

EVALUATING A RELATIONSHIP OF FACTORS AFFECTING USERS'
SATISFACTION WITH MOBILE GOVERNMENT SERVICES OF ABU DHABI
POLICE

SALEM RASHED SAIF MURSHED ALMEQBAALI

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DEDICATION

For my beloved sweet family



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PTTA UTHM
PERPUSTAKAAN TUNKU TUN AMINAH

ABSTRACT

One of the objectives of the Abu Dhabi Police is to improve citizen satisfaction with its services through ICT. The Abu Dhabi Police launched M-government mobile app called “Abu Dhabi Police”. However, despite the issues and concerns about similar M-government services in UAE, there is lack of studies that evaluate the service quality of the M-government police services and how it influence users’ satisfaction. Accordingly, this research evaluated the relationship between service quality, technology and behavioural (personal) profile on users’ satisfaction with M-government police service in Abu Dhabi, UAE. Data were collected from the users of the M-government services of Abu Dhabi Police which are approximately over 950,000 users. However, only 400 questionnaires were distributed and 250 responses were usable for the statistical analysis. Partial Least Squares – Structural Equation Modelling (PLS-SEM) was used to analyse the data. Overall, the research found that about 68 percent ($R^2 = 0.682$) of the variation users’ satisfaction with M-government police services is explained by service quality, technology quality and behavioural (personal) profile. Specifically, the research found that service quality ($\beta = .433$, t statistics = 6.477, $p < .0001$) and technology quality ($\beta = .460$, t statistics = 7.248, $p < .0001$) have significant positive effect with M-government police services. However, the research did not find significant relationship between behavioural (personal) profile and satisfaction with M-government police services ($\beta = .041$, t statistics = 0.651, $p > .05$). The research has contributed to the existing body of knowledge and the practice of providing M-government services to the citizens for their overall satisfaction. The research recommend replicating the study on other M-government services and domains. Further studies should also extend the constructs used in this research and propose a framework for effective M-government service delivery.

ABSTRAK

Salah satu objektif Polis Abu Dhabi adalah meningkatkan kepuasan rakyat terhadap perkhidmatannya melalui ICT. Polis Abu Dhabi melancarkan aplikasi mudah alih M-kerajaan yang dipanggil "Polis Abu Dhabi". Walau bagaimanapun, walaupun terdapat isu dan kebimbangan mengenai perkhidmatan M-kerajaan yang serupa di UAE, terdapat kekurangan kajian yang menilai kualiti perkhidmatan perkhidmatan polis kerajaan M dan cara ia mempengaruhi kepuasan pengguna. Sehubungan itu, penyelidikan ini menilai hubungan antara kualiti perkhidmatan, teknologi dan profil tingkah laku (peribadi) terhadap kepuasan pengguna terhadap perkhidmatan polis M-kerajaan di Abu Dhabi, UAE. Data dikumpul daripada pengguna perkhidmatan M-kerajaan Polis Abu Dhabi yang berjumlah lebih kurang 950,000 pengguna. Walau bagaimanapun, hanya 400 soal selidik telah diedarkan dan 250 jawapan boleh digunakan untuk analisis statistik. Kuasa Dua Separa Terkecil – Pemodelan Persamaan Struktur (PLS-SEM) telah digunakan untuk menganalisis data. Secara keseluruhan, kajian mendapati bahawa kira-kira 68 peratus ($R^2 = 0.682$) daripada variasi kepuasan pengguna terhadap perkhidmatan polis kerajaan-M dijelaskan oleh kualiti perkhidmatan, kualiti teknologi dan profil tingkah laku (peribadi). Secara khusus, kajian mendapati kualiti perkhidmatan ($\beta = .433$, statistik $t = 6.477$, $p < .0001$) dan kualiti teknologi ($\beta = .460$, statistik $t = 7.248$, $p < .0001$) mempunyai kesan positif yang signifikan dengan M- perkhidmatan polis kerajaan. Walau bagaimanapun, kajian tidak menemui hubungan yang signifikan antara profil tingkah laku (peribadi) dan kepuasan terhadap perkhidmatan polis kerajaan M ($\beta = .041$, statistik $t = 0.651$, $p > .05$). Penyelidikan ini telah menyumbang kepada badan pengetahuan sedia ada dan amalan menyediakan perkhidmatan M-kerajaan kepada rakyat untuk kepuasan keseluruhan mereka. Penyelidikan mengesyorkan agar mereplikasi kajian ke atas perkhidmatan dan domain M-kerajaan yang lain. Kajian lanjut juga harus memanjangkan konstruk yang digunakan dalam penyelidikan ini dan mencadangkan rangka kerja untuk penyampaian perkhidmatan M-kerajaan yang berkesan.

