of companies in their approach to customers according to gender difference. Therefore, an understanding of customers' difference by gender will provide strategic implications for strengthening the competitive power of family restaurant Web sites and, through this, make it possible to support management improvement and promotion[1].

2.3 Hypotheses

This study suggests seven hypotheses. Hypotheses 1 to 5 are based on TAM. This study establishes these hypotheses for analyzing the customer adoption process for family restaurant Web sites according to gender difference.

- H1. The ease of use of family restaurant Web

sites will influence the usefulness.

- H2. The ease of use of family restaurant Web sites will influence the intention to use.
- H3. The usefulness of family restaurant Web sites will influence the intention to use.
- H4. The intention to use family restaurant Web sites will affirmatively influence the transactional use.
- H5. The intention to use family restaurant Web sites will affirmatively influence the information use.

According to the extended study of TAM, the extension of intention to use provides useful implications to understand customers' attitudes and their actual use in technology adoption. Ultimately, customers' intention to use new technology positively influences attitude [3][13][15], perceptual usage [32], and actual usage [14]. According to Koh and Prybutok (2003), in the case of companies, application of IT is applied in the operational dimension, the transactional dimension, and the informational dimension[4]. The foregoing three dimensions are considered in companies, but informational application in transactional and informational dimensions are considered in customer dimensions. Moreover, Park (2002) noted that an increased service of hotels affirmatively affects the actual use and the satisfaction, and this positively influences the recommendation of the hotel use[11][28]. Therefore, this study established the hypotheses that, focusing on customer use of family restaurant Web sites, the intention to use family restaurant Web sites influences transactional use and informational use of family restaurants, the transactional use and its increased actual use influence the recommendations to use family restaurant Web sites by the customers.

- H6. The transactional use of family restaurant Web sites will affirmatively influence the

recommendation to use them.

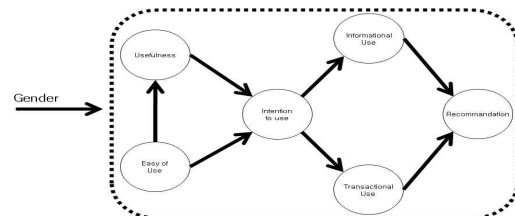
- H7. The informational use of family restaurant Web sites will affirmatively influence the recommendation to use them.

Also, as explained previously, we adopted the variables of gender and established these hypotheses of gender difference through the PLS structural equation model.

3. Research model

3.1 Research model

As explained in previous studies, this study applied TAM to customers' use of family restaurant Web sites. Furthermore, we analyzed PLS technique to provide strategic implications for a discriminating customer marketing strategy and for understanding distinctive characteristics in male and female perspectives respectively. This study's research model is depicted in <Figure 1>.



<Figure 1> Research Model

3.2 Research variables

This study's research variables were selected in accordance with information from previous studies. This study's researchers developed survey questions about customer use of family restaurant Web sites from previous studies, and we amended the survey questions, which we developed through the use of experts' interviews. First of all, this study is

composed of the following variables: ease of use, usefulness, intention to use.

<Table 2> Research Variables

Variables	Items	Related study
Perceived Ease of use (PEOU)	Family restaurant Web sites are easy to use. Informational use of family restaurant Web sites is easy.	[13]
Usefulness (UF)	The use of family restaurant Web sites provides usefulness for us when we use family restaurant Web sites. The use of family restaurant Web sites provides useful information for me, making it helpful to select family restaurant menus.	[13]
Intention to use (INT)	I will obtain the information about restaurants through family restaurant Web sites. I will use family restaurant Web sites continuously in the future. I will confirm additional services that family restaurant Web sites provide continuously by periodic visits.	[13]
Informational use (IU)	I obtain the information, such as a general description about family restaurants, location, menu, contacts, and so on, through family restaurant Web sites. I obtain various optical and video information about the restaurant from using family restaurant Web sites.	[4]
Transactional Use (TU)	I download discount coupons from family restaurant Web sites. I participate in family restaurants' marketing, which discounts food prices through family restaurant Web sites. I participate in various events that are performed on family restaurant Web sites. I obtain various additional services and economical benefits through family restaurant Web sites.	[4]
Recommendation (REC)	I recommend the informational use of family restaurant Web sites. I perceive the usefulness of a visit to family restaurant Web sites, and I recommend the use of family restaurant Web sites to people who use the restaurant	[2] [18] [45]
Gender	What is your gender?	[10]

