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Determinants of e-government services adoption in developing countries: a field survey and a case study

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Determinants of E-Government Services Adoption in Developing Countries: A Field Survey and a Case study

A thesis submitted in fulfilment of the requirements for the award of the degree of

DOCTOR OF PHILOSOPHY

from

UNIVERSITY OF WOLLONGONG

By

OMAR ALHUJRAN

School of Information Systems and Technology

Faculty of Informatics

2009

CERTIFICATION

I, Omar Alhujran, declare that this thesis, submitted in partial fulfilment of the requirements for the award of Doctor of Philosophy, in the School of Information Systems and Technology, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

Omar Alhujran
March 2009

Abstract

The rapid growth of investment in public service delivery through e-government has drawn attention to research on this area. However, both governments and academic researchers recognise the problem of low-level adoption of e-government services among citizens; the common problem in both developed and developing countries. E-government adoption, unlike most of IT adoption by employees in private-sector organizations, is voluntary and occurs often in turbulent social-political environments. Therefore, the problem needs to be addressed comprehensively from technological, social, political, and cultural perspectives. However, e-government adoption research currently lacks a comprehensive conceptual framework for explaining citizen adoption of e-government services. To fill this gap, this study extends the Technology Acceptance Model (TAM) (Davis et al., 1989) by adding a set of social, political, and cultural constructs that are derived from different research literatures: government trustworthiness, perceived public value e-government programs, and national culture dimensions.

The extended model is then tested using multiple research methods: a large-scale, multi-site questionnaire survey of 335 Jordanian citizens, and case study interviews with e-government officials. Structural equation modelling and regressions analysis results indicate that citizen attitude towards using e-government services is the most significant determinant of citizen intention to use e-government services. Moreover, citizen attitude, in turn, is jointly determined by citizen belief: perceived usefulness and perceived ease of use of an e-government service. These results provide new evidence for considering the attitude construct to study citizen adoption of e-government services which is voluntary in nature. Importantly, the results also suggest the importance of perceived public value as a significant determinant of the citizen's belief. Furthermore, the results show strong evidence of a positive relationship between trustworthiness and citizen belief. Research limitations and future directions as well as managerial implications are also discussed.

List of publications

Chatfield, A & **Alhujran, O** 2009, 'A Cross-Country Comparative Analysis of E-Government Service Delivery among Arab Countries', *Information Technology for Development, accepted (in press)*.

Alhujran, O & Chatfield, A 2008, 'Toward a Model for E-government Services Adoption: The Case of Jordan', in *Proceedings of the 8th European Conference on E-Government*, Ecole Polytechnique, Lausanne, Switzerland, 10-11 July 2008, pp 13-22..

Chatfield, A & **Alhujran, O** 2007a, 'E-Government Service Delivery Capabