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Examining the critical success factors of mobile website adoption

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Abstract

Purpose – The purpose of this research is to examine the critical success factors of mobile web site adoption.

Design/methodology/approach – Based on the valid responses collected from a questionnaire survey, the structural equation modelling technique was employed to examine the research model.

Findings – The results indicate that system quality is the main factor affecting perceived ease of use, whereas information quality is the main factor affecting perceived usefulness. Service quality has significant effects on trust and perceived ease of use. Perceived usefulness, perceived ease of use and trust determine user satisfaction.

Practical implications – Mobile service providers need to improve the system quality, information quality and service quality of mobile web sites to enhance user satisfaction.

Originality/value – Previous research has mainly focused on e-commerce web site success and seldom examined the factors affecting mobile web site success. This research fills the gap. The research draws on information systems success theory, the technology acceptance model and trust theory as the theoretical bases.

Keywords Critical success factors, System quality, Information quality, Service quality assurance, Communication technologies, Mobile communication systems, Internet, China

Paper type Research paper

Introduction

According to a report issued by the China Internet Network Information Centre in July 2010, the number of mobile internet users in China has reached 277 million, accounting for 66 per cent of the internet population (CNNIC, 2010). This shows the considerable extent of the mobile internet user base. The advent of third generation mobile communication technologies in particular has triggered the rapid development of mobile commerce around the world. Faced with this opportunity many businesses have built their own wireless application protocol sites, which allow users to retrieve information or access services via their handheld devices (Hung *et al.*, 2003). Mobile service providers expect to use these mobile sites to deliver ubiquitous and real-time information and services to users. Then they can acquire and retain customers and achieve competitive advantages. For example Taobao, which is the largest online consumer-to-consumer platform in China, has released a mobile version.

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As the main interface between users and mobile service providers, mobile site quality will affect user adoption and usage (Lee and Benbasat, 2004). Compared with internet sites mobile sites have some limitations, such as the smaller interface, lower resolution, and slower responses because of the constraints of mobile terminals. In addition, mobile users are always on the move when they access mobile services. They may find it difficult to concentrate their attention on using mobile sites. Thus, mobile service providers need to improve their interface design and provide a high quality mobile site to users.

According to the information systems success theory proposed by DeLone and McLean (2003) system quality, information quality and service quality represent the main success factors of an information system. These three factors have significant effects on user satisfaction and usage. Information systems success theory has received considerable attention in the electronic commerce context (Devaraj *et al.*, 2002; Wixom and Todd, 2005; Gable *et al.*, 2008; Cheung and Lee, 2009). However, it has seldom been used to explain the success of mobile sites, which represent an emerging information technology and have features including ubiquity, immediacy and localability. These features enable users to access mobile sites and acquire information at any time from anywhere. However, due to the constraints of mobile terminals such as small screens and inconvenient input, users may be reluctant to adopt mobile sites if mobile service providers do not present a high quality interface to them. Thus, it is necessary to employ information systems success theory to examine the critical success factors of mobile sites. This will not only extend the information systems success theory to the mobile commerce context, but also advance our understanding of mobile user behaviour and provide practical guidelines for mobile service providers to enhance their site design.

In addition to information systems success theory the technology acceptance model (TAM) and trust theory are often used to explain user adoption. TAM proposes that perceived ease of use and perceived usefulness represent two main beliefs affecting user adoption of an information technology. Due to its parsimony researchers suggest uncovering the determinants of both beliefs including perceived ease of use and perceived usefulness (Benbasat and Barki, 2007). System quality, information quality and service quality reflect users' perceptions of mobile sites, which may affect their evaluations of the ease of use and usefulness associated with using mobile sites. In addition, due to its virtuality and anonymity, mobile commerce also involves great uncertainty and risk. Thus, users need to build trust to alleviate perceived risk and facilitate their adoption and usage of mobile sites. System quality, information quality and service quality will affect users' trust beliefs in mobile service providers' ability and integrity. Summarising these points it is necessary to combine information systems success theory with TAM and trust theory to more fully examine user adoption of mobile sites.

Drawing on information systems success theory, TAM and trust theory, this research examines the critical success factors of mobile web site adoption. We propose that system quality, information quality, and service quality affect perceived ease of use, perceived usefulness and trust, further affecting user satisfaction. The results indicate that system quality is the main factor affecting perceived ease of use, whereas information quality is the main factor affecting perceived usefulness. Perceived ease of use, perceived usefulness and trust have significant effects on satisfaction. Among

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them trust has the largest effect. The results imply that mobile service providers need to focus on system quality, information quality and service quality to generate user trust and satisfaction.

The rest of this paper is organised as follows. We present a literature review in the next section. Then we propose the research model and hypotheses. The subsequent section reports instrument development and data collection. Then we present the data analysis and results, followed by a discussion of these results. After that, we present the theoretical and managerial implications and conclusions.

Literature review

Information systems success theory

Information systems success theory proposes that system quality and information quality affect users' usage of and satisfaction with information systems, further determining organisational performance (DeLone and McLean, 1992). Service quality was later incorporated into the model. The new model argues that system quality, information quality and service quality affect usage and user satisfaction, further affecting net benefits such as increased knowledge sharing and lower costs (DeLone and McLean, 2003, 2004).

Since its inception information systems success theory has been widely applied and empirically validated in the contexts of traditional information systems and electronic commerce. Wixom and Todd (2005) noted that information quality and system quality affect data warehousing software users' satisfaction, perceived usefulness, perceived ease of use and usage behaviour. Zhang (2010) proposed that both system quality and information quality affect social networking users' satisfaction and sense of community. Song and Zahedi (2007) reported that system quality and information quality affect users' trust in health infomediaries. Lin (2008) noted that system quality and information quality affect virtual community user satisfaction. Chatterjee *et al.* (2009) conducted a qualitative study and found that system quality, content quality and service quality affect the usage of mobile technology in healthcare. Lee *et al.* (2009) found that better information quality increased the usage of mobile data services, whereas lower system quality decreased usage.

TAM

TAM suggests that user acceptance of an information technology is mainly affected by two factors: perceived usefulness and perceived ease of use (Davis, 1989; Davis *et al.*, 1989). Perceived usefulness reflects the improvement of effectiveness and efficiency associated with using an information technology, whereas perceived ease of use reflects the (lack of) difficulty in using an information technology.

Due to its parsimony TAM has been widely used to explain mobile adoption behaviour (Ngai and Gunasekaran, 2007). Hong and Tam (2006) examined user adoption of mobile data services. They found that perceived usefulness, perceived ease of use, perceived enjoyment, a need for uniqueness and perceived cost affect users' behavioural intentions. Kim *et al.* (2010) noted that individual differences and mobile payment characteristics affect user adoption of mobile payment through perceived usefulness and perceived ease of use. Shin *et al.* (2010) proposed that service variety, access quality, cost rationality and perceived ease of use affect users' post-adoption usage of mobile internet through perceived usefulness.