These variables were based on Davis's (1989) TAM study. Moreover, we composed questions regarding transactional use and informational use based on Koh and Prybutok (2003) and regarding recommendation based on Cho and Cho (2010), Babin et al., (2005), and Fong & Burton (2008). Furthermore, we analyzed differentiated characteristics between genders regarding the use of family restaurant Web sites. The research variables of this study are listed in <Table 2>.

3.3. Survey

The validity of the measurement items was evaluated and justified by twelve experts before the main survey was conducted: diverse comments and advice were collected. The final questionnaire had been developed through a procedure that modified or deleted each survey item that lacked validity or reality. This survey was conducted with university students and graduated student who frequent family restaurants. The survey was conducted from April 1, 2011 to April 30, 2011. We collected a total number of 140 data using web surveyor. The survey instrument consisted of questions based on a seven-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). All statistical analyses in this study were conducted by using SPSS 12.0 and SMART PLS 2.0.

4. Empirical results

4.1. Sample information

The characteristics of the survey participants of 140 survey respondents in the study sample are as follows. Details of sample information (gender, education level, usage time, age and the average amount of money spent each time) are shown in <Table 3>.

<Table 3> Sample

		Frequency	%
Gender	Male	76	54.3
	Female	64	45.7
	Total	140	100.0
Education level	Undergraduate	138	98.6
	Graduate	1	.7
	Finished college	1	.7
	Total	140	100.0
Usage time	Under 1 hour	7	5.0
	Under 2 hours	50	35.7
	Under 3 hours	37	26.4
	Under 4 hours	24	17.1
	Under 5 hours	17	12.1
	Under 6 hours	2	1.4
	Under 7 hours	3	2.1
	Total	140	100.0
Age	10~19	6	3.4
	20~29	165	94.3
	30~39	3	1.7
	40~49	1	0.6
	Total	140	100.0
average amount of money spent each time	Under 20,000 won	36	25.7
	Under 40,000 won	76	54.3
	Under 60,000 won	24	17.1
	More than 80,000 won	4	2.9
	Total	140	100.0

4.2. Empirical validation and reliability

An analysis of reliability and validity was conducted on the variables (see <Table 4> and <Table 5>). Through PLS analysis, reliability was analyzed using a Composite Scale Reliability Index (CSRI). Typically, if the CSRI value is above 0.7, reliability may be assumed. Furthermore, validity was evaluated through composite reliability and Cronbach's Alpha. If the composite reliability and average variance extracted (AVE) square value is above 0.7, the variables are viewed as having sufficient validity [5][12][17]. Through statistical analysis, the research variables of this study were evaluated and confirmed to have sufficient reliability.

<Table 4> Factor Analysis

Male	IU	INT	REC	TU	PEO	UF
INT1		0.89				
INT2		0.93				
INT3		0.66				
IU1	0.85					
IU2	0.87					
PEOU1					0.93	
PEOU2					0.95	
REC1			0.96			
REC2			0.96			
TR1				0.77		
TR2				0.78		
TR3				0.78		
TR4				0.79		
UF1						0.92
UF2						0.93
Female	IU	INT	REC	TU	PEO	UF
INT1		0.89				
INT2		0.95				
INT3		0.76				
IP1	0.90					
IP2	0.88					
PEOU1					0.89	
PEOU2					0.92	
REC1			0.93			
REC2			0.93			
TR1				0.85		
TR2				0.90		
TR3				0.86		
TR4				0.91		
UF1						0.94
UF2						0.93