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CHAPTER 1

INTRODUCTION

1.1 Study Background

In today's millennium era, Service Quality (SQ) is essential to enhance customers' satisfaction, customers' retention, minimal costing which ensures profitability (Asim, et al, 2015). This topic has become an area of interest for managers, practitioners and researchers. According to the Alanezi *et al.* (2016), Grossi, *et al.* (2020), Syapsan (2019), and Ozbekler and Ozturkoglu (2020), service quality has been known as one of the fundamental pillars of support for enhancing an organization's sustainability. Service quality is a catalyst that is important to improve the success of an organization and, simultaneously, it also represents the comparison between customers' expectations of how a company or an organization should perform the service and what the customers perceive (Cegarra-Navarro & Martelo-Landroguez, 2020). To satiate the customers' satisfaction, the government must determine the most critical characteristics of service quality that the users seek in M-government services (Wang & Teo, 2020).

Therefore, this research relates to the government policies and intervention introduced by the government and their reason for introducing the policies, issues, challenges and lessons learned from the introduction of policies related to delivering a digital public service. As it is an integral part of building the economy, the public sector improves various digital government services.

The composition of the public sector varies by country, but in most countries, the public sector includes services such as the military, police, infrastructure, public education, health care and those that work for the government itself, such as elected officials (Christensen *et al.*, 2020). The public sector may provide services that benefit society as a whole rather than the individual who uses the service. Since rapid technological changes are happening worldwide, there are plenty of discussions that focus on the M-government services to support the private sectors. Hence, there is a need to focus on priorities for effective government facilities and substantial development for M-government (Almuraqab, 2020; Eid, Selim & El-Kassrawy, 2020). M-government involves more than data gathering, downloading records or making online exchanges, it also includes interactions with the stakeholders as well as the level of ICT utilization with the public (Alqaralleh *et al.*, 2020; Sakowicz, 2003).

To highlight the M-government definition specifically, Wang *et al.* (2021) presents the interpretation of the term precisely by listing distinctive components or appropriateness of applicability in the diversity of public organization capacities such as internal use, administration arrangement or citizen's support. Apart from that, M-government issues are presented by authors regarding the possible interest, profit or consequences for their implementation (De Oliveira Malaquias, & Da Silva Júnior, 2021). According to Al-Hashmi & Darem (2008), by cultivating transparency, disposing of separation and other segregation, M-government employed technology to attain reformation which encourages civilians to engage in the political processes that influence their lives. Most of the M-government approaches are quite useful to emphasize the citizens' perspective which is not merely a matter of giving government officials computers or turning the current processes into digital ones. However, it is more than that which involves many interactions and nuances (Chohan *et al.*, 2020; Wang *et al.*, 2021; Nokele & Mukonza, 2021; Moon, Lee & Roh, 2014).

In UAE, the fundamental goal of the M-government services reform was to use technological advantages such as a technique for linking people to government and promoting the delivery of integrated public services via mobile applications (Almaiah & Nasereddin, 2020; Almeqbali & Kasim, 2020). The reformation period of two years (June 2013-May 2015) shows positive achievements in terms of fluent transformation from e-government to M-Government.

In addition, Abu Dhabi M-government service aims to give the required policies and facilities boost to attract globally renowned individuals and organizations to invest in the country (Al-Mansoori, 2017). Besides, the Abu Dhabi Strategic Plan 2030 ensures that general strategic plan approaches help to produce a fundamental decision in the part of the government which enhances the productivity of the government of Abu Dhabi in their governance (Al Mansoori, Sarabdeen & Tchantchane, 2018).

In this study, the users are defined as the general public, especially those who use the services of the M-government of Abu Dhabi. They synonymously refers to customers. In this research, the state government refers to the professional service provider. However, according to Yeo (2008), the people or the public are essential as they are the users of any M-government services. It involves directly with the input and output of the process. Hence, this study aims to determine the relationship between service quality, technology quality and behavioural profile, and users' satisfaction with the M-government service in UAE.

