

Exploring mobile government from the service quality perspective

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Abstract

Purpose – The purpose of this paper is to identify service quality dimensions and their sub-dimensions for mobile government services. Despite studies conducted on mobile services, there is lack of a comprehensive framework of mobile government service quality. Researchers and practitioners must outline a taxonomy of mobile government service quality before they can begin to test their effects empirically. It cannot be assumed that e-government is the same as m-government. Therefore, it is important to understand the dimensions that affect mobile government service quality.

Design/methodology/approach – Mobile government service quality dimensions were extracted from the literature on m-government from its development and transition from e-government to service models being used. This helps understand what service quality dimensions are necessary when creating more efficient, reliable, and responsible forms of m-government. The dimensions are demonstrated within a holistic framework of m-government service quality, presented for both academic and practitioner appreciation.

Findings – This paper identifies 20 mobile government service quality sub-dimensions classified within six dimensions.

Originality/value – The literature on mobile government service quality is scarce. With the expectation of mobile subscriptions worldwide reaching 8 billion by 2016, it is the most lucrative time to be researching how the design of mobile government affects service quality. This paper is the first to provide information on m-government service quality dimensions available for assessment.

Keywords Service quality, Mobile government service

Paper type Conceptual paper

Introduction

Contemporary society is mobile (Malik *et al.*, 2013; Norazah, 2013). Jahanshahi *et al.* (2011) note that nearly 80 percent of the world's population has a cell phone. There are nearly 7 billion mobile subscriptions worldwide, which the International Telecommunication Union suggests is equivalent to 95.5 percent of the world's population (Mobithinking, 2014), and this figure will grow to 8 billion by 2016 (Malik *et al.*, 2013). Smartphone sales have grown strongly worldwide, with 1 billion sold in 2013 alone (Mobithinking, 2014). By 2016, more than a billion individuals will own smartphones and tablets (HP, 2014). The growing use of mobile devices for accessing information and services increases the appeal of mobile services. This modernization, driven by the fast-paced technology industry, has changed how citizens want to deal with government; they are no longer happy with the traditional way of delivering services (Reddick, 2009). Governments should be responsive, transparent, and available 24/7 (HP, 2014) due to users personalizing their devices and their expectations of new channels of interaction with a government. In response, mobile governments have been developed and deployed in many countries (Malik *et al.*, 2013). Mobile government services are government services that are provided through Government Mobile Application (Apps) or interactive SMS – push and pull service or Government kiosks (TRA, 2013). To cope with this new form of government, many countries established different regulatory bodies that are responsible for establishing policies, guidelines, or standards for both government as a service provider and the telecom industry as a network provider.

The primary responsibility of government is to deliver essential community services such as public health, education, police, ambulance, and utilities (Mohammed Bin Rashid School of Government, 2014). Citizens' expectations from governments on the provision of quality public



services are rising (Sareen *et al.*, 2013). As Mayer-Schonberger and Lazer (2007) note, the last decade has led to unprecedented attention toward the need for governments to provide information access to citizens. Technology has become the answer, and consequently, governments are tapping the convenience offered by internet and mobile technologies to deliver these services (Zarei and Ghapanchi, 2008). The main benefit of mobile government (m-government) is “boundary-breaking potential” (Lallana, 2008) and the goals of m-government are simple – provide facilities, appropriateness of service, privatization of service, and implementation of public services by creating convergence between the internet and wireless services (Jahanshahi *et al.*, 2011, p. 1188). However, challenges lie in effective and efficient delivery of these services, and achieving citizen satisfaction and continued loyalty (Mayer-Schonberger and Lazer, 2007).

