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Spring 5-29-2021

### Factors Affecting the Adoption of M- government services in Saudi Arabia: A Female Citizen Perspective

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#### Recommended Citation

Alotaibi, Norah Humus; Dasuki, Dr.Saliyu; and Zamani, Dr. Efpraxia Zamani, "Factors Affecting the Adoption of M- government services in Saudi Arabia: A Female Citizen Perspective" (2021). *UK Academy for Information Systems Conference Proceedings 2021*. 5.

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**Factors Affecting the Adoption of M-government services in Saudi Arabia: A Female  
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# **Factors Affecting the Adoption of M- government services in Saudi Arabia: A Female Citizen Perspective**

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Topic Area: Developmental Papers (Research in Progress) on Mobile  
Government Adoption.

# **Factors Affecting the Adoption of M- government services in Saudi Arabia: A Female Citizen Perspective**

## **Abstract**

*There are several studies about M-government adoption in Saudi Arabia, but few of these focus on women. However, in 2019 the Saudi government enabled women to access government services independently of their male guardians. Hence, this study addresses the adoption of M-government by women to see what factors affect adoption and the extent to which accessing government services via mobile phone is perceived to empower Saudi women. A theoretical model that utilises a modified Unified Theory of Acceptance and Use of Technology (UTAUT) adoption framework and the Capability Approach (CA) is created for this study. Data will be gathered by semi-structured interviews with Saudi women to identify core themes that will form the basis for a survey which examines the relative importance of each factor. The study's findings will contribute useful information for policy-makers to enhance the provision of M-government to Saudi women and to find strategies to encourage adoption.*

**Keywords:** M-government, Saudi women, Empowerment, Male guardianship.

## **1.0 Introduction**

Studies which identify factors affecting Saudi citizen adoption of M-government (Almarashdeh & Alsmadi, 2017; Alonazi, Beloff, & White, 2019; Alotaibi, Houghton, & Sandhu, 2017; Alotaibi, 2017) tend to ignore the female perspective, as until recently, Saudi women were denied direct access to citizen services like the issue of passports and ID cards without permission from their male guardian (Salaebing, 2019). This study thus focuses exclusively on the female perspective to identify the factors that affect their adoption of M-government and the impact of adoption on women's empowerment.

Having introduced a new policy in 2019, the Saudi government needs to understand what Saudi women require from M-government services. Empirical studies are required to understand the cultural and social factors that influence female citizens to adopt them to enhance the services in accordance with their needs (Alghamdi, 2017; Alonazi, 2019).

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This study thus seeks to answer the following question:

*What factors influence the adoption and use of M-government by Saudi female citizens?*

## **2.0: Literature Review**

### **2.1 An Overview of M-government**

Electronic government (E-government) improves communication between citizens and government and provides a more efficient service; and M-government is E-government adapted for mobile devices (Kumar & Sinha, 2007). M-government enhances the way services are delivered to citizens, businesses and other government agencies (Chen & Ma, 2010) and changes the traditional process and interaction with government sectors (Alotaibi, Houghton & Sandhu, 2017; Isagah & Wimmer, 2017; Saxena, 2017), by creating transparent, effective and convenient online channels accessible in a mobile environment (Choudrie, Alfalah, Spencer & Sundaram, 2018).

### **2.2 Research in M-government in Saudi Arabia: Identifying the Knowledge Gap**

Although Saudi studies have ascertained how citizens perceived the advantages of M-government and what barriers existed to adoption, they were conducted by male researchers when Saudi women were unable to access M-government services independently; consequently Saudi women's perspectives were omitted and the permission of male guardians and women's empowerment not addressed. The cultural context was however highlighted as important by Saudi researchers who adapted existing technology acceptance models to fit the Saudi context.

Although the Capability Approach (CA) has been shown to be a key approach to studying empowerment, most studies on Saudi women's empowerment addressed only the economic context for Saudi women without applying the CA framework (Alkhaled & Berglund, 2018; Metcalfe, 2011; Saqib, Aggarwal, & Rashid, 2016; Topal, 2019; Nasseef, 2015). Although Saudi women now have the right to engage with social, economic and civil life without male control or permission, and can access M-government applications on a par with men, the cultural barriers still exist. The study will therefore investigate how these cultural barriers affect women's empowerment and contribute to the field by addressing whether mobile

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phones empower Saudi women in an M-government context now that Saudi women can finally access key government services for themselves. A new model that combines two frameworks (CA and UTAUT) will be created to address the knowledge gap.