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Trust

Trust reflects a willingness to be vulnerable based on the positive expectation of another party's future behaviour (Mayer *et al.*, 1995). Due to the virtuality and anonymity of online transactions trust is the critical factor ensuring their success. Thus, trust has received considerable attention in the online commerce context. Gefen *et al.* (2003) integrated TAM and trust to explain online purchase behaviour. They found that perceived ease of use affects trust, further determining perceived usefulness. McKnight *et al.* (2002) developed a scale measuring initial trust and found that web site quality is the most significant factor affecting trust. Benamati *et al.* (2010) examined the effects of technological perceptions including perceived ease of use and perceived usefulness on initial trust. Beldad *et al.* (2010) provided a good review of online trust and its determinants.

Like online commerce mobile commerce involves great uncertainty and risk. For example mobile networks are vulnerable to hacker attack and information interception. Thus, users need to build trust to alleviate perceived risk and facilitate their behaviour. Lee (2005) noted that mobile interactivity including ubiquitous connection and contextual offerings has a significant effect on user trust. Luo *et al.* (2010) examined the relationship between user trust and perceived risk associated with using mobile banking. Li and Yeh (2010) found that design aesthetics affect mobile user trust through usefulness, ease of use and customisation. Kim *et al.* (2009) noted that structural assurance is the main factor affecting initial trust in mobile banking. Vance *et al.* (2008) revealed that system quality affects perceived ease of use and user trust in mobile commerce technologies.

Research model and hypotheses

Figure 1 presents the research model. System quality, information quality and service quality affect user satisfaction through perceived ease of use, perceived usefulness and trust. Demographic characteristics such as gender, age and education are used as the control variables.

Perceived ease of use and perceived usefulness

System quality reflects the stability, navigation and layout of mobile sites. Mobile service providers need to rely on a reliable and well-designed interface to deliver

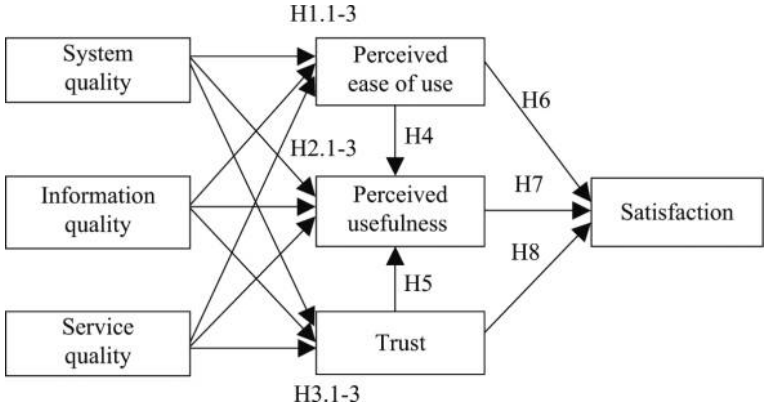

Figure 1.
Research model

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ubiquitous information and services to users. Information quality reflects the timeliness, accuracy and comprehensiveness of the information provided by mobile sites. Service quality reflects the reliability, responsiveness, assurance and empathy of the services delivered to users (Gefen, 2002). Reliability means that mobile service providers present services to users in a timely manner. Previous research has revealed that reliability represents the key dimension of service quality (Cenfetelli *et al.*, 2008). Responsiveness means that mobile service providers present prompt responses to users' enquiries. Assurance means that mobile service providers build users' confidence by providing professional services to them. Empathy means that mobile service providers present personalised services to users.

System quality, information quality and service quality reflect users' perceptions towards mobile sites. These factors will affect users' evaluations of the difficulty and utility associated with using mobile sites. For example, if system quality is poor, users may often encounter service interruption. They may also need to spend more time on information retrieval due to lack of efficient navigation and clear layout. This will increase their difficulty with using mobile sites and reduce their perceived usefulness. However, if the information is outdated, inaccurate or limited, users will perceive low utility of mobile sites. In addition reliable, prompt and personalised services will reduce users' effort spent on information search and improve their work and life efficiency and effectiveness (Cenfetelli *et al.*, 2008). Wixom and Todd (2005) suggested that system quality and information quality affect perceived ease of use and perceived usefulness of web sites. Thus we propose:

H1.1-1.3. System quality, information quality and service quality significantly affect perceived ease of use.

H2.1-2.3. System quality, information quality and service quality significantly affect perceived usefulness.

Trust

Trust reflects a user's positive expectations of mobile service providers' future behaviour. Trust often includes three beliefs: ability, integrity and benevolence (Song and Zahedi, 2007). Ability indicates that mobile service providers have the necessary knowledge and skills to perform their tasks. Integrity means that mobile service providers commit to their promises and will not deceive users. Benevolence suggests that mobile service providers are concerned with users' interests rather than themselves.

System quality, information quality and service quality will affect users' trust in mobile service providers. Mobile service providers need to spend considerable effort and resources on delivering high quality mobile sites to users. Thus, system quality, information quality and service quality will affect users' trust beliefs in service providers' ability, integrity and benevolence. If mobile site quality is poor, users may feel that mobile service providers lack the necessary ability to provide quality information and services. Users may also feel that mobile service providers will deceive them and ignore their needs. The effect of system quality, information quality and service quality on trust has been supported in previous research. Vance *et al.* (2008) revealed that system quality affects user trust in information technology products. Zahedi and Song (2008) found that information quality is a significant factor affecting

users' trust in health infomediaries. Gefen (2002) noted that service quality affects online consumers' trust, further determining their loyalty.

H3.1-3.3. System quality, information quality and service quality significantly affect user trust.

TAM proposes that perceived ease of use affects perceived usefulness (Davis, 1989). If mobile sites are difficult to use, users will associate them with low utility. In addition trust will affect perceived usefulness. Trust enables users to believe that mobile service providers have enough ability and integrity to provide expected utility to them. Thus, trust provides a guarantee that users will acquire positive outcomes in the future (Gefen *et al.*, 2003). The effect of trust on perceived usefulness has been verified in previous research (Yoon, 2009; Sun, 2010). Thus, we propose:

H4. Perceived ease of use significantly affects perceived usefulness.

H5. Trust significantly affects perceived usefulness.

Satisfaction

Satisfaction is an important factor in information systems success (DeLone and McLean, 2004). Satisfaction reflects an accumulative feeling developed during multiple interactions with mobile service providers. Satisfaction can also reflect a gap between perceived performance and expectation. When perceived performance exceeds expectation, users will be satisfied. Perceived ease of use, perceived usefulness and trust will affect satisfaction. Users always expect mobile sites to be easy to use, useful and trustworthy. When these expectations are met, users may be satisfied. Otherwise they cannot develop satisfaction with mobile sites. Prior research has revealed the effects of these factors on user trust. Both Lee *et al.* (2007) and Thong *et al.* (2006) noted that perceived usefulness and perceived ease of use affect mobile internet users' satisfaction. Lin and Wang (2006) reported that trust affects user satisfaction with m-commerce systems. Thus, we posit:

H6. Perceived ease of use significantly affects user satisfaction.

H7. Perceived usefulness significantly affects user satisfaction.

H8. Trust significantly affects user satisfaction.