Shin (2010) stresses the importance of service quality, particularly with mobile services, because when consumers experience delays, disconnections, lack of access, and poor security, they are reluctant to use mobile services. To evaluate mobile-service quality, especially regarding governments, a researcher must first understand what dimensions affect service quality. Thus, this study develops an m-government service quality framework, contributing to the literature on service quality dimensions in the context of m-government since few studies have been conducted in this domain (Akter *et al.*, 2010; Lu *et al.*, 2009). Considerable research has been conducted on e-government service quality, examining m-government service quality as an extension of e-government, which adds complexity due to mobile-unique characteristics (Wang *et al.*, 2012). Mobile services have their own characteristics such as mobility, anytime, and anywhere (Lu *et al.*, 2009). Thus, there is a need for a comprehensive model of m-government service quality. Negi (2009) highlights the absence of a proper framework for mobile-service quality since most researchers adapt e-service quality models to a mobile context. Lu *et al.* (2009) argue that context plays a role, with no single method to measure the concept perfectly in every industry; there is a scarcity of literature on mobile-service quality. Akter *et al.* (2010) suggest that there is a need for an integrated and validated mobile-service quality framework. Thus, this highlights a gap and the need for a comprehensive framework of m-government service quality. To construct a framework, dimensions important to m-government service quality must be identified and defined.

Relevant literature

Mobile government

M-government “is the government that provides information and services to citizens and firms using wireless user infrastructure, service software application and mobile devices” (Wang *et al.*, 2012, p. 17). It entails the delivery of government services and applications (Apps) through mobile technology such as tablets, smartphones, etc. (Wang *et al.*, 2012). It is an improved form of e-government through mobile technology (Malik *et al.*, 2013; Sareen *et al.*, 2013). M-government is not limited to mobile phones; it extends to all mobile and intelligent devices (e.g. kiosks) (TRA, 2013). In the mobile context, the government is the service provider. The core principle is that public information and government services can be accessed anywhere and at any time. M-government also includes some unique characteristics such as mobility, portability, location, and personalization (Wang *et al.*, 2012). With widespread mobile use and increased broadband, governments are able to reach remote areas (Sareen *et al.*, 2013). Due to the widespread use of low-cost, hand-held devices among citizens, m-government is a more flexible, versatile, effective, and efficient method of accessing government services (Trimi and Sheng, 2008).

Service quality

Service quality has become a major area of attention for researchers, practitioners, and managers, especially due to its strong impact on business performance (Lassar *et al.*, 2000;

Silvestro and Cross, 2000) and several organizational outcomes (Brady and Cronin, 2001). Service quality plays an increasingly critical role in the success of organizations (Caro and García, 2008). The concept has become increasingly critical to service organizations (Yang *et al.*, 2012). Brady and Cronin (2001) suggest that for businesses to enhance services, they must understand users' perceptions of service quality. Consumer perceptions of service quality are about comparing expectations with the services that a consumer perceives to have received (Al-Nasser *et al.*, 2013). Service quality represents the relationship between the customer and the service provider and between perceptions of services and services delivered (Soita, 2012). More recently, service quality has been conceptualized as a multidimensional construct (Akteer *et al.*, 2010, 2013; Lu *et al.*, 2009), meaning that service quality is no longer simple.

Akteer *et al.* (2010) argue that research must be more specific when it comes to service quality, suggesting that its conceptualization and measurement should be based on users' perceptions, context specific, hierarchical, and multidimensional. Grönroos (1984) suggests that service quality includes two dimensions – the technical and functional, and Rust and Oliver (1994) suggest three dimensions – service product, delivery, and environment. Parasuraman *et al.* (1988) began with ten terms to describe service quality dimensions, including reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding, and tangibles, which were subsequently reduced to five – tangibles, reliability, responsiveness, assurance, and empathy – called the SERVQUAL approach (Bataineh and Al-Hazaymeh, 2011). Despite the wide popularity of SERVQUAL, it does not apply to all types of services (Landrum and Prybutok, 2004). Some researchers modify the method. Cronin and Taylor (1992) modified SERVQUAL to create SERVPERF to measure service quality regarding only service performance (Lu *et al.*, 2009), whereas SERVQUAL was based on measuring both expectations of service quality and performance. Brady and Cronin (2001) introduced a model that included three primary dimensions: interaction, physical environment, and outcome quality. However, the complexity of service quality evaluations is a reason many researchers have failed to use or replicate existing models in disparate contexts. Measurement of service quality varies according to the context and objectives of a study (Akteer *et al.*, 2010; Brady and Cronin, 2001), and across service types (Zhao *et al.*, 2012).