## **2.3 M-government and Gender Empowerment**

‘Empowerment’ is a complex term which can vary with location and time (Gigler, 2004). It can be defined as any process that enables “self-confidence, self-direction, autonomy and self-worth” (Narayan, 2005, p. 3); and enables people to choose their own values, supports their ability to do what they recognise as of value and gives them the freedom to manage their lives independently (Busken & Webbe, 2009). This study will focus on gender empowerment via mobile phones through accessing of M-government applications in the light of the maxim: “give access, get empowerment” (Bailur, Masiero & Tacchi, 2018, p. 99). In the context of M-government, mobile phones allow digital access to government services 24/7. Moreover, they can improve social networks especially in rural areas; strengthen economic networks by linking citizens with financial institutions and supply chains (Smith et al., 2011); can be an important means for positive social transformation; and can expand the capability of women and enrich their empowerment (Porter et al., 2020).

However, any study of empowerment by use of ICTs requires a context-specific understanding of the practices involved. There is evidence that women’s access to and use of mobile phones is subject to restrictions; and “poor access may be the result of ...cost, male control of finances as well as use, poor digital literacy... and, perhaps, fear of use” (Bailur et al., 2018 p. 97). In view of these findings, this study aims to identify the barriers to Saudi women’s empowerment offered by M-government by exploring the impact of the male guardianship system and other factors that may inhibit adoption.

## **3.0 Aim & Objectives:**

The research objectives are based on the gaps identified in the literature. The first objective is to understand the factors that influence the adoption and use of M-government for women’s empowerment. This entails reviewing theories of women’s empowerment and the models and theories used in relation to M-government. Secondly, to develop a model from a critical

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analysis of the literature that explains the empowerment opportunities provided by M-government as well as factors affecting adoption; thirdly, to empirically apply this model in the context of women in Saudi Arabia; and finally to offer recommendations to policy-makers to enhance the adoption and use of M-government services by Saudi women.

### **4.0 The CA Framework and the UTAUT Technology Adoption Model**

To answer the research question for this study, both the CA and UTAUT will be used. The CA framework outlines how individuals use resources as a means to improve their lives, and has long been used to investigate how ICTs may function to give individuals agency (Sen, 1992). Resources are therefore assessed on how far they enable this and provide people with choices that are life-enhancing and feasible (Nikou et al., 2020).

The UTAUT was developed to overcome the limitations of other models on users' adoption of new technology (Venkatesh, et al., 2003) and was deemed most suitable as a starting point to create the study model, which comprises three groups of independent variables: practical, affective and cultural factors. The UTAUT has been extensively used in the field; a meta-analysis of 69 published studies having shown it to be a valid and powerful model (Walldén, Mäkinen & Raisamo, 2016). It has also proved effective for the prediction and explanation of citizens' adoption of M-government in a range of contexts (Abdullah & Ward, 2016.)

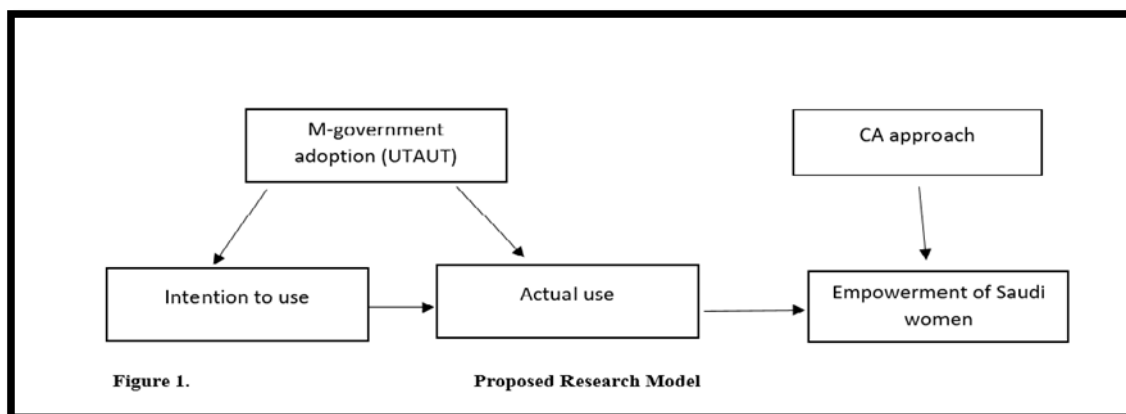
Technology adoption theories explain the factors that influence people's adoption of technology to conduct their activities and tasks, whereas the CA framework emphasises how these technologies improve their capabilities to perform the tasks or activities (Nikou, et al., 2020). The UTAUT is utilized to assess women's intentions to adopt M-government by looking at women's perceptions of its usefulness; whilst the CA assesses if they are empowered by this capability to do activities they consider valuable as the result of using M-government. Therefore, CA will address the limitations of UTAUT to consider the empowerment of women; and UTAUT will cover the limitation of CA to understand the adoption and intention to use M-government services.