Data collection

The research model includes seven factors. Each factor was measured with multiple items. All items were adapted from previous literature to improve content validity (Straub *et al.*, 2004). These items were first translated into Chinese by a researcher. Then another researcher translated them back into English to ensure consistency. When the instrument was developed it was tested on ten users who had rich mobile site usage experience. Then based on their comments we revised some items to improve clarity and understandability. The final items and their sources are listed in Appendix 1. All items were measured with a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

Items of system quality were adapted from Wixom and Todd (2005) to reflect the reliability, navigation and layout of mobile sites. Items of information quality were also

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adapted from Wixom and Todd (2005) to reflect the timeliness, accuracy and comprehensiveness of the information provided by mobile sites. Service quality items were adapted from Tsai *et al.* (2006) to reflect the timely, prompt and personalised services. Items measuring perceived ease of use and perceived usefulness were adapted from Davis *et al.* (1989). Items of perceived ease of use reflect the ease of learning to use and skills required when using mobile sites. Items of perceived usefulness reflect the improvement of work and life efficiency and effectiveness associated with using mobile sites. The trust items were adapted from Lee (2005) to measure the ability, integrity and benevolence of mobile service providers. Items measuring satisfaction were adapted from Wixom and Todd (2005) to reflect users' satisfaction, contentment and pleasure when using mobile sites.

Data were collected at service centres of China Mobile and China Unicom, both of which are the main telecommunication operators in China. These service centres are located in a city in eastern China, where mobile commerce is better developed than in other regions. There were plenty of mobile users in these places and this expedited our data collection process. Researchers randomly contacted users and enquired whether they had mobile site usage experience. If the answers were positive they were asked to complete the questionnaire based on their favourite mobile site usage experience. We reviewed all questionnaires and excluded those with too many missing values. As a result we obtained 229 valid responses. Among them 56.8 per cent were male and 43.2 per cent were female. In terms of age 30.6 per cent were under 20 years old, 34.9 per cent were between 20 and 29 years old, 24 per cent were between 30 and 39 years old, and 10.5 per cent were over 39 years old. In terms of education 37.1 per cent, 43.7 per cent, 13.1 per cent and 6.1 per cent had received lower secondary school, secondary school, associate degree, university and higher education, respectively. The frequently used mobile sites include Kongzhong, Mobile Baidu, Mobile Tencent and Monternet.

To examine the common method variance (CMV) we conducted two tests. First, we conducted a Harman's single-factor test (Podsakoff *et al.*, 2003). The results indicate that the largest variance explained by an individual factor is 14.427 per cent. Thus, none of the factors can explain the majority of the variance. Second we modelled all items as the indicators of a factor representing the common method effect (Malhotra *et al.*, 2006). The results show poor fitness. For example the goodness of fit index (GFI) is 0.474 (< 0.90) and the root mean square error of approximation (RMSEA) is 0.239 (> 0.08). With both tests we feel that CMV is not a significant problem in our research.

Results

Following the two-step approach recommended by Anderson and Gerbing (1988) we first examined the measurement model to test reliability and validity. Then we examined the structural model to test the research hypotheses and model fitness.

First, we conducted a confirmatory factor analysis (CFA) to test the validity, which includes convergent validity and discriminant validity. Convergent validity measures whether items can effectively reflect their corresponding factor, whereas discriminant validity measures whether two factors are statistically different. Table I lists the standardised item loadings, the average variance extracted (AVE), the composite reliability (CR) and Cronbach's alpha values. As shown in the table all loadings are larger than 0.7 and *t*-values indicate that these loadings are significant at the 0.001 level. All AVEs exceed 0.5 and all CRs exceed 0.7. Thus, the scale has good convergent

Factor	Item	Standardised loadings	AVE	CR	Alpha
System quality	SYSQ1	0.949	0.839	0.940	0.938
	SYSQ2	0.911			
	SYSQ3	0.887			
Information quality	INFQ1	0.877	0.747	0.899	0.898
	INFQ2	0.802			
	INFQ3	0.911			
Service quality	SERQ1	0.950	0.794	0.920	0.917
	SERQ2	0.913			
	SERQ3	0.803			
Perceived ease of use	PEOU1	0.836	0.767	0.908	0.899
	PEOU2	0.952			
	PEOU3	0.835			
Perceived usefulness	PU1	0.837	0.742	0.896	0.893
	PU2	0.823			
	PU3	0.921			
Trust	TRU1	0.846	0.710	0.880	0.878
	TRU2	0.854			
	TRU3	0.827			
Satisfaction	SAT1	0.972	0.957	0.985	0.984
	SAT2	0.988			
	SAT3	0.974			

Table I. Standardised loadings, AVE, CR and Cronbach's alpha values

validity (Bagozzi and Yi, 1988; Gefen *et al.*, 2000). In addition all Cronbach's alpha values are larger than 0.7, showing good reliability (Nunnally, 1978).

To test the discriminant validity we compared the square root of the AVE and factor correlation coefficients. As listed in Table II for each factor the square root of AVE is significantly larger than its correlation coefficients with other factors, showing good discriminant validity (Fornell and Larcker, 1981; Gefen *et al.*, 2000). We also provide the cross-loading matrix in Appendix 2. Each item has a higher loading on its corresponding factor than the cross-loadings on other factors, indicating a clear loading matrix. We tested the multicollinearity among independent variables and found that the variance inflation factor values for all factors range between 1.411 and 2.257, which are below the threshold value of 5 (Belsley *et al.*, 1980). Thus, there exists no serious multicollinearity in our research.

	SYSQ	INFQ	SERQ	PEOU	PU	TRU	SAT
SYSQ	*0.916*						
INFQ	0.301	*0.865*					
SERQ	0.470	0.367	*0.891*				
PEOU	0.543	0.412	0.404	*0.876*			
PU	0.496	0.560	0.440	0.533	*0.861*		
TRU	0.582	0.496	0.561	0.650	0.677	*0.842*	
SAT	0.383	0.367	0.401	0.575	0.550	0.684	*0.978*

Note: The square root of AVE is shown in italics

Table II. The square root of AVE (in italics) and factor correlation coefficients

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Second, we used LISREL structural equation modelling software to estimate the structural model. The path coefficients and their significance are listed in Table III. Except for *H2.3* the hypotheses are supported. Table IV lists the recommended and actual values of some fit indices. Except for GFI the fit indices have better actual values than the recommended values. This shows good fitness of the research model. The explained variance of perceived ease of use, perceived usefulness, trust and satisfaction is 37.9 per cent, 53.7 per cent, 51.7 per cent and 47.9 per cent, respectively.

Following Baron and Kenny (1986) we conducted a post hoc analysis to examine the mediation effects of perceived ease of use, perceived usefulness and trust on satisfaction. We added three direct paths from system quality, information quality and service quality to satisfaction and re-estimated the model. The results indicate that all three paths are insignificant. This shows that perceived ease of use, perceived usefulness and trust fully mediate the effects of system quality, information quality and service quality on satisfaction.