In the mobile-service context, some research assesses m-service quality (Akteer *et al.*, 2010; Lu *et al.*, 2009), but the literature on a mobile-service quality framework is lacking (Lu *et al.*, 2009; Negi, 2009). Investigating m-health, Akteer *et al.* (2010) argue that there is a need for an integrated and comprehensive mobile-service quality framework. The current paper explores the dimensions that affect m-government service quality to construct a holistic framework.

Mobile government service quality framework

This study defines factors of mobile service that a customer might perceive during evaluations of mobile services. Since few studies report directly on m-government service quality from customer perspectives, the literature from other areas such as mobile commerce, banking, and the internet was reviewed to develop a pool of constructs. Researchers largely use extant service quality models to evaluate mobile-service quality (Negi, 2009). Use of existing service quality models or e-service quality models in the mobile context is making it more difficult to evaluate as mobile service has its own features (Lu *et al.*, 2009; Wang *et al.*, 2012). This is the reason for the absence of a scale to measure mobile-service quality (Özer *et al.*, 2013). Thus, studies use disparate service quality dimensions.

Considering the unique characteristics of mobile services, Lu *et al.* (2009) propose a multidimensional, hierarchical model of mobile brokerage service quality. According to Lu *et al.* (2009), the primary construct in service quality consists of three dimensions: interaction, environment, and outcome quality, which are similar to models that Brady and Cronin (2001) and Rust and Oliver (1994) offer. Each of the three dimensions has its own sub-dimensions. Interaction quality includes attitudes, expertise, problem solving, and

information; environment quality includes equipment, design, and situation; and outcome quality includes punctuality, tangibles, and valence.

Zhao *et al.* (2012) explore the effects of service quality and justice on customer satisfaction in mobile services. They use multiple dimensions of interaction, environment, and outcome quality to measure m-service quality, similar to Lu *et al.* (2009). Akter *et al.* (2010) investigate service quality of m-health using the three dimensions of interaction, platform, and outcome quality. In a more recent study, Akter *et al.* (2013) developed and validated an instrument to measure user-perceived service quality of m-health using three dimensions of interaction, system, and information quality. Shin and Kim (2008) suggest factors such as quality, pricing structure, mobile devices, value-added services, convenience with procedures, and customer support to measure mobile-service quality. Lim *et al.* (2006) highlight that customers evaluate service quality of mobile-service providers based on the attributes of pricing plans, network quality, data services, messaging services, entertainment services, locator services, billing system, and customer service. Tan and Chou (2008) consider seven dimensions of mobile-service quality, including perceived usefulness, perceived ease of use, content, variety, feedback, experimentation, and personalization.

As noted above, extant studies use disparate mobile-service quality dimensions across industries, with different sub-dimensions. The next section will discuss the main factors that affect mobile government service quality. In this paper, different government entities are considered the service providers for mobile service and telecom companies are the network providers. Also, it is important to note that m-government services can be in different forms, through Government Mobile Application (Apps) or interactive SMS – push and pull service or Government kiosks (TRA, 2013).

Interaction quality

Interaction quality refers to the quality of customer interactions with m-service providers (government) or the systems during service delivery (Lu *et al.*, 2009; Zhao *et al.*, 2012). Nysveen *et al.* (2005) argue that interactivity can be personal or machine interactivity according to mobile services. This means that interaction in service occurs for example when the customer talks to customer service or when the customer uses the kiosk machine to request a service. Since services are inherently intangible, interactions occurring during service delivery have the greatest effect on service quality (Bitner *et al.*, 1994; Brady and Cronin, 2001; Hartline and Ferrell, 1996). Similarly, interaction quality influences service quality in a mobile context (Lu *et al.*, 2009; Zhao *et al.*, 2012). Since mobile industries do not provide goods, a service provider's (government) relationship with customers is important (Boohene and Agyapong, 2011). Thus, in terms of service quality in mobile industries, service managers should pay more attention to staff skills and attitudes when dealing with customers and trying to solve their problems (Brady and Cronin, 2001; Caro and García, 2008; Kim *et al.*, 2004). Connections with customers might be through online chats, e-mail, or over the phone, and an employee should be caring and helpful, and react positively to customer inquiries over these media. Service providers should handle user problems and be able to give quality responses to user questions to build long-term customer service relationships (Yang *et al.*, 2012). However, empirical testing must examine how interaction affects service quality in mobile contexts. Therefore, the first hypothesis can be proposed as follows:

