Determinants of e-government adoption: An empirical investigation in the Kurdistan region of Iraq

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Abstract

Governments worldwide are increasingly becoming aware of the benefits of using the Internet to provide public services to their citizens. This phenomenon, referred to as electronic government (e-government), is said to generate substantial benefits such as accountability, transparency, convenience, cost saving, efficiency to both the government and citizens alike. However, despite the increase in e-government investments globally, low level citizens’ adoption of these services has been identified as a serious impediment to their success in both developed and developing countries.

Researchers in various countries have tried to understand citizens’ perception towards e-government services, and to identify the factors that encourage citizens to adopt e-government services. Despite the existence of several studies, no such study has yet been conducted in the Kurdistan region of Iraq where government has planned to implement e-government in the region. Thus, the current study was the first to explore Kurdish citizens’ behavioural intentions towards e-government services to provide government authorities with information that could assist them to increase citizen acceptance of e-government services in the region.

In addition to its practical significance, this study seeks to make theoretical and methodological contributions to the existing e-government literature. The current study distinguished between intention to use e-government for accessing information and intention to use e-government for conducting transactions, and separate models were developed for each comprised of several variables adapted from the technology adoption and e-government adoption literature. This distinction is lacking in the majority of e-government studies despite the empirical evidence that these two services are different in that transactional e-government is considered to be more
complicated and more risky since it requires users to provide personal and financial information to government agencies. Consequently, empirical evidence shows that citizens are more likely to use e-government for obtaining information rather than conducting transactions. Therefore, it is both practically and theoretically important to distinguish between these two types of e-government services. This study also improves on the statistical approach used in other studies, employing a more robust approach in order to more accurately identify the relationships between the research variables prior to testing them.

The data were collected through a survey questionnaire administered by the researcher to two groups of participants; undergraduate university students and non-academic staff at the University of Salahaddin in Erbil. The data were analysed using multiple logistic regressions in SPSS and path analysis in AMOS19. The results revealed that all the variables that were hypothesized in this study to be associated with the intention to use e-government services were indeed associated with the intention to use. For some the association was direct and for some it was only indirect through their relationship with other independent variables. The results also revealed that the strength of the association for those variables that were tested on both informational and transactional e-government on the intention to use was more significant for transactional e-government. This supported the argument that informational and transactional e-government should be distinguished when investigating citizens’ e-government adoption behaviour for both theoretical and practical purposes. Finally, the hypothesized relationship between the intention to use informational e-government with the intention to use transactional e-government was confirmed. This suggested that, higher intentions to use government websites to seek information are associated with higher intentions to use government websites to transact with government.
Acknowledgement

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This thesis would have remained a dream had it not been for the support of the great Nechirwan Barzani, the prime minister of Kurdistan Regional Government. I would like to also acknowledge the financial, academic and technical support of the Kurdistan government.

I am indebted to my supervisors, Professor Linda Botterill, Professor John Campbell and Professor Helen Berry for their help, support and patience. It gives me great pleasure in acknowledging the support and help which they have provided me throughout this journey.