We also examined the effects of control variables including gender, age and education on perceived ease of use, perceived usefulness, trust and satisfaction. The results indicate that both age and education have significant effects ($\gamma = -0.53$, $p < 0.001$; $\gamma = 0.16$, $p < 0.05$; respectively) on perceived ease of use. In addition age significantly affects ($\gamma = -0.27$, $p < 0.01$) trust. This indicates that young people are

Hypothesis	Path	Path coefficient
H1.1	SYSQ → PEOU	0.41**
H1.2	INFQ → PEOU	0.25**
H1.3	SERQ → PEOU	0.12*
H2.1	SYSQ → PU	0.12*
H2.2	INFQ → PU	0.28**
H2.3	SERQ → PU	0.02
H3.1	SYSQ → TRU	0.36**
H3.2	INFQ → TRU	0.29**
H3.3	SERQ → TRU	0.29**
H4	PEOU → PU	0.11*
H5	TRU → PU	0.39**
H6	PEOU → SAT	0.24**
H7	PU → SAT	0.13*
H8	TRU → SAT	0.45**

Note: *$p < 0.05$; **$p < 0.001$

Table III.
Path coefficients and their significance

Fit indices	chi^2/df	GFI	AGFI	CFI	NFI	NNFI	RMSEA
Recommended values	<3	>0.90	>0.80	>0.90	>0.90	>0.90	<0.08
Actual values	1.89	0.880	0.839	0.982	0.966	0.979	0.063

Note: chi^2/df is the ratio between Chi-square and degrees of freedom; GFI: Goodness of Fit Index; AGFI: Adjusted Goodness of Fit Index; CFI: Comparative Fit Index; NFI: Normed Fit Index; NNFI: Non-Normed Fit Index; RMSEA: Root Mean Square Error of Approximation

Table IV.
The recommended and actual values of fit indices

more likely to perceive ease of use and build trust in mobile service providers. Users who have undergone higher education will also be more comfortable with using mobile sites.

Discussion

As listed in Table III all hypotheses, except *H2.3*, are supported. System quality and information quality affect perceived ease of use, perceived usefulness and trust. Service quality affects perceived ease of use and trust, but has no effect on perceived usefulness. Perceived ease of use and trust affect perceived usefulness. These three factors further determine user satisfaction.

Among the factors affecting perceived ease of use, system quality has the largest effect ($\gamma = 0.41$). This result is consistent with previous findings (Vance *et al.*, 2008). Mobile service providers need to enhance the interface design of their mobile sites to improve users' perceived ease of use. They should develop mobile sites that have clear layout, effective navigation and reliable connections. This will reduce users' efforts spent on information retrieval. In particular the small screens and inconvenient input of mobile terminals highlight the necessity of presenting a high quality interface to users. Otherwise users may find it difficult to use mobile sites. Mobile service providers can emulate their peers' successful mobile sites to improve their interface design. In addition they should ensure reliable service. If mobile users often find that services are unavailable or interrupted, they may feel a lack of control, which decreases their perceived ease of use.

System quality and information quality both significantly affect perceived usefulness, but information quality has a relatively larger effect ($\gamma = 0.28$). Mobile service providers need to present up-to-date, accurate and comprehensive information to users. Mobile users expect to acquire timely information at any time from anywhere. If this information is outdated and inaccurate, users may feel that mobile services are of no use for their work and life. For example, a user may access mobile map services to locate their car. If the location information provided to the user is outdated and inaccurate, users may feel that the mobile map is not of much use. We did not find a direct effect of service quality on perceived usefulness, however service quality affects perceived ease of use and trust. Thus, perceived ease of use and trust mediate the effect of service quality on perceived usefulness.

Service quality has a significant effect on user trust. Mobile service providers need to present timely, prompt and personalised services to users. This will build users' trust in mobile service providers' ability, integrity and benevolence. Mobile service providers can use location-based services to deliver optimal information and services to users based on their locations and preferences. This personalised service can increase user trust (Lee, 2005). However, mobile service providers need to get users' permission in advance because this service needs to utilise users' location information, which may arouse their concerns about privacy and risk. Of course high quality services require service providers to invest continuous effort and resources (Cenfetelli *et al.*, 2008). Thus, it is a challenge for them to build user trust.

Perceived ease of use and trust significantly affect perceived usefulness, and all three factors determine user satisfaction. Among them trust has the largest effect on satisfaction ($\beta = 0.45$). This shows that building user trust is crucial to improving user satisfaction. Due to the virtuality and lack of control, mobile commerce involves

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great uncertainty and risk. Users need to build trust to alleviate their perceived risk. Our results indicate that system quality, information quality, and service quality significantly affect user trust. Mobile service providers can improve these aspects to engender user trust. They may also use other measures such as structural assurance (Kim *et al.*, 2009) and interactivity (Lee, 2005) to build mobile user trust.

Theoretical and managerial implications

From a theoretical perspective this research identified the critical success factors of mobile sites. As noted earlier, previous research has focused on examining the success factors of web sites. However, the constraints of mobile terminals such as small screens and inconvenient input highlight the need to provide a quality mobile site to users. Thus, it is necessary to examine the effect of site quality on mobile site adoption and success. Although there has been considerable research on m-commerce adoption, it has mainly been based on information technology adoption theories such as TAM (Hung *et al.*, 2003; Yang, 2005; Khalifa and Shen, 2008; Wei *et al.*, 2009), innovation diffusion theory (Hsu *et al.*, 2007), task technology fit (Junglas *et al.*, 2008) and the unified theory of acceptance and use of technology (Xu and Gupta, 2009). User motivations such as perceived usefulness, task technology fit and performance expectancy are found to affect user behaviour. However, information systems success theory has seldom been used to explain mobile site adoption and success. To fill this gap we drew on information systems success theory, TAM and trust theory to examine mobile site success. This advanced our understanding of mobile site adoption and information system success. We found that system quality is the main factor affecting perceived ease of use, whereas information quality is the main factor affecting perceived usefulness. These results are consist with Wixom and Todd's (2005) findings indicating that system quality affects user attitude through perceived ease of use, whereas information quality affects user attitude through perceived usefulness. Our results reveal that perceived ease of use, perceived usefulness and trust have significant effects on satisfaction. Among them trust has the largest effect on satisfaction. Future research can further verify the effect of trust on mobile user behaviour in other contexts such as mobile purchase and mobile payment.

From a managerial perspective our results indicate that mobile service providers should focus on system quality, information quality and service quality to improve user satisfaction and ensure the success of mobile web sites. We found that system quality is the main factor affecting perceived ease of use, whereas information quality is the main factor affecting perceived usefulness. Thus, mobile service providers need to focus on different aspects when improving perceived ease of use and perceived usefulness. For example, they should present a well-designed interface to users in order to enhance their perceived ease of use. They also need to deliver timely, accurate and comprehensive information to users in order to enhance users' perceived utility associated with using mobile sites. Our results indicate that perceived ease of use, perceived usefulness and trust predict user satisfaction, with trust having the largest effect. In addition to system quality and information quality, service quality has a significant effect on trust. Thus, mobile service providers need to deliver prompt and personalised services to users. For example they can adopt location-based services to present contextual information and services to users. This will engender user trust in mobile service providers' ability and benevolence.

Conclusion

Mobile commerce is developing rapidly around the world. However, the constraints of mobile terminals have limited user adoption and usage of mobile sites. Drawing on information systems success theory, TAM and trust theory, this research examined the critical success factors of mobile sites. The results indicated that system quality is the main factor affecting perceived ease of use, whereas information quality is the main factor affecting perceived usefulness. Service quality has no direct effect on perceived usefulness, but has significant effects on trust and perceived ease of use. Thus, mobile service providers need to enhance their interface design and deliver high quality information and service to users.