H1. Interaction quality will have a significant impact on mobile government service quality.

Environment quality

In a mobile context, environment quality represents “how the consumer considers the overall environment of the service delivered by the service provider” (Zhao *et al.*, 2012, p. 649). This reflects the basic requirement of using such services: design and equipment (e.g. mobile devices). Many mobile-context studies consider both interface design and

equipment (Awwad, 2012; Fassnacht and Koesse, 2006; Kleijnen *et al.*, 2007; Lu *et al.*, 2009; Yang *et al.*, 2012; Zhao *et al.*, 2012). For example, interface design, which includes font, navigation, color, etc., plays a role in the appeal and attraction for customers who want to use services (Cyr *et al.*, 2006; Lee and Benbasat, 2004; Lin, 2013; Nysveen *et al.*, 2005). An interface should make users more confident in the use of a service, enabling them to learn functions more quickly (Nikou and Mezei, 2013; Yang *et al.*, 2012). This is called usability, defined by whether a user can understand easily how mobile services work (Nikou and Mezei, 2013), and it has been found to be a factor for mobile service users (Nikou and Mezei, 2013). Extant findings suggest that service providers should ensure successful transactions over mobile devices because they contribute to good service quality (Yang *et al.*, 2012). Thus, a mobile service should function properly across mobile devices. Whether environment quality, with its dimensions, affects mobile users is unknown, but it would inform governments on the essence of successful mobile services. Based on the above literature review, the following hypothesis is proposed:

- H2. Environment quality will have a significant impact on mobile government service quality.

Information quality

Information quality is “the ability of the system to convey the intended meaning of information” (Wang and Lin, 2012, p. 187), including features such as currency, completeness, accuracy, and format (Jeon, 2008). In some research, information quality refers to content quality, which affects service quality (Cheong and Park, 2005; Lin, 2013; Tan and Chou, 2008). Extant studies suggest that quality in a mobile-technology context should be viewed as information quality (Chae *et al.*, 2002; Lee and Benbasat, 2004), and many studies consider information quality an element when evaluating mobile-service quality (Awwad, 2012; Kim and Lee, 2013; Kuo *et al.*, 2009; Lu *et al.*, 2009; Tan and Chou, 2008; Yang *et al.*, 2012). All services provided through mobile devices are affected by various attributes, and information is one (Akter *et al.*, 2010); mobile users desire timely and accurate information to meet their needs (Choi *et al.*, 2008; Wang and Lin, 2012). Information received through a provider’s system must facilitate user understanding to aid task completion, leading to customer satisfaction (Wang and Lin, 2012). For example, location-based services must provide timely, accurate, and easy-to-understand information (Wang and Lin, 2012). Information quality is critical to the success of mobile services (Kim and Lee, 2013; Wang and Lin, 2012) since content influences customer satisfaction through mobile service experiences (Choi *et al.*, 2008; Nikou and Mezei, 2013). Due to a lack of m-government research, it will be interesting to examine the information quality that governments provide through mobile services and how they influence overall m-government service quality. In view of the above, the following hypothesis is proposed:

- H3. Information quality will have a significant impact on mobile government service quality.