<Table 5> AVE and Reliability

Male	AVE	Composite Reliability	Cronbachs Alpha
IU	0.74	0.85	0.64
INT	0.70	0.87	0.78
REC	0.91	0.96	0.91
TU	0.61	0.86	0.79
PEOU	0.89	0.94	0.88
UF	0.86	0.92	0.83
Female	AVE	Composite Reliability	Cronbachs Alpha
IU	0.79	0.89	0.74
INT	0.76	0.90	0.84
REC	0.86	0.92	0.83
TU	0.77	0.93	0.90
PEOU	0.82	0.90	0.78
UF	0.87	0.93	0.86

<Table 6> Correlations

Male	IU	INT	REC	TU	PEOU	UF
IU	0.86*					
INT	0.68	0.84*				
REC	0.53	0.58	0.96*			
TU	0.53	0.61	0.58	0.78*		
PEOU	0.67	0.64	0.58	0.49	0.94*	
UF	0.77	0.77	0.60	0.57	0.78	0.93*
Female	IU	INT	REC	TU	PEOU	UF
IU	0.89*					
INT	0.62	0.87*				
REC	0.54	0.46	0.93*			
TU	0.46	0.69	0.51	0.88*		
PEOU	0.57	0.70	0.29	0.46	0.90*	
UF	0.67	0.77	0.41	0.57	0.86	0.94*

* Squares root of AVE, *P < 0.001

This research also included a correlation analysis for discriminant validity (See <Table 6>). Since the correlation coefficients of the research variables were no more than 0.7, sufficient discriminant validity was procured [30]. Also, the squares root of AVE bigger than other correlation values. Thus, our variables are satisfied to determine the discriminant validity[5].

4.3. Empirical results

<Tables 7> show the results of a structural equation modeling test using Smart PLS. Tests of significance for all paths were conducted using the bootstrap resampling procedure. Chin (1998) noted that bootstrap resampling simulation times are from 100 to 1000 times in the PLS structural model[44]. The results of the structural path analysis of the research model provided support for all seven hypotheses. We simulated the resampling procedure 500 times to analyze the sample.

In the case of males, the analytical results of the PLS showed that ease of use is a determinant of usefulness at a significant level of 0.001 (t = 39.54). Ease of use is found to be a significant influence on intention (p < 0.001, t = 2.95). Likewise, usefulness is an influence on intention (p < 0.001, t

= 27.22). Intention is found to be a significant influence both on informational use (p < 0.001, t = 25.17) and on transactional use (p < 0.001, t = 19.30). Information use is found to be a significant influence on recommendation at a significance level of 0.001 (t = 7.69). Transactional use is an influence on recommendation (p < 0.001, t = 11.42).

<Table 7> Results

Hypothesis (female)	Beta	T-Statistics	Result
IU → REC	0.39	8.93 *	Accept
INT → IU	0.62	17.99*	Accept
INT → TU	0.69	24.12 *	Accept
TU → REC	0.33	6.19 *	Accept
PEOU → INT	0.12	1.74 **	Accept
PEOU → UF	0.86	64.31 *	Accept
UF → INT	0.67	10.87 *	Accept
Hypothesis(male)	Beta	T-Statistics	Result
IU → REC	0.31	7.69 *	Accept
INT → IU	0.68	25.17 *	Accept
INT → TU	0.61	19.30 *	Accept
TU → REC	0.42	11.42 *	Accept
PEOU → INT	0.11	2.95 *	Accept
PEOU → UF	0.78	39.54 *	Accept
UF → INT	0.69	27.22 *	Accept

※ Female : R squares : Informational use (0.39), Intention to use (0.60), Recommendation (0.38) Transactional use (0.48), Usefulness (0.74)
 ※ Male : R squares : Informational use (0.47), Intention to use (0.60), Recommendation (0.50) Transactional use (0.37), Usefulness (0.60)
 ※ * P < 0.001, ** P < 0.01