This research has the following limitations. First, we conducted this research in China, where mobile commerce is developing rapidly but still in its infancy. Thus, our results need to be generalised to other countries with developed mobile commerce. Second, the explained variance of satisfaction is about 50 per cent. Thus, besides perceived ease of use, perceived usefulness and trust, there are other factors affecting satisfaction, such as switching costs and commitment. Future research can explore their effects. Third, we mainly conducted a cross-sectional study; user behaviour is dynamic, so a longitudinal study may provide more insights on the changes in user behaviour over time.

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References

Anderson, J.C. and Gerbing, D.W. (1988), "Structural equation modeling in practice: a review and recommended two-step approach", *Psychological Bulletin*, Vol. 103 No. 3, pp. 411-23.

Bagozzi, R.P. and Yi, Y. (1988), "On the evaluation of structural equation models", *Journal of the Academy of Marketing Science*, Vol. 16 No. 1, pp. 74-94.

Baron, R.M. and Kenny, D.A. (1986), "The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations", *Journal of Personality and Social Psychology*, Vol. 51 No. 6, pp. 1173-82.

Beldad, A., de Jong, M. and Steehouder, M. (2010), "How shall I trust the faceless and the intangible? A literature review on the antecedents of online trust", *Computers in Human Behavior*, Vol. 26 No. 5, pp. 857-69.

Belsley, D.A., Kuh, E. and Welsch, R.E. (1980), *Regression Diagnostics: Identifying Influential Data and Sources of Collinearity*, John Wiley & Sons, New York, NY.

Benamati, J.S., Fuller, M.A., Serva, M.A. and Baroudi, J.A. (2010), "Clarifying the integration of trust and TAM in e-commerce environments: implications for systems design and management", *IEEE Transactions on Engineering Management*, Vol. 57 No. 3, pp. 380-93.

Benbasat, I. and Barki, H. (2007), "*Quo vadis*, TAM?", *Journal of the Association for Information Systems*, Vol. 8 No. 4, pp. 211-18.

Cenfetelli, R.T., Benbasat, I. and Al-Natour, S. (2008), "Addressing the what and how of online services: positioning supporting-services functionality and service quality for business-to-consumer success", *Information Systems Research*, Vol. 19 No. 2, pp. 161-81.

Chatterjee, S., Chakraborty, S., Sarker, S., Sarker, S. and Lau, F.Y. (2009), "Examining the success factors for mobile work in healthcare: a deductive study", *Decision Support Systems*, Vol. 46 No. 3, pp. 620-33.

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Cheung, C.M.K. and Lee, M.K.O. (2009), "User satisfaction with an internet-based portal: an asymmetric and nonlinear approach", *Journal of the American Society for Information Science and Technology*, Vol. 60 No. 1, pp. 111-22.

CNNIC (2010), *26th Statistical Survey Report on the Internet Development in China*, China Internet Network Information Centre, available at: www.cnnic.cn

Davis, F.D. (1989), "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, Vol. 13 No. 3, pp. 319-40.

Davis, F.D., Bagozzi, R.P. and Warshaw, P.R. (1989), "User acceptance of computer technology: a comparison of two theoretical models", *Management Science*, Vol. 35 No. 8, pp. 982-1003.

DeLone, W. and McLean, E. (1992), "Information systems success: the quest for the dependent variable", *Information Systems Research*, Vol. 3 No. 1, pp. 60-95.

DeLone, W.H. and McLean, E.R. (2003), "The DeLone and McLean model of information systems success: a ten-year update", *Journal of Management Information Systems*, Vol. 19 No. 4, pp. 9-30.

DeLone, W.H. and McLean, E.R. (2004), "Measuring e-Commerce success: applying the DeLone & McLean information systems success model", *International Journal of Electronic Commerce*, Vol. 9 No. 1, pp. 31-47.

Devaraj, S., Fan, M. and Kohli, R. (2002), "Antecedents of B2C channel satisfaction and preference: validating e-commerce metrics", *Information Systems Research*, Vol. 13 No. 3, pp. 316-33.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.

Gable, G.G., Sedera, D. and Chan, T. (2008), "Re-conceptualizing information system success: the IS-impact measurement model", *Journal of the Association for Information Systems*, Vol. 9 No. 7, pp. 377-408.

Gefen, D. (2002), "Customer loyalty in e-commerce", *Journal of the Association for Information Systems*, Vol. 3, pp. 27-51.

Gefen, D., Karahanna, E. and Straub, D.W. (2003), "Trust and TAM in online shopping: an integrated model", *MIS Quarterly*, Vol. 27 No. 1, pp. 51-90.

Gefen, D., Straub, D.W. and Boudreau, M.C. (2000), "Structural equation modeling and regression: guidelines for research practice", *Communications of the Association for Information Systems*, Vol. 4 No. 7, pp. 1-70.

Hong, S.-J. and Tam, K.Y. (2006), "Understanding the adoption of multipurpose information appliances: the case of mobile data services", *Information Systems Research*, Vol. 17 No. 2, pp. 162-79.

Hsu, C.-L., Lu, H.-P. and Hsu, H.-H. (2007), "Adoption of the mobile internet: an empirical study of multimedia message service (MMS)", *Omega*, Vol. 35 No. 6, pp. 715-26.

Hung, S.-Y., Ku, C.-Y. and Chang, C.-M. (2003), "Critical factors of WAP services adoption: an empirical study", *Electronic Commerce Research and Applications*, Vol. 2 No. 1, pp. 42-60.

Junglas, I., Abraham, C. and Watson, R.T. (2008), "Task-technology fit for mobile locatable information systems", *Decision Support Systems*, Vol. 45 No. 4, pp. 1046-57.

Khalifa, M. and Shen, K.N. (2008), "Drivers for transactional B2C m-commerce adoption: extended theory of planned behavior", *Journal of Computer Information Systems*, Vol. 48 No. 3, pp. 111-17.

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Kim, C., Mirusmonov, M. and Lee, I. (2010), "An empirical examination of factors influencing the intention to use mobile payment", *Computers in Human Behavior*, Vol. 26 No. 3, pp. 310-22.

Kim, G., Shin, B. and Lee, H.G. (2009), "Understanding dynamics between initial trust and usage intentions of mobile banking", *Information Systems Journal*, Vol. 19 No. 3, pp. 283-311.

Lee, I., Choi, B., Kim, J. and Hong, S.-J. (2007), "Culture-technology fit: effects of cultural characteristics on the post-adoption beliefs of mobile internet users", *International Journal of Electronic Commerce*, Vol. 11 No. 4, pp. 11-51.

Lee, S., Shin, B. and Lee, H.G. (2009), "Understanding post-adoption usage of mobile data services: the role of supplier-side variables", *Journal of the Association for Information Systems*, Vol. 10 No. 12, pp. 860-88.

Lee, T. (2005), "The impact of perceptions of interactivity on customer trust and transaction intentions in mobile commerce", *Journal of Electronic Commerce Research*, Vol. 6 No. 3, pp. 165-80.

Lee, Y.E. and Benbasat, I. (2004), "A framework for the study of customer interface design for mobile commerce", *International Journal of Electronic Commerce*, Vol. 8 No. 3, pp. 79-102.

Li, Y.-M. and Yeh, Y.-S. (2010), "Increasing trust in mobile commerce through design aesthetics", *Computers in Human Behavior*, Vol. 26 No. 4, pp. 673-84.