System quality

System quality refers to “the user’s perceptions regarding the technical level of communication” (Akter *et al.*, 2010, p. 213); it is an “assessment of the information processing system itself and focuses on the outcome of the interaction between user and system” (Jeon, 2008, p. 48). The primary dimensions of system quality are reliability, flexibility, accessibility, and timeless (speed) (Jeon, 2008). It is important to consider system quality when evaluating services delivered over mobile platforms (Akter *et al.*, 2013; Özer *et al.*, 2013; Sousa and Voss, 2006). Attributes of mobile devices and the nature of mobile

services support the importance of system quality (Jeon, 2008). The importance of system quality derives from the fact that users who experience delays in responses, poor security, and lack of access are hesitant to use mobile services in the future (Shin, 2010). System quality ensures a user of the reliability of a system to produce or exchange required information (Wang and Lin, 2012). Mobile payments, security, and privacy – components of system quality – are critical (Chen, 2008). Therefore, system reliability, availability, and privacy are core themes that affect system quality (Akter *et al.*, 2010). Mobile payments, security, and privacy – components of system quality – are critical (Chen, 2008). Therefore, system reliability, availability, and privacy are core themes that affect system quality (Akter *et al.*, 2010). Also, it is important to note that in many countries, there is a regulatory body that sets the standards and rules for both government and network service providers. For example the Ministry of Internal Affairs and Communications in Japan, European telecom regulators in the European Union, the Federal Communications Commission in the United States of America (Stevenson and Clement, 2010), and the Telecommunication Regulatory Authority in UAE (TRA, 2015). The above arguments lead to the following hypothesis:

H4. System quality will have a significant impact on mobile government service quality.

Network quality

Network quality refers to indoor and outdoor coverage, and no connection breakdowns (Gerpott *et al.*, 2001). It also refers to instant connectivity (Jeon, 2008). In mobile contexts, many studies suggest that network quality is important to mobile-service quality (Chae *et al.*, 2002; Kuo *et al.*, 2009; Lim *et al.*, 2006; Rahman *et al.*, 2010; Varshney, 2005; Yang, 2012) because disconnections and lack of access lead to user reluctance to use mobile services (Shin, 2010). However, as the number of mobile users increases, network congestion causes services to deteriorate (Yang *et al.*, 2012). When many mobile users use mobile application services and exceed the load capacity of a local network, network overcrowding occurs, which reduces network efficiency, influencing mobile users' satisfaction regarding network quality (Yang *et al.*, 2012). Hence, network quality refers to managing a network and its bandwidth to provide consistency when delivering data (Wood and Chatterjee, 2002). Network quality should be a concern of a service provider to prioritize and manage network traffic over existing infrastructure (Wood and Chatterjee, 2002). This ensures that users can obtain mobile services anytime and anywhere in various contexts (Jeon, 2008). Network quality appears to be a governmental concern, but assessing this dimension from users' viewpoints will help governments collaborate with network service providers to maintain m-government service quality. Based on the above findings, the following hypothesis is proposed:

H5. Network quality will have a significant impact on mobile government service quality.

Outcome quality

Outcome quality is "what the customer is left with, after the service deliver" (Brady and Cronin, 2001, p. 40). Zhao *et al.* (2012) suggest that outcome quality reflects the service that a customer just experienced. In mobile contexts, various studies consider outcome quality during service evaluations (Akter *et al.*, 2010; Lu *et al.*, 2009; Zhao *et al.*, 2012). The most common determinates of outcome quality in mobile contexts are valance and service benefits. Valance refers to "attributes that control whether customers believe the service outcome is good or bad, regardless of their evaluation of any other aspects of the experience" (Brady and Cronin, 2001, p. 40). For example, consider a customer who

requests a loan from a bank but his request is rejected. In this case, service performance might not be important or relevant since the loan request is rejected (Brady and Cronin, 2001). In other words, the customer might hold a positive view of each service dimension, but the negative valence of the outcome led to an unfavorable service experience (Brady and Cronin, 2001). Also, the importance of outcome quality is captured by its functional and emotional benefits (Akter *et al.*, 2010). Functional benefits refer to the degree to which a service serves its purpose. Emotional benefits refer to the degree to which a service leads to positive feelings, for example, a customer statement such as “I feel hopeful or I feel confident using this service” (Akter *et al.*, 2010). Research suggests that outcome quality has the most significant effect on user satisfaction (Zhao *et al.*, 2012). Thus, in view of the above, the following hypothesis is proposed:

H6. Outcome quality will have a significant impact on mobile government service quality.

