Using the UTAUT Model to Determine Factors Affecting Acceptance and Use of E-government Services in the Kingdom of Saudi Arabia

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DECLARATION

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the thesis itself.

__________________________
Mohammed Alshehri
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LIST OF PUBLICATIONS

The following academic publications emerged from this PhD dissertation:

**Journal Publications**


**Conference Papers**


ABSTRACT

E-government has become a popular focus of government efforts in many countries around the world. More and more governments around the world are introducing e-government as a means of reducing costs, improving services, saving time and increasing effectiveness and efficiency in the public sector. E-government and the Internet has made an essential change to the whole of Saudi societal structure, values, and culture, as well as the ways of conducting business by utilizing the potential of ICT as a tool of daily work. Therefore, e-government has been identified as one of the top priorities for Saudi government and all its agencies. However, the adoption of e-government faces many challenges and barriers, including political, cultural, organizational, technological, and social issues which must be considered and treated carefully by any government contemplating e-government adoption. Findings of several studies indicate that despite the high cost of e-government projects, both tangible and intangible, many e-government efforts are failing or are slowly diffusing.

This thesis presents a comprehensive study and investigation of the influential factors on the acceptance of using e-government services (G2C) in the Kingdom of Saudi Arabia (KSA) by adopting the Unified Theory of Acceptance and Use of Technology (UTAUT) model. This study uses an amended version of the UTAUT model as its theoretical foundation. UTAUT is an empirically validated model that combines eight major models of technology acceptance and their extensions. The study investigates the effect of proposed UTAUT constructs and moderating variables on e-government services use and acceptance. Therefore, this study critically assesses key factors that influence e-government service acceptance in the public sector in Saudi Arabia, discusses the importance of citizen perspective about e-services, and provides a comprehensive assessment of e-service providers and citizens’ perceptions about the obstacles facing e-government services acceptance and use in Saudi Arabia. This thesis provide a comprehensive view and deep understanding of e-government services adoption based on the perceptions of e-services providers and Saudi citizens through the utilisation of the UTAUT model.

Several past studies have provided significant knowledge and results regarding the implementation and adoption of e-government sectors such as G2G, G2B, and G2E. Moreover, some of these studies discussed the adoption of e-government from various
Abstract

perspectives, including cultural aspect, the social aspect, the technical aspect, the organizational aspect, and many others. However, there is still a demand for more empirical and theoretically based studies that focus on the actual factors that affect the acceptance and use of e-government services (G2C) from the perspective of citizens and services providers. Moreover, despite the fact that implementation is an important phase of e-government project structure, the acceptance and use of such services in an inclusive and modelled manner within this particular context of the KSA has not been comprehensively studied. Therefore, this research aims to address the gap in the literature empirically by utilizing and developing the validated UTAUT model to determine the factors that influence the actual usage of e-government services in the KSA.

To achieve the research aims, a triangulation approach for data gathering was employed. In the first step, a quantitative questionnaire survey method was used to evaluate and refine the developed UTAUT model. A total of 686 questionnaires were collected as primary data for this phase. In this stage, several multivariate statistical techniques, including Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modelling (SEM) were utilized to analyze and validate the developed research model. EFA and CFA were used to discover and prove robust model structures. The SEM technique and Analysis of Moment Structures (AMOS) Version 19.0 were then used to examine and refine the model relationships. The proposed UTAUT model was examined with six independent scales: Trust (TR), Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Website Quality (WQ), and Facilitating Conditions (FC). It also used two dependent scales, Behaviour Intention (BI) and Use Behaviour (USE), as well as three moderators of key relationships: Age, Gender, and Internet Experiences. The proposed UTAUT model was then tested and modified, and the final model result was evidenced by goodness of fit of the model to confirm its validity and reliability.

The second phase of the research consisted of the employment of a qualitative focus group method to support and validate the questionnaire findings. The focus groups were conducted with two groups of five participants each. The first group consist of five Saudi citizens from diverse levels of educational and age, while the second group was comprised of five IT staff from several government sectors.
As a result of this empirical study, the new work and understanding that is reported in this thesis, as validated by literature review, includes a number of interesting findings. For instance, it was found that the five independent constructs of the UTAUT model, that is, Trust (TR), Performance Expectancy (PE), Effort Expectancy (EE), Website Quality (WQ) and Facilitating Conditions (FC), significantly affect the Behaviour Intention (BI) to accept and use e-government services. In contrast, Social Influence (SI) had an insignificant effect on the Behaviour Intention (BI) to accept and use e-government services. Additionally, Use Behaviour of e-government services (USE) was significantly influenced by Behaviour Intention (BI) to accept and use e-government services. In addition, three moderators—age, gender and Internet experience—impacted the influence of key determinants towards usage behaviour for e-government services. Importantly, the results also indicate the importance of government website support systems and citizen awareness about e-government systems as significant determinants of the adoption of e-government services by citizens.

Furthermore, this study provides a set of implications for innovation and key conditions which could potentially help all Saudi government sectors and the Saudi e-government program (Yesser) towards successful adoption and diffusion of e-government services (G2C) in the KSA.

Moreover, the findings of this research provide an empirical result for other developing counties that have a similar context to the KSA and face similar difficulties for the adoption of e-government services (G2C) in their own country. All e-government stakeholders, researchers in e-government fields, policy-makers and academicians can also benefit from the findings of this research.

In summary, this research study significantly expands and improves upon the existing knowledge of e-government services adoption within the KSA context. A validated and practical model (UTAUT) was developed and used a variety of sophisticated processing and analysis techniques to determine the key factors that affect the acceptance and use of e-government services (G2C) in the KSA. This dissertation concludes with a discussion of the contributions and limitations of this work, and provides directions for future research.
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