Lin, H.-F. (2008), "Determinants of successful virtual communities: contributions from system characteristics and social factors", *Information & Management*, Vol. 45 No. 8, pp. 522-7.

Lin, H.H. and Wang, Y.S. (2006), "An examination of the determinants of customer loyalty in mobile commerce contexts", *Information & Management*, Vol. 43 No. 3, pp. 271-82.

Luo, X., Li, H., Zhang, J. and Shim, J.P. (2010), "Examining multi-dimensional trust and multi-faceted risk in initial acceptance of emerging technologies: an empirical study of mobile banking services", *Decision Support Systems*, Vol. 49 No. 2, pp. 222-34.

McKnight, D.H., Choudhury, V. and Kacmar, C. (2002), "Developing and validating trust measures for e-commerce: an integrative typology", *Information Systems Research*, Vol. 13 No. 3, pp. 334-59.

Malhotra, N.K., Kim, S.S. and Patil, A. (2006), "Common method variance in IS research: a comparison of alternative approaches and a re-analysis of past research", *Management Science*, Vol. 52 No. 12, pp. 1865-83.

Mayer, R.C., Davis, J.H. and Schoorman, F.D. (1995), "An integrative model of organizational trust", *The Academy of Management Review*, Vol. 20 No. 3, pp. 709-34.

Ngai, E.W.T. and Gunasekaran, A. (2007), "A review for mobile commerce research and applications", *Decision Support Systems*, Vol. 43 No. 1, pp. 3-15.

Nunnally, J.C. (1978), *Psychometric Theory*, McGraw-Hill, New York, NY.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879-903.

Shin, Y.M., Lee, S.C., Shin, B. and Lee, H.G. (2010), "Examining influencing factors of post-adoption usage of mobile internet: focus on the user perception of supplier-side attributes", *Information Systems Frontier*, Vol. 12 No. 4.

Song, J. and Zahedi, F.M. (2007), "Trust in health infomediaries", *Decision Support Systems*, Vol. 43 No. 2, pp. 390-407.

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Straub, D., Boudreau, M.-C. and Gefen, D. (2004), "Validation guidelines for IS positivist research", *Communications of the Association for Information Systems*, Vol. 13, pp. 380-427.

Sun, H. (2010), "Sellers' trust and continued use of online marketplaces", *Journal of the Association for Information Systems*, Vol. 11 No. 4, pp. 182-211.

Thong, J.Y.L., Hong, S.-J. and Tam, K.Y. (2006), "The effects of post-adoption beliefs on the expectation-confirmation model for information technology continuance", *International Journal of Human-Computer Studies*, Vol. 64 No. 9, pp. 799-810.

Tsai, H.-T., Huang, H.-C., Jaw, Y.-L. and Chen, W.-K. (2006), "Why on-line customers remain with a particular e-retailer: an integrative model and empirical evidence", *Psychology & Marketing*, Vol. 23 No. 5, pp. 447-64.

Vance, A., Christophe, E.-D.-C. and Straub, D.W. (2008), "Examining trust in information technology artifacts: the effects of system quality and culture", *Journal of Management Information Systems*, Vol. 24 No. 4, pp. 73-100.

Wei, T.T., Marthandan, G., Chong, A.Y.L., Ooi, K.B. and Arumugam, S. (2009), "What drives Malaysian m-commerce adoption? An empirical analysis", *Industrial Management & Data Systems*, Vol. 109 Nos 3-4, pp. 370-88.

Wixom, B.H. and Todd, P.A. (2005), "A theoretical integration of user satisfaction and technology acceptance", *Information Systems Research*, Vol. 16 No. 1, pp. 85-102.

Xu, H. and Gupta, S. (2009), "The effects of privacy concerns and personal innovativeness on potential and experienced customers' adoption of location-based services", *Electronic Markets*, Vol. 19 Nos 2-3, pp. 137-49.

Yang, K.C.C. (2005), "Exploring factors affecting the adoption of mobile commerce in Singapore", *Telematics and Informatics*, Vol. 22 No. 3, pp. 257-77.

Yoon, C. (2009), "The effects of national culture values on consumer acceptance of e-commerce: online shoppers in China", *Information & Management*, Vol. 46 No. 5, pp. 294-301.

Zahedi, F.M. and Song, J. (2008), "Dynamics of trust revision: using health infomediaries", *Journal of Management Information Systems*, Vol. 24 No. 4, pp. 225-48.

Zhang, Z. (2010), "Feeling the sense of community in social networking usage", *IEEE Transactions on Engineering Management*, Vol. 57 No. 2, pp. 225-39.

Appendix 1. The scales and items

System quality (SYSQ) (adapted from Wixom and Todd (2005))

SYSQ1: This mobile site is reliable.

SYSQ2: The navigation of this mobile site is effective.

SYSQ3: The layout of this mobile site is clear.

Information quality (INFQ) (adapted from Wixom and Todd (2005))

INFQ1: The information provided by this mobile site is up-to-date.

INFQ2: The information provided by this mobile site is accurate.

INFQ3: The information provided by this mobile site is comprehensive.

Service quality (SERQ) (adapted from Tsai et al. *(2006))*

SERQ1: This mobile site provides on-time services.

SERQ2: This mobile site provides prompt responses to my questions.

SERQ3: This mobile site provides personalised and professional services.

Perceived ease of use (PEOU) (adapted from Davis et al. *(1989))*

PEOU1: Learning to use this mobile site is easy.

PEOU2: Skilfully using this mobile site is easy.

PEOU3: Overall this mobile site is easy to use.

Perceived usefulness (PU) (adapted from Davis et al. *(1989))*

PU1: This mobile site improves my work and life efficiency.

PU2: This mobile site allows me to easily acquire the information I need.

PU3: Overall, this mobile site is useful.

Trust (TRU) (adapted from Lee (2005))

TRU1: This mobile site is trustworthy.

TRU2: This mobile site keeps its promises.

TRU3: This mobile site keeps users' interests in mind.

Satisfaction (SAT) (adapted from Wixom and Todd (2005))

SAT1: I feel satisfied with the services provided by this mobile site.

SAT2: I feel contented with the services provided by this mobile site.

SAT3: I like the services provided by this mobile site.

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Appendix 2. Cross-loading matrix

	SAT	SYSQ	SERQ	INFQ	PEOU	PU	TRU
SYSQ1	0.132	0.873	0.158	0.082	0.247	0.156	0.146
SYSQ2	0.128	0.857	0.188	0.086	0.179	0.154	0.189
SYSQ3	0.074	0.884	0.200	0.070	0.143	0.137	0.109
INFQ1	0.111	0.070	0.041	0.865	0.131	0.189	0.160
INFQ2	0.199	0.060	0.140	0.860	0.046	0.129	0.035
INFQ3	0.028	0.094	0.155	0.857	0.193	0.202	0.132
SERQ1	0.118	0.195	0.875	0.163	0.126	0.087	0.183
SERQ2	0.198	0.143	0.883	0.119	0.057	0.111	0.152
SERQ3	0.061	0.197	0.829	0.070	0.209	0.177	0.075
PEOU1	0.217	0.267	0.136	0.133	0.752	0.104	0.239
PEOU2	0.252	0.202	0.094	0.129	0.847	0.189	0.160
PEOU3	0.193	0.166	0.199	0.158	0.813	0.129	0.136
PU1	0.169	0.172	0.093	0.263	0.033	0.821	0.177
PU2	0.261	0.128	0.187	0.123	0.238	0.767	0.191
PU3	0.183	0.202	0.160	0.253	0.194	0.797	0.164
TRU1	0.271	0.156	0.184	0.086	0.288	0.217	0.765
TRU2	0.251	0.292	0.160	0.207	0.185	0.210	0.738
TRU3	0.337	0.178	0.271	0.209	0.193	0.258	0.630
SAT1	0.869	0.112	0.128	0.135	0.241	0.199	0.247
SAT2	0.897	0.112	0.153	0.134	0.219	0.192	0.184
SAT3	0.890	0.135	0.135	0.135	0.203	0.198	0.203

Table AI.