As shown in <Table 7>, for females, the empirical analytical results of PLS showed that informational use is a determinant of recommendation at a significance level of 0.001 (t = 8.93). Also, intention to use is found to be a significant influence both on informational use (p < 0.001, t = 17.99) and transactional use (p < 0.001, t = 24.12). Transactional use is found to be a significant influence on recommendation (p < 0.001, t = 6.19). Ease of use is an influence on intention to use (p < 0.05, t = 1.74) and influences usefulness as well (p < 0.001, t = 64.31). Also, usefulness is found to be a significant influence on intention to use (p < 0.01, t = 10.87).

5. Conclusions

5.1 Discussions

This study was an empirical study on the intention to use, actual usage, and recommendation to use family restaurant Web sites. The seven selected research hypotheses were borne out as the researchers of this study anticipated. The findings of this study are explained in the following paragraphs.

First, women, more strongly than men, influence the relationship from ease of use and usefulness of family restaurant Web sites to an intention to use them in <Table 7>. This peculiarity can be explained by the fact that women, more so than men, prefer to make advanced preparations to use family restaurants. Therefore, companies that operate family restaurant Web sites should understand that women are a more significant marketing target than men, and they should establish or adjust their marketing strategies accordingly by aiming their efforts toward the known characteristics of women, rather than men.

Second, analysis of the characteristics of gender differences has shown this important implication: women are more likely to collect a random variety of information in their online searches and perform prudent decision-making, whereas men exhibit more purpose-oriented online behaviors[6][9]. Thus, men are not as immersed in gathering information through the Internet as women are, and men tend to focus on transaction-oriented behaviors. Other gender-related characteristics observed in this study include these. Men exert greater influence on the relationship of intention to use to transactional use than do women, and women are more influential in information gathering behaviors than men in <Table 7>. Therefore, family restaurant companies should establish a marketing strategy that clearly

differentiates between women and men.

Third, there are differences between men and women regarding the tendency to recommend the use of family restaurant Web sites in <Table 7>. Men demonstrate a stronger tendency to recommend the use of information from Web sites than do women, but they are weaker when it comes to recommending the use of transactions on the Web sites. This result can be understood by the fact that women tend to promote the more practical aspects of using family restaurant Web sites than men do. Therefore, companies that operate family restaurant Web sites should establish different web site operating strategies that take into consideration the gender differences in women and men in both practical use and transactional use. Moreover, family restaurants should establish different marketing strategies targeting the actual use of their Web sites according to gender differences. For example, companies should strengthen their offline marketing strategies toward women since women seem to recommend transactional use more often than do men, even though women exhibit a weaker tendency to acquire information by the word-of-mouth effect.

5.2 Implications

Today, family restaurants usually utilized the services of Web site for providing to consumer. However, the systematic strategies of providing information didn't existed. Our study has following managerial and theoretical implications for family restaurants e-marketer.

First, customer relationship management of family restaurants Web-site is the most important research areas in hospitality industry. However, study about transactional and informational usage of web contents in regarding the use of family restaurant Web sites didn't founded. In particular, through an

analysis of gender differences regarding the use of family restaurant Web sites, this study also produced important information for a discriminating CRM marketing strategy directed toward gender characteristics by companies that operate family restaurant Web sites.

Second, TAM-related studies have been adapted to a variety of technology adoption studies, and TAM and ECM also provided useful information regarding the IT adoption [36][37][41]. This study was an empirical study on the intention to use, actual usage, and recommendation to use family restaurant Web sites, conducted with an extended version of TAM. In particular, our study extended the TAM with actual usage and recommendation. The theoretical contribution of this results validated and extended the usefulness of TAM.