1.2 Problem Statement

The aim of every government is to deliver the needed services to their citizens efficiently and effectively with the aim of improving public satisfaction (Wang, Teo, Dwivedi, & Janssen, 2021). The traditional systems of providing services manually is costly with a lot of delays occasioned by bureaucratic tendencies (Alrazooqi & De Silva, 2010a). To overcome these challenges, governments transitions to e-government systems to provide public services through e-channels. The UAE government adopted the e-government systems around 2005 with significant increase in implementation. The country's e-government development rank increased from 42nd in 2005 to 27th in 2012 in the world, and 5th in Asia (Al Mansoori, 2017). With the rapid development of mobile technology, e-government becomes inadequate in meeting the flexibility and accessibility demand of the users leading to the development of M-government to address the issues with e-government (Al-Busaidi, 2012; Saadi, Ahmad, & Hussain, 2017).

The UAE, and Abu Dhabi government in particular, adopted the M-government system is providing essential services to the citizen. The government of

Abu Dhabi offer M-government services to the public and private entities and individuals for convenient and ease of transactions (Al Mansoori, 2017). As at 2015 when the government of Abu Dhabi stated implementing M-government services, there was over 420 services offered through 44 mobile apps by 30 government agencies which earned the government the first ever “Smart Government Award” (Al Mansoori, 2017). Among these services is the Abu Dhabi Police M-government services with shares inherent characteristics with the other M-government services. Even through the M-government enables the Abu Dhabi government to improve the quality of services it renders to its citizens, the deployment of the systems is not without some issues and problems related to the quality of the services. In real life situation, there are frequent conflicts between the police and the citizens which has been reduced by virtual policing through M-government services. However, there are still instances of irresponsive and non-empathetic policing in the M-government services (Ekaabi, Khalid, Davidson, Kamarudin, & Preece, 2020b).

The issues with the Abu Dhabi, and by extension UAE, M-government services can be viewed from the quality of the services offered, the quality of the technology used, and the users’ circumstances. The service quality deals the level of services the government employees (the police) offered to the citizens through the mobile application. There are complains that citizens face increasing delays before services are delivered to them (Alsaadi, Ahmad, & Hussain, 2018, 2019). This fails to meet the requirement of the users of wanting to engage the customer-service team online as fast as possible (Al-Hubaishi, Ahmad, & Hussain, 2017).

The technology quality refers to the efficiency of the mobile applications used to provide the government services. One of the major concern of the M-government service users in Abu Dhabi is the security of their information on the mobile applications against unauthorised access (Al Mansoori, 2017). Alsaadi *et al.* (2019) reported that there are visible technology quality breaches in UAE M-government services due to failure to consider the customers’ needs before the development of the mobile applications. This is because developing high quality m-government services system require citizens’ participation and meeting their needs (Ahmad & Khalid, 2017; Saadi *et al.*, 2017). Similarly, Al-Hubaishi, Ahmad, & Hussain (2017) reported delays, occasional lack of access, and perceived poor security associated with the use of m-government services which questions the

quality of the services which in turn adversely affect the users' satisfaction making them reluctant to use the systems.

The individual circumstances deals with the attitude of the people towards the systems. There are reported concerns of mistrust among the users of the M-government services stemming from their concern on their privacy and information security (Al Mansoori, 2017). Another issue is majority of the Abu Dhabi population are foreigner, and considering the mobile applications contents are mostly in Arabic and some translated to English Language, there is significant challenges to foreigner in assessing the complete information which invariably affect their satisfaction with the M-government services (Al Mansoori, 2017; Almeqbali & Kasim, 2020). Another problem from individual perspective is lack of awareness and skills among some users to access the contents of the M-government apps and the attitude of some, especially the elderly, to resist changes and become uninterested in the services offered (Al Mansoori, 2017). Lack of interest on services affects satisfaction with the service negatively (Pfannstiel & Rasche, 2019). These concerns has led to the poor M-government adoption by individuals in UAE (Almuraqab & Jasimuddin, 2017).

The M-government police services in UAE, including Abu Dhabi, is not free from the issues associated with the technology quality, service quality and individual circumstances as highlighted. Ekaabi, Khalid, and Davidson (2020b) noted that though there is improvement to traditional policing, the M-government police services in UAE also suffers from the concerns of privacy and security, citizens' anxiety over the threat of information or identity theft, connectivity problems, delays in response, lack of access, and bureaucracy. These have adverse effect on the citizens' satisfaction with the M-government police services.

The service quality issues associated with M-government services in UAE, and Abu Dhabi in particular affected citizens' satisfaction. This may explain why the rate of adoption of M-government services in UAE is still less than the target set by the government (Saadi *et al.*, 2017). Since the aim of the government is delivering quality services to improve the citizens' wellbeing and satisfaction, investigating the nexus between M-government service quality and citizens' satisfaction is necessary to reveal the interventions necessary to improve the service quality of the M-government systems for improved citizens' satisfaction and wellbeing. In government services, satisfaction remains the key driver for performance

measurement (Ahmad & Khalid, 2017). Thus, investigating factors that influence satisfaction is very vital for the achievement of Abu Dhabi vision 2030 which seek to empower the society and businesses for sustainable development through smart services (M-government) (Al Mansoori, 2017).