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4. Ashraf Ahmed Fadelelmoula. 2018. The Impacts of the Quality Dimensions of the ERP System on the Realization of the Fundamental Business Objectives and Perceived Usefulness. *International Journal of Enterprise Information Systems* **14**:4, 89-107. [Crossref]
5. ChhonkerMayanka Singh, Mayanka Singh Chhonker, VermaDeepak, Deepak Verma, KarArpan Kumar, Arpan Kumar Kar, GroverPurva, Purva Grover. 2018. m-commerce technology adoption. *The Bottom Line* **31**:3/4, 208-233. [Abstract] [Full Text] [PDF]
6. Ting Chi. 2018. Understanding Chinese consumer adoption of apparel mobile commerce: An extended TAM approach. *Journal of Retailing and Consumer Services* **44**, 274-284. [Crossref]
7. Ting Chi. 2018. Mobile Commerce Website Success: Antecedents of Consumer Satisfaction and Purchase Intention. *Journal of Internet Commerce* **17**:3, 189-215. [Crossref]
8. Reham I. Elseidi. 2018. Understanding Egyptian Consumers' Intentions in Online Shopping. *International Journal of Online Marketing* **8**:3, 1-18. [Crossref]
9. Fang Xu, Jia Tina Du. 2018. Factors influencing users' satisfaction and loyalty to digital libraries in Chinese universities. *Computers in Human Behavior* **83**, 64-72. [Crossref]
10. Ajimon George. 2018. Perceptions of Internet banking users — a structural equation modeling (SEM) approach. *IIMB Management Review* . [Crossref]
11. Elise Wong, Rosanna Leung, Rob Law. 2018. Significance of the dimensions and attributes of hotel mobile website from the perceptions of users. *International Journal of Hospitality & Tourism Administration* **5**, 1-23. [Crossref]
12. Ting Chi, Quinn Sullivan. How Web site Quality Affects Apparel Mobile Commerce Consumer Satisfaction and Intent to Purchase? A Study of Chinese Consumers 49-71. [Crossref]
13. A. Alkali, Nur Abu Mansor. 2017. Interactivity and Trust as Antecedents of E-Training Use Intention in Nigeria: A Structural Equation Modelling Approach. *Behavioral Sciences* **7**:4, 47. [Crossref]
14. Min Zhang, Yupei Liu, Weiwei Yan, Yan Zhang. 2017. Users' continuance intention of virtual learning community services: the moderating role of usage experience. *Interactive Learning Environments* **25**:6, 685-703. [Crossref]
15. Jörg Heinze, Matthias Thomann, Peter Fischer. 2017. Ladders to m-commerce resistance: A qualitative means-end approach. *Computers in Human Behavior* **73**, 362-374. [Crossref]
16. Mohammad Daradkeh, Radwan Moh'd Al-Dwairi. 2017. Self-Service Business Intelligence Adoption in Business Enterprises. *International Journal of Enterprise Information Systems* **13**:3, 65-85. [Crossref]
17. SalimonMaruf Gbadebo, Maruf Gbadebo Salimon, YusoffRushami Zien Bin, Rushami Zien Bin Yusoff, Mohd MokhtarSany Sanuri, Sany Sanuri Mohd Mokhtar. 2017. The mediating role of hedonic motivation on the relationship between adoption of e-banking and its determinants. *International Journal of Bank Marketing* **35**:4, 558-582. [Abstract] [Full Text] [PDF]

18. Lingling Gao, Kerem Aksel Waechter. 2017. Examining the role of initial trust in user adoption of mobile payment services: an empirical investigation. *Information Systems Frontiers* **19**:3, 525-548. [Crossref]
19. MarinkovicVeljko, Veljko Marinkovic, KalinicZoran, Zoran Kalinic. 2017. Antecedents of customer satisfaction in mobile commerce. *Online Information Review* **41**:2, 138-154. [Abstract] [Full Text] [PDF]
20. Meng Tian, Guohu Xu. Exploring the determinants of users' satisfaction of WeChat official accounts 362-366. [Crossref]
21. Jian Mou, Jason F. Cohen. 2017. Trust and online consumer health service success. *Information Development* **33**:2, 169-189. [Crossref]
22. Marco Hubert, Markus Blut, Christian Brock, Christof Backhaus, Tim Eberhardt. 2017. Acceptance of Smartphone-Based Mobile Shopping: Mobile Benefits, Customer Characteristics, Perceived Risks, and the Impact of Application Context. *Psychology & Marketing* **34**:2, 175-194. [Crossref]
23. D. Harrison McKnight, Nancy K. Lankton, Andreas Nicolaou, Jean Price. 2017. Distinguishing the effects of B2B information quality, system quality, and service outcome quality on trust and distrust. *The Journal of Strategic Information Systems* . [Crossref]
24. Aristotelis Chantzaras, Nasiopoulos K. Dimitrios, D. S. Vlachos. Mobile Commerce and Success Factors. Simulation and Modeling of the Problem 349-355. [Crossref]
25. Jong-Hyun Park, Moon-Koo Kim. 2016. Factors influencing the low usage of smart TV services by the terminal buyers in Korea. *Telematics and Informatics* **33**:4, 1130-1140. [Crossref]
26. RezaeiSajad, Sajad Rezaei, AminMuslim, Muslim Amin, MoghaddamMinoo, Minoo Moghaddam, MohamedNorshidah, Norshidah Mohamed. 2016. 3G post adoption users experience with telecommunications services. *Nankai Business Review International* **7**:3, 361-394. [Abstract] [Full Text] [PDF]
27. Hemlata Gangwar, Hema Date. 2016. Critical Factors of Cloud Computing Adoption in Organizations: An Empirical Study. *Global Business Review* **17**:4, 886-904. [Crossref]
28. Edward Shih-Tse Wang. 2016. The moderating role of consumer characteristics in the relationship between website quality and perceived usefulness. *International Journal of Retail & Distribution Management* **44**:6, 627-639. [Abstract] [Full Text] [PDF]
29. Dan J Kim, Myung-Seong Yim, Vijayan Sugumaran, H Raghav Rao. 2016. Web assurance seal services, trust and consumers' concerns: an investigation of e-commerce transaction intentions across two nations. *European Journal of Information Systems* **25**:3, 252-273. [Crossref]
30. Edward Shih-Tse Wang, Ruenn-Lien Lin. 2016. Perceived quality factors of location-based apps on trust, perceived privacy risk, and continuous usage intention. *Behaviour & Information Technology* 1-9. [Crossref]
31. Francisco Liébana-Cabanillas, Francisco Muñoz-Leiva, Juan Sánchez-Fernández, María I. Viedma-del Jesús. 2016. The moderating effect of user experience on satisfaction with electronic banking: empirical evidence from the Spanish case. *Information Systems and e-Business Management* **14**:1, 141-165. [Crossref]
32. Boris Ovčjak, Marjan Heričko, Gregor Polančič. 2016. How Do Emotions Impact Mobile Services Acceptance? A Systematic Literature Review. *Mobile Information Systems* **2016**, 1-18. [Crossref]
33. Lingling Gao, Kerem Aksel Waechter, Xuesong Bai. 2015. Understanding consumers' continuance intention towards mobile purchase: A theoretical framework and empirical study – A case of China. *Computers in Human Behavior* **53**, 249-262. [Crossref]
34. Boris Ovčjak, Marjan Heričko, Gregor Polančič. 2015. Factors impacting the acceptance of mobile data services – A systematic literature review. *Computers in Human Behavior* **53**, 24-47. [Crossref]