5.3 Limitations

This study has certain limitations. First, a sampling process limitation exists. The study focused its survey questions on university students, and survey questionnaires were conducted only in selected areas, Seoul and Kyungi, and Kangwon province in South Korea. Thus, the results provide useful implications regarding only college students. This limitation may, therefore, skew any generalization from the results. Further, this study was composed of respondents only from Seoul, Kyungi, and Kangwon-province in South Korea. Since large differences exist between these cities in both regional characteristics and the number of family restaurants available, the research is limited in that it does not fully reflect the regional characteristics of the customers. Therefore, future studies should extend the sample targets and establish more elaborate and complete research models in order to provide more detailed implications for future study.

Second, this study applied the TAM of Davis (1989) to family restaurant Web site use, thus extending TAM to the actual use and recommendations for use of family restaurant Web sites. The TAM was extended by using various preceding factors, circumstantial variables, dependant variables, and other modifications [43]. This study focused on consumers' actual use and recommendations for use of family restaurant Web sites. However, in actuality, there were differences by individual characteristics in the use of family restaurant Web sites and also large differences by individual economic situations in the use of family restaurant Web sites. Therefore, this study lacked a control for the family restaurant users' sample. This research limitation could be improved by arranging for greater control standards and adopting a wider variety of circumstantial variables in future research.

References

- [1] A. J. Lee and M. S. Kim, "A study of Internet marketing for family restaurant in Korea", *Korean Journal of Culinary Research*, Vol. 7, No. 1, pp. 203-227, 2001.
- [2] B. J. Babin, Y. K., Lee, E. J. Kim, and M. Griffin, "Modeling consumer satisfaction and word-of-mouth: restaurant patronage in Korea", *Journal of Services Marketing*. Vol. 19, No. 3, pp. 133-139, 2005.
- [3] B. Szajna, "Empirical evaluation of the revised technology acceptance model", *Management Science*, Vol. 42, No. 1, pp. 85-92, 1996.
- [4] C. E. Koh, and V. R. Prybutok, "The three ring model and development of an instrument for measuring dimensions of e-government functions", *Journal of Computer Information Systems*, Vol. 43, No. 4, pp. 34-39, 2003.

- [5] C. Fornell and D. F. Larcker. D. F. "Evaluating structural equation models with unobservable variables and measurement error," *Journal of Marketing Research*, Vol. 18, pp. 39-50, 1981.
- [6] C. L. Comunale and F. Belanger, "Gender differences in perceptions of web-based shopping", *Communications of the ACM*, Vol. 45, No. 8, pp. 82-86, 2002.
- [7] Chin-Lung Hsu, and Lu, Hsi-Peng, "Why do people play on-line games? An extended TAM with social influences and flow experience", *Information & Management*, Vol. 41, No. 7, pp. 853-868, 2004.
- [8] D. Gefen, and C. M., Ridings, "IT acceptance: managing user-IT group boundaries", *ACM SIGMIS Database*, Vol. 34, No. 3, pp. 25-40, 2003.
- [9] D. Gefen, M. Catherine, and C. M. Ridings, "If you spoke as she does, sir, instead of the way you do: a sociolinguistics perspective of gender differences in virtual communities", *ACM SIGMIS Database*, Vol. 36, No. 2, pp.78-92, 2005.
- [10] D. Gefen and D. W. Straub, "Gender differences in the perception and use of e-mail: an extension to the technology acceptance model", *MIS Quarterly*, Vol. 21, No. 4, pp. 389-400, 1997.
- [11] D. K. Park, "The effect of the hotel service quality's perception and satisfaction on intention of visit and recommendation", *Hotel Management Study*, Vol. 14, No. 1, pp. 103-119, 2002.
- [12] D. W. Barclay, C. Higgins, and R. Thompson, "The partial least squares (PLS) approach to causal modeling: personal computer adaptation and use as an illustration," *Technology Studies*, Vol. 2, No. 2, pp. 285-309, 1995.
- [13] F. D. Davis, "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, Vol. 13, No. 3, pp. 319-340, 1989.
- [14] F. D. Davis and V. Venkatesh, "Toward preprototype user acceptance testing of new information systems: implications for software project management", *IEEE Transaction Engineering Management*, Vol. 51, No. 1, pp. 31-46, 2004.
- [15] F. D., Davis, R. P. Bagozzi and P. R. Warshwa, "User acceptance of computer technology: a comparison of two theoretical models", *Management Science*, Vol. 35, No. 8, pp. 982-1003, 1989.
- [16] J. A. Kim, "Toward an understanding of Web-based subscription database acceptance", *Journal of the American Society for Information Science and Technology*, Vol. 57, No. 13, pp. 1715-1728, 2006.
- [17] J. C. Nunnally and I Bernstein, *Psychometric Theory*, McGraw-Hall, New York, 1994.
- [18] J. Fong, and S. Burton, "A cross-cultural comparison of electronic word-of-mouth and country-of-origin effects", *Journal of Business Research*, Vol. 61, No. 3, pp. 233-242, 2008.
- [19] J. Murphy, E., Forrest, and C. E. Wotring, "Restaurant marketing on the worldwide web", *The Cornell Hotel and Restaurant Administration Quarterly*, Vol. 37, No. 1, pp. 61-71, 1996.
- [20] J. Schepers and M. Wetzels, "Meta-analysis of the technology acceptance model: investigating subjective norm and moderation effects", *Information & Management*, Vol. 44, pp. 90-103, 2007.
- [21] K. Arning, and M. Ziefle, "Understanding age differences in PDA acceptance and performance", *Computers in Human Behavior*, Vol. 23, No. 6, pp. 2904-2927. 2007.
- [22] K. C. C. Yang, "Exploring factors affecting the adoption of mobile commerce in Singapore",