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<th>Description</th>
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<tbody>
<tr>
<td>A</td>
<td>Attitude</td>
</tr>
<tr>
<td>AGFI</td>
<td>Adjusted Goodness-Of-Fit Index</td>
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<tr>
<td>AIC</td>
<td>Akaike information criterion</td>
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<tr>
<td>AMOS</td>
<td>Analysis of Moment Structures</td>
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<td>BI</td>
<td>Behavioural Intention</td>
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<tr>
<td>CAIC</td>
<td>Consistent Akaike information criterion</td>
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<tr>
<td>CB</td>
<td>Control Belief</td>
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<tr>
<td>CEHR</td>
<td>Committee for Ethics in Human Research</td>
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<tr>
<td>CFI</td>
<td>Comparative Fit Index</td>
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<tr>
<td>C-TAM-TPB</td>
<td>Combined TAM and TPB</td>
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<tr>
<td>COMPT</td>
<td>Compatibility</td>
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<tr>
<td>DTPB</td>
<td>Decomposed Theory of Planned Behaviour</td>
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<tr>
<td>DV</td>
<td>Dependent Variable</td>
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<tr>
<td>EE</td>
<td>Effort Expectancy</td>
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<tr>
<td>FC</td>
<td>Facilitating Conditions</td>
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<tr>
<td>GFI</td>
<td>Goodness- of- Fit Index</td>
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<tr>
<td>G2C</td>
<td>Government to Citizen</td>
</tr>
<tr>
<td>G2B</td>
<td>Government to Business</td>
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<tr>
<td>G2E</td>
<td>Government to Employee</td>
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<tr>
<td>G2G</td>
<td>Government to Government</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<td>---------</td>
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<tr>
<td>IT</td>
<td>Information Technology</td>
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<tr>
<td>ICT</td>
<td>Information and Communication Technology</td>
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<td>IDT</td>
<td>Innovation Diffusion Theory</td>
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<tr>
<td>IS</td>
<td>Information System</td>
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<td>IV</td>
<td>Independent Variable</td>
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<td>KMO</td>
<td>Kaiser-Meyer-Olkin</td>
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<td>KRG</td>
<td>Kurdistan Regional Government</td>
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<td>MM</td>
<td>Motivational Model</td>
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<td>MPCU</td>
<td>Model of PC utilization</td>
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<td>NFI</td>
<td>Normed Fit Index</td>
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<tr>
<td>PBC</td>
<td>Perceived Behaviour Control</td>
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<td>PEOU</td>
<td>Perceived Ease of Use</td>
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<td>PE</td>
<td>Performance Expectancy</td>
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<td>PC</td>
<td>Personal Computer</td>
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<td>Perceived Information Quality</td>
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<td>PPR</td>
<td>Public Sector Process Rebuilding</td>
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<td>Perceived Risk</td>
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<td>PwC</td>
<td>PriceWaterhouseCoopers</td>
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<tr>
<td>RMSEA</td>
<td>Root Mean Square Error of Approximation</td>
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<tr>
<td>RMR</td>
<td>Root mean square residual</td>
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<tr>
<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>SCT</td>
<td>Social Cognitive Theory</td>
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<tr>
<td>SE</td>
<td>Self-efficacy</td>
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<td>Social Influence</td>
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<td>SN</td>
<td>Subjective Norms</td>
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<tr>
<td>SPSS</td>
<td>Statistical Package for Social Science</td>
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<tr>
<td>TAM</td>
<td>Technology Acceptance Model</td>
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<tr>
<td>TAM2</td>
<td>Technology Acceptance Model 2</td>
</tr>
<tr>
<td>TLI</td>
<td>Tucker Lewis Index</td>
</tr>
<tr>
<td>TRA</td>
<td>Theory of Reasoned Action</td>
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<td>TG</td>
<td>Trust in Government</td>
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<td>TI</td>
<td>Trust in the Internet</td>
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<tr>
<td>TPB</td>
<td>Theory of Planned Behaviour</td>
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<tr>
<td>UTAUT</td>
<td>Unified Theory of Acceptance and Use of Technology</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNPA</td>
<td>United Nations Public Administrations Network</td>
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Chapter 1: Introduction

This chapter provides a brief overview of what this thesis is about. The chapter begins by describing the problem for which the current study was undertaken. Following this, research questions and objectives are outlined. The chapter then explains the theoretical and practical contributions that this study sought to make by answering these questions. Research methodology and data analysis procedures are explained next. The chapter concludes by outlining the structure of the thesis.

Research Problem and Background

Information communication technologies (ICT) are one of the most significant characteristics of our age which have dramatically changed our societies and the way that we interact with each other (Alshehri & Drew, 2010). In recent years, these technologies, particularly the Internet, have revolutionized societies and have enabled individuals and businesses alike to communicate and interact with each other more effectively at a lower cost, regardless of their physical locations (Kumar et al., 2007). Businesses in the commercial sector for years have embraced the Internet to communicate with their customers all over the globe (Shih, 2004). This phenomena, which is also referred to as electronic commerce (e-commerce), has generated significant advantages for both businesses and customers, such as convenience, cost reduction, faster transactions and the availability of services 24/7 (Lu et al., 2011).

The use of the Internet to communicate with customers has not been limited to the commercial sector only. Organizations in the public sector have also been increasingly aware of the significant advantages of using the Internet and thereby have employed it to support government activities and to communicate with their stakeholders (Kumar et al., 2007). The use of the Internet by the public sector to deliver government services is referred to as