Proposed framework of m-government service quality

Although the hypotheses presented above are grounded in the literature and arrived thorough an understanding of the concepts, further empirical testing is required to test these hypotheses to establish the model as applicable in relating the factors that affect mobile government service quality. Table I summarizes these different factors. From the collection of previous research studies, a conceptual model was developed (see Figure 1) to demonstrate that six factors may have an impact on service quality in the context of mobile government.

Research implications and future research

A holistic framework was designed for use by researchers as a starting point for future examinations. This paper provides researchers and practitioners with a comprehensive framework for m-government mobile-service quality, serving as a guideline for clearer understanding and future research. With technological development worldwide in terms of mobile devices, it will be important to consider the dimensions appearing in the framework while developing and evaluating mobile services. This paper offers a number of opportunities for government into the design of mobile services and provides advice on how to design mobile services that customers use. Moreover, it will help the government to evaluate their mobile services later and define areas of improvement in all dimensions. However, future researches are needed to assess the framework and test it in practice. Researchers and practitioners can use the framework for both qualitative and quantitative studies, and adoption of disparate views from stakeholders of mobile services for each dimension will be especially valuable.

Conclusion

Mobile technologies are penetrating world markets quickly. With the growing rate of mobile sales and subscriptions, combined with introduction of m-government in many countries, it is the most lucrative time to research mobile government service quality. Governments use technological advancements to find innovative ways of delivering services, and the demand for better government services is increasing. Huge efforts and budgets are allocated to mobile service initiatives. Therefore, there should be some way to evaluate whether these services perform as expected or not. In the absence of a mobile service model, this paper identifies m-government service quality dimensions that best fit these types of services, helping governments design mobile services and capture customer experiences during their use. The holistic framework combines all dimensions necessary to achieve service quality with such services. Thus, the government can identify the

Main factors	Supporting literature	Main findings related to factors affecting service quality
Interaction quality	Akter <i>et al.</i> (2010), Lu <i>et al.</i> (2009), Yang <i>et al.</i> (2012)	It has been found that interpersonal process or “attitude” is crucial to users when interaction occurs with an employee. It affects their level of satisfaction
	Lu <i>et al.</i> (2009), Shin and Kim (2008), Yang <i>et al.</i> (2012)	It has been found that “problem solving” is an area of concern when the users evaluated service quality
	Lu <i>et al.</i> (2009), Yang <i>et al.</i> (2012)	Researchers have pointed out that the “expertise” level of an employee and his/her “skills” influence user experience with service quality
Environment quality	Bauer <i>et al.</i> (2006), Fassnacht and Koese (2006), Kim and Lee (2013), Özer <i>et al.</i> (2013)	One of the common points among the studies when discussing environment quality is “easy to use”. They highlight that easy to use is considered more important to new users than users who have experience
	Lu <i>et al.</i> (2009), Özer <i>et al.</i> (2013), Yang <i>et al.</i> (2012)	Through the literature, various degrees of importance have been given to the importance of a successful transaction over a different mobile device to the user to evaluate the service quality. Users want that the system used to request the service is “compatible” with their devices
	Chae <i>et al.</i> (2002), Lin (2013), Lu <i>et al.</i> (2009), Özer <i>et al.</i> (2013)	It been found that the “design” is important to users. It has been noted that a good interface makes users more confident in using mobile service, thus enabling them to learn the functions more quickly
Information quality	Al Thunibat <i>et al.</i> (2011), Fassnacht and Koese (2006), Jeon (2008), Kim and Lee (2013), Lin (2013)	The researchers highlight that any information provided to the user should be “up to date (currency)” so that they are satisfied
	Fassnacht and Koese (2006), Lin (2013)	Pervious findings suggested that the information received through the system must be “complete” so that it facilitates user understanding to complete the requested transaction
	Lin (2013), Lu <i>et al.</i> (2009), Wang and Lin (2012)	Researchers have pointed out that the information provided to users should be “accurate”. Accuracy ranked first for users who have experience
System quality	Fassnacht and Koese (2006), Kim and Lee (2013), Lin (2013), Wang and Lin (2012)	It been highlighted in the literature that any information provided to the user should be “relevance” to the transaction. However, its importance varied among different groups of users
	Akter <i>et al.</i> (2010, 2013), Fassnacht and Koese (2006), Wang and Lin (2012)	In different studies, “system reliability” was frequently referred to as a unique and crucial indicator of system quality. Reliability is important to insure that the user continues using the service
	Akter <i>et al.</i> (2010), Lin (2013), Rahman <i>et al.</i> (2010), Wang and Lin (2012)	The results showed that “availability” of the system has always been cited as an important parameter for system Quality. This reflects the user’s need that mobile services should be accessible anytime and anywhere
	Akter <i>et al.</i> (2010, 2013), Al Thunibat <i>et al.</i> (2011), Lin (2013), Özer <i>et al.</i> (2013)	“Privacy” has always been cited as an important theme to win users’ trust and gain reliance on the service system. Users want to feel that their personal information is protected
	Al Thunibat <i>et al.</i> (2011), Lin (2013), Özer <i>et al.</i> (2013), Wang and Lin (2012)	Many research studies have recognized the importance of “response time”. Results showed that users who experience delays in response will be hesitant to use the service in the future
	Lin (2013), Özer <i>et al.</i> (2013)	Studies found that One of the critical issues for users is “system security”. The system should provide a secure way to exchange any information. Thus, it is essential to build high-quality services