- Telematics and Informatics*, Vol. 22, No. 3, pp. 257-277, 2005.
- [23] Lei-da Chen, "A model of consumer acceptance of mobile payment", *International Journal of Mobile Communications*, Vol. 6, No. 1, pp. 32-52, 2008.
- [24] L. Liu and P. Louvieris, "Managing customer retention in the UK online banking sector", *International Journal of Information Technology and Management*, Vol. 5, No. 4, pp. 295-307, 2006.
- [25] M. E. Hupfer and B. Detlor, "Gender and Web information seeking: A self-concept orientation model: research articles", *Journal of the American Society for Information Science and Technology*, Vol. 57, No. 8, pp. 1105-1115, 2006.
- [26] M. L. Kasavana, "E-marketing: restaurant Websites that click", *Journal of Hospitality & Leisure Marketing*, Vol. 9, No. 3/4, pp. 161-178, 2002.
- [27] N. Awad and A. Ragowsky, "Establishing trust in electronic commerce through online word of mouth: an examination across genders", *Journal of Management Information Systems*, Vol. 24, No. 4, pp. 101-121, 2008.
- [28] N. H. Park, "A Study on Internet advertisement effects of attitudes toward the Web site, brand, purchase intention : focused on family restaurant Internet Web sites", *Hotel Management Study*, Vol. 11, No. 2, pp. 115-132, 2002.
- [29] Oronsky, C. R., Chathoth, P. K., 2007, "An exploratory study examining information technology adoption and implementation in full-service restaurant firms", *International Journal of Hospitality Management*, Vol. 26, No. 4, pp. 941-956, 2007.
- [30] P. E. Kennedy, *Aguide to econometrics* (4th ed.), Cambridge, MA : MIT Press, 1988.
- [31] Q. Ma and L. Liu, "The technology acceptance model: a meta-analysis of empirical findings", *Journal of Organizational and End User Computing*, Vol. 16, No. 1, pp. 59-72, 2004.
- [32] R. P. Horton, T. Buck, P. E. Waterson, and C. W. Clegg, "Explaining intranet use with the technology acceptance model", *Journal of Information Technology*, Vol. 16, No. 4, pp. 237 - 249, 2001.
- [33] R. Stockdale and M. Borovicka, "Developing a model for supporting quality in restaurant Web sites: A pilot study", *Journal of Food Service Business Research*, Vol. 10, No. 1, pp. 51-76, 2007.
- [34] S. J. Simon, "The impact of culture and gender on web sites: an empirical study", *ACM SIGMIS Database*, Vol. 32, No. 1, pp. 18-37, 2001.
- [35] S. Han, P. Mustonen, M. Seppanen, and M. Kallio, "Physicians' acceptance of mobile communication technology: an exploratory study", *International Journal of Mobile Communications*, Vol. 4, No. 2, pp. 210-230, 2006.
- [36] S. R. Lee and S. W. Yang, "An Integrative Study on Continued Use of Web-Based Information Systems: Focusing on Online Shopping Sites", *Journal of Information Technology Application & Management*, Vol. 16, No. 1, 2009, pp. 51-71, 2009.
- [37] S. W. Yang, and J. H. Whang, "The effect of factors on continuous use of video telephony service for mobile device", *Journal of Information Technology Application & Management*, Vol. 17, No. 1, 2009, pp. 107-125, 2009.
- [38] T. J. Hess, M. A. Fuller and J. Mathew, "Involvement and decision-making performance with a decision aid: the influence of social multimedia, gender, and playfulness", *Journal of Management Information Systems*, Vol. 22, No. 3, pp. 15-54, 2006.
- [39] V. S. Lai, and H Li, "Technology acceptance model for internet banking: an invariance analysis", *Information & Management*, Vol. 42, No. 2, pp. 373-386, 2005.