Despite the nagging issues identified with the UAE, including Abu Dhabi, Police M-government services, and its effects on citizens' satisfaction, there is still substantial dearth of studies that empirically examined the dimensions of Police M-government service in UAE including Abu Dhabi, and how the quality of the services influence citizens' satisfaction with the M-government services. With the exception of the (Ekaabi *et al.*, 2020b) who considered the quality of smart policing in UAE wholly and its influence on citizens' satisfaction with smart policing, other studies merely investigated m-government service quality generally without linking it with satisfaction. The Ekaabi *et al.* (2020b) study also has some inherent limitation.. The study is too general. It considered the smart policing in the entire UAE which may not reveal the specific situations at local level. Thus, investigating the Abu Dhabi Police M-government services is timely.

Other studies in UAE including Abu Dhabi on M-government services are mostly on intention to adoption. For instance, Eid *et al.* (2020) identified the factors influencing M-government services in UAE and Al Mansoori (2017) also investigated the adoption of M-government services by Abu Dhabi citizens. Other studies also investigated the adoption of m-government services in UAE (Al-Busaidi, 2012; Almuraqab & Jasimuddin, 2017; Alrazooqi & De Silva, 2010a, 2010b). As a result, these research efforts lack a comprehensive understanding of implementation. However, since M-government services, including the police M-government, is significantly implemented, investigating the quality of implemented services is therefore necessary.

Interestingly, moderate efforts have been made in to investigate the M-government services quality in UAE. For instance Al-Hubaishi *et al.* (2017) explored the M-government service quality in UAE and defined the M-government service quality factors. The factors identified were not distinctly associated to technology quality and service quality. However, the research did not link m-government service quality factors with users' satisfaction, but the researchers recommend carrying out further studies on other factors and variables to obtain new results that could contribute in improving m-government services. The study of Ekaabi *et al.*

(2020a) conceptualises the M-government service quality of police called “smart policing service quality” in UAE and came up five dimensions including transparency, integrity, interactivity, responsivity and serviceability. These dimensions were more or less related to technology quality than the service quality from service provider. The study was also limited to only identification of the dimensions without empirically testing them or relating them to citizens’ satisfaction. Another study also deals M-government police service quality in UAE is that of Alsaadi *et al.* (2019) came up with service environment, service interaction, information control, service effect and outcome quality dimensions. The studies only treated one aspect of quality or the other without holistically treating all the different quality fragments (service quality and technology quality) in a single model which are vital in determining overall users’ satisfaction (Aladwan *et al.*, 2021).

The influence of users’ characteristics on their satisfaction with a service is also noted in the literature (De Oliveira, Cherubini, & Oliver, 2013; Mariani, Di Fatta, & Di Felice, 2019; Ngubelanga & Duffett, 2021; Pang, 2021; Y. Wang, Yao, & Pan, 2021). However, despite the individual characteristics issues identified with the use of m-government services in UAE including Abu Dhabi, no studies was found to have examined how the personal traits of the users affect their satisfaction with M-government services. The study therefore fill this important gap by adding the users’ profile to service quality and technology quality in determining users’ satisfaction with Abu Dhabi M-government police services. The emphasis on holistic evaluation of satisfaction with m-government services is because no organization can obtain positive achievement without satisfying its customers. By identifying the significant M-government police service quality factors and users’ profile that influence users’ satisfaction, the research would obtain new results that could contribute in improving government m-police services in Abu Dhabi.

From the foregoing problems and issues identified, this research address the important questions how service quality of the Abu Dhabi M-government police services affects users’ satisfaction with the services, the impact on technology quality of Abu Dhabi M-government services on users’ satisfaction with the services; and how users’ profile influence their satisfaction with Abu Dhabi M-government police services.

1.3 Research Questions

This research addressed a number of questions including:

- i. What is the impact of service quality of Abu Dhabi M-government police services on the users' satisfaction in Abu Dhabi?
- ii. What is the effect of technology quality on users' satisfaction with M-government police services in Abu Dhabi?
- iii. What is the impact of behavioural profile on users' satisfaction with M-government police services in Abu Dhabi?