Capabilities can be conceived of as the potential outcomes that could be facilitated by the adopted technologies (Nikou et al., 2020). Indeed, various well-established technology adoption theories view expected outcomes as central. For instance, the UTAUT uses the

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construct 'performance expectancy (expected improvements in job performance) as one of the factors that explain adoption (Venkatesh et al., 2003). Thus, there is a relationship between technology adoption theories and the CA. However, it would be simplistic to equate technology adoption with empowerment and treat 'capability' as just someone's ability to use that technology when their life chances and opportunities to access and use the technology in pursuit of meaningful goals and to improve their quality of life need to be taken into account. (Ye et al., 2020).

This study will develop a model called M-government Adoption for Saudi Women (MGSW), to examine the adoption and use of M-government services in the Saudi context. It includes cultural factors relevant to Saudi women context such as male guardianship (*Walayah*) The MGSW will add key factors identified in the literature to the UTAUT, as well as integrating relevant dimensions from the CA model to compensate for previous lack of attention to the influence of culture. The relationships between the practical, affective and cultural factors and Saudi female citizens' intention to use M-government and actual use are measured by the MGSW with consideration of empowerment measured via the CA.



The study intends using the CA and technology adoption theory to identify what Saudi women perceive they can actually do with the opportunities provided by M-government services (Adaba & Rusu, 2014).

### 5.0: Research Methodology:

The study will adopt mixed-methods which involve collecting both quantitative and

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qualitative data and integrating them (Cresswell, 2014). A sequential exploratory design is used, starting with qualitative data collection (semi-structured interviews) and analysis (Phase 1) followed by quantitative data collection (questionnaire) and analysis (Phase 2). The interviews will be conducted with Saudi women to understand the factors and the cultural influences on M-government adoption and women's empowerment in more depth. After analysing the interviews, a questionnaire survey will be developed from these insights and studies found in the literature on M-government adoption and distributed to Saudi women to test the factors in the model and identify how they affect intention and actual use.

The interview participants will be 20-30 Saudi female citizens over 18. The interviews will be conducted in Arabic and last approximately 45 minutes. The female perspective about accessing government services independently of male guardians and using M-government apps will be explored with open-ended questions and participants will be encouraged to ask questions and speak freely.

The questionnaire will be distributed to an intended sample of 1500 Saudi women, and contain three sections. The first will acquire demographic data; the second will broadly cover what empowerment means to the women, their use of M- government, their perception of empowerment due to the new law and what and how M-government services contribute to their empowerment. The final section will focus on factors that affect their adoption and use of these M-government services. As Phase 2 involves developing a theoretical model that understands Saudi female citizens' adoption and use of M-government services, a number of hypotheses will be proposed to test the factors in the model.

### **6.0 Conclusion: The Study's Contributions to the Field**

The study makes several contributions to the field of IS; and to the best of our knowledge, will be the first study in IS conducted by woman that focuses on women's adoption and empowerment that uses CA and adoption theory in an M-government context. The contribution is therefore both theoretical and practical.

Theoretically, the research will contribute to the field by providing a critical review of models and theories used to analyse M-government adoption and intention to use and



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proposing a new model—the M-government for Saudi Women (MGSW) developed from existing models with the addition of new factors relevant to the research context and the CA framework for understanding Saudi women’s empowerment. Practically, the study identifies factors affecting female adoption of M-government and these results will be useful to researchers, the ICT industry, government agencies and policy makers who wish to improve their online services. In particular, it provides recommendations for improvements to Saudi government services from the perspectives of Saudi women

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