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35. Mutaz M. Al-Debei, Mamoun N. Akroush, Mohamed Ibrahiem Ashouri. 2015. Consumer attitudes towards online shopping. *Internet Research* **25**:5, 707-733. [Abstract] [Full Text] [PDF]
36. Pallab Sikdar, Amresh Kumar, Munish Makkad. 2015. Online banking adoption. *International Journal of Bank Marketing* **33**:6, 760-785. [Abstract] [Full Text] [PDF]
37. Xianjin Zha, Jinchao Zhang, Yalan Yan, Daochen Zha. 2015. Sound information seeking in Web 2.0 virtual communities: the moderating effect of mindfulness. *Behaviour & Information Technology* **34**:9, 920-935. [Crossref]
38. Hyun Hee Kim, Rob Law. 2015. Smartphones in Tourism and Hospitality Marketing: A Literature Review. *Journal of Travel & Tourism Marketing* **32**:6, 692-711. [Crossref]
39. Xianjin Zha, Jinchao Zhang, Yalan Yan, Zhiliang Xiao. 2015. Does affinity matter? Slow effects of e-quality on information seeking in virtual communities. *Library & Information Science Research* **37**:1, 68-76. [Crossref]
40. Morteza Ghobakhloo, Tang Sai Hong, Craig Standing. 2015. B2B E-Commerce Success among Small and Medium-Sized Enterprises. *Journal of Organizational and End User Computing* **27**:1, 1-32. [Crossref]
41. Morteza Ghobakhloo, Tang Sai Hong, Craig Standing. 2014. Business-to-Business Electronic Commerce Success: A Supply Network Perspective. *Journal of Organizational Computing and Electronic Commerce* **24**:4, 312-341. [Crossref]
42. Xianjin Zha, Jinchao Zhang, Yalan Yan, Zhiliang Xiao. 2014. User perceptions of e-quality of and affinity with virtual communities: The effect of individual differences. *Computers in Human Behavior* **38**, 185-195. [Crossref]
43. Tao Zhou. 2014. Understanding continuance usage intention of mobile internet sites. *Universal Access in the Information Society* **13**:3, 329-337. [Crossref]
44. Garry Wei-Han Tan, Keng-Boon Ooi, Siong-Choy Chong, Teck-Soon Hew. 2014. NFC mobile credit card: The next frontier of mobile payment?. *Telematics and Informatics* **31**:2, 292-307. [Crossref]
45. Lingling Gao, Xuesong Bai. 2014. An empirical study on continuance intention of mobile social networking services. *Asia Pacific Journal of Marketing and Logistics* **26**:2, 168-189. [Abstract] [Full Text] [PDF]
46. Yalan Yan, Xianjin Zha, Jinchao Zhang, Xiaorong Hou. 2014. Comparing digital libraries with virtual communities from the perspective of e-quality. *Library Hi Tech* **32**:1, 173-189. [Abstract] [Full Text] [PDF]
47. Xianjin Zha, Zhiliang Xiao, Jinchao Zhang. 2014. A Survey of User Perceptions of Digital Library E-Quality and Affinity. *Serials Review* **40**:1, 3-11. [Crossref]
48. Alastair Holmes, Angela Byrne, Jennifer Rowley. 2013. Mobile shopping behaviour: insights into attitudes, shopping process involvement and location. *International Journal of Retail & Distribution Management* **42**:1, 25-39. [Abstract] [Full Text] [PDF]
49. Ashkan Davarpanah, Norshidah Mohamed. Human Resource Information Systems (HRIS) success factors in a public higher education institution context 79-84. [Crossref]
50. Catherine Watson, Jeff McCarthy, Jennifer Rowley. 2013. Consumer attitudes towards mobile marketing in the smart phone era. *International Journal of Information Management* **33**:5, 840-849. [Crossref]
51. Felix T.S. Chan, Alain Yee-Loong Chong. 2013. Analysis of the determinants of consumers' m-commerce usage activities. *Online Information Review* **37**:3, 443-461. [Abstract] [Full Text] [PDF]

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52. Yalan Yan, Xianjin Zha, Zhiliang Xiao. 2013. Exploring Users' Perceptions of Conventional and Unconventional Electronic Resources. *Serials Review* **39**:2, 105-113. [Crossref]
53. Francisco Liébana-Cabanillas, Francisco Muñoz-Leiva, Francisco Rejón-Guardia. 2013. The determinants of satisfaction with e-banking. *Industrial Management & Data Systems* **113**:5, 750-767. [Abstract] [Full Text] [PDF]
54. Yen-Lin Kuo. 2013. Technology readiness as moderator for construction company performance. *Industrial Management & Data Systems* **113**:4, 558-572. [Abstract] [Full Text] [PDF]
55. Sonia San-Martin, Blanca López-Catalán. 2013. How can a mobile vendor get satisfied customers?. *Industrial Management & Data Systems* **113**:2, 156-170. [Abstract] [Full Text] [PDF]
56. Xiao-Liang Shen, Nan Wang, Yongqiang Sun, Li Xiang. 2013. Unleash the power of mobile word-of-mouth. *Online Information Review* **37**:1, 42-60. [Abstract] [Full Text] [PDF]
57. Morteza Ghobakhloo, Tang Sai Hong, Craig Standing. B2B E-Commerce Success among Small and Medium-Sized Enterprises 117-150. [Crossref]
58. Sina Baghbaniyazdi, Amir Ekhlassi, Kamal Sakhdari. Factors Affecting the Adoption of Entertainment Mobile Applications in Iran 1552-1566. [Crossref]
59. Mohammad Daradkeh, Radwan Moh'd Al-Dwairi. Self-Service Business Intelligence Adoption in Business Enterprises 1096-1118. [Crossref]
60. Wilson Ozuem, Bibi Nafiisah Mulloo. Basics of Mobile Marketing Strategy 1-18. [Crossref]
61. Wilson Ozuem, Bibi Nafiisah Mulloo. Basics of Mobile Marketing Strategy 155-172. [Crossref]
62. Lori N. K. Leonard. Factors of Impact on C2C Mobile Commerce 1359-1369. [Crossref]
63. Wilson Ozuem, Bibi Nafiisah Mulloo. Manifested Consumption 356-373. [Crossref]

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