1.4 Aim of the Study

The study aims to evaluate the relationship between the factors (service quality, technology quality and behavioural profile) and users' satisfaction with mobile government of police services in Abu Dhabi, UAE with view to improving M-government police services in Abu Dhabi, UAE.

1.5 Research Objectives

To achieve the aim stated in this study, the following objectives are pursued:

- i. To determine the impact of service quality of Abu Dhabi M-government police services on the users' satisfaction in Abu Dhabi.
- ii. To examine the effect of technology quality on users' satisfaction with M-government police services in Abu Dhabi.
- iii. To evaluate the impact of behavioural profile on users' satisfaction with M-government police services in Abu Dhabi?

1.6 Scope of the Study

Conceptually, the research is limited to M-government service quality and users' satisfaction. Accordingly, the research covered M-government services and the

concept of service quality holistically. As such, it covered the concept of service quality based on the SERVQUAL model with reliability, tangible, responsiveness, empathy and assurance; and the concept of technology quality. The research also covered the customers' satisfaction with M-government services including the factors that determines it such as the customers' profile.

Contextually, the research evaluated the service quality of the Abu Dhabi M-government police services. Accordingly, the research is limited to only the Abu Dhabi M-government police services. Thus, the research covers the aspects of Abu Dhabi police services, its structure and how it deploy M-government to deliver its services to the citizens.

Geographically, the research is limited to Abu Dhabi Emirate of United Arab Emirates (UAE). Accordingly, it considered the citizen that use the Abu Dhabi M-government police services as the respondents for the research.

1.7 Significance of the Study

This research has two main significances which are the theoretical significance and practical significance. The theoretical value is where this study presents a subject related to the application of M-government as a developmental technology in government sectors, which has emerged due to the information developments, especially by applying M-government through mobile, which is an accessible and available handheld device aligned with a fast-growing technological revolution in developed countries. The practical significance is where this study serves the government to benefit from its results in ensuring the successful performance of these digital government services in the UAE. This improves the quality of the ministry services provided to citizens to meet their needs and expectations to make M-government software more user-friendly. The users or citizens would be the beneficiaries who will have more efficient m-government online systems through their mobile phones, which makes it easier to deliver the services they require.

This research evaluated the relationship between service quality, technology quality and behavioural profile, and users' satisfaction with M-government service in Abu Dhabi, UAE. This research if adequately applied by the practitioners, would be

tremendously helpful in ensuring the service quality of users' satisfaction in the M-government service.

Moreover, this study is also one of the greatest significances to researchers and academicians as it contributes considerably to the existing body of knowledge. This study will also open more areas of future researches in the Abu Dhabi government. This research also provides further background information to the studied area and help scholars who want to carry out further research in this area.

The study filled a gap in the studies of service quality by formatting a set of dimensions that fit the M-government services. The dimensions of M-government service quality will be formatted by reviewing a wide range of studies, not only studies of M-service quality but also the service quality. Although the SERVQUAL is the fundamental ground of any service quality study, this study will exceed this model and review a more modern and fitting model for service quality also the output of this study will support the government to enhance M-government service quality and increase users' satisfaction.

However, from the perspective of customers on service quality, this research evaluated on service quality and user satisfaction through the understanding and evaluation of indicators, such as the tangibility of mobile service, reliability of the content of information, responsiveness and assurance of mobile service and empathy on using the mobile service for M-government services.

Lastly, this research also seeks to contribute suggestions for applying the framework as a guideline to the stakeholder in order to practice, especially in the context of Abu Dhabi. It is expected that the results of this research can be used by manager to guide and structure m-government strategies and improve M-government service in Abu Dhabi based on users' satisfaction.

1.8 Research Plan

The research study was planned and carried out in the following stages:

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VITA

Salem Rashed Murshid ALmeqbali was born on December 29, 1981 in Al Ain, United Arab Emirates. He attended Umm Ghafa Primary, Preparatory and Secondary School. After that, he joined Abu Dhabi University to study Business Administration with a major in Finance, then completed his MBA from the same university and graduated in 2009. In 2011 he joined Higher Colleges of Technology to study an Executive MBA and graduated with excellent grades, and in 2018 he obtained a Master's degree in Management Projects from George Washington University.. Al-Meqbali is interested in studies and research related to the field of quality and excellence. He is a certified internal auditor for several international standards. He is a certified chief auditor in addition to being an approved assessor from several international institutions for a large number of excellence awards. Al-Meqbali is considered a consultant in developing administrative systems. He has specialized certificates in preparing institutional policies and operational processes and following up on institutional performance and institutional risks. He is also a member of several associations of public interest related to quality and excellence.



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