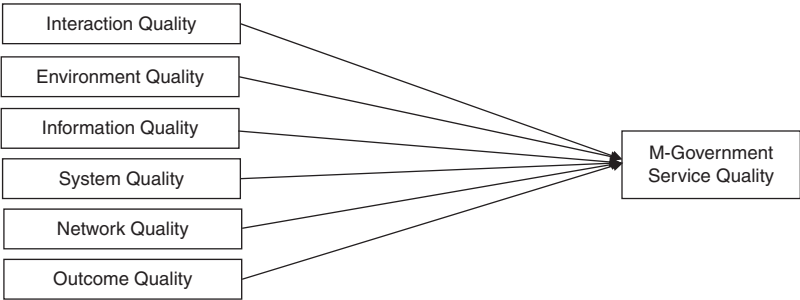
(continued)

Table I.
The factors that affect
mobile government
service quality

Table I.

Main factors	Supporting literature	Main findings related to factors affecting service quality
Network quality	Chae <i>et al.</i> (2002), Fassnacht and Koese (2006), Özer <i>et al.</i> (2013), Yang <i>et al.</i> (2012)	In the mobile context, previous studies found that a “stable connection” is important to mobile-service quality. That is, disconnection of the service will make users reluctant to use the mobile service
	Gerpott <i>et al.</i> (2001), Jeon (2008)	A few studies have pointed out that users want to obtain mobile anytime and anywhere with no restriction to context “(reachability)”. This will lead to satisfaction based on the level of the quality of excellent indoor and outdoor coverage
Outcome quality	Lu <i>et al.</i> (2009), Yang <i>et al.</i> (2012)	Previous results showed that “valence” is a core theme underpinning outcome quality. This is because it may affect the users even if all their experiences have been positive
	Akter <i>et al.</i> (2010), Fassnacht and Koese (2006)	Results found that “functional benefit” plays a critical role in developing a positive attitude toward using any service. This is because users want to receive the service that they requested
	Akter <i>et al.</i> (2010), Fassnacht and Koese (2006), Zhao <i>et al.</i> (2012)	The previous finding implies that “emotional benefit” has received considerable attention in recent years to stimulate users’ beliefs of service quality perception

Figure 1.
Proposed framework
of M-government
service quality



dimension that they need to focus their efforts on, leading to customer satisfaction. The findings from this study extend the understanding of m-government service quality and help in building a greater understanding of the factors associated with the development of mobile services from the beginning.

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