[40] W. J. Nam, and H. J. Park, "A Study on the difference selection attributes in family restaurant brands: focused on Busan", *Food Management Research*, Vol. 5, No. 3, pp. 91-108, 2002.

[41] W. K. Jang, and T. K. Kim, "A Study on the Adoption of Accounting Information Systems in Mandatory Environments: Using TAM and TPB", *Journal of Information Technology Application & Management*, Vol. 12, No. 1, 2005, pp. 173-189, 2005.

[42] Wann-Yih Wu and Chia-Ying Li, "A contingency approach to incorporate human, emotional and social influence into a TAM for KM programs", *Journal of Information Science*, Vol. 33, No. 3, pp. 275-297, 2007.

[43] W. R. King and J. He, "A meta-analysis of the technology acceptance model", *Information & Management*, Vol. 43, No. 6, pp. 740-755, 2006.

[44] W. W. Chin, "The partial least squares approach to structural equation modeling", in G.A. Marcoulides(Ed.), *Modern Methods for Business Research*, Lawrence Erlbaum Associates, pp. 295-336, 1998.

[45] W. S. Cho and M. S. Cho, "The structural relationship between on-line word of mouth, trust, acceptance of word of mouth and intention of family restaurant visit on the Family Restaurant", *Tourism Management Review*, Vol. 14, No. 2, pp. 181-199, 2010.

[46] Ya-Ching Lee, "The role of perceived resources in online learning adoption", *Computers & Education*, Vol. 50, No. 4, pp. 1423-1438, 2008.

[47] Y. H. Huo, "Information technology and the performance of the restaurant firms", *Journal of Hospitality & Tourism Research*, Vol. 22, No. 3, pp. 239-251, 1998.

[48] Y. Lee, K. Kozar, and K. Larsen, "The technology acceptance model: past, present, and future", *Communications of the AIS*, Vol. 12,

No. 50, pp.752-780, 2003.

[49] Y. Namkung, I. S. Yang, and S. Y. Shin, "Identifying family restaurant website usability dimensions", *Tourism Studies*, Vol. 28, No. 4, pp. 47-65, 2005a.

[50] Y. Namkung, I. S. Yang, and S. Y. Shin, "Analysis of operating characteristics and the importance of performance", *Food Management Research*, Vol. 8, No. 2, pp. 25-44, 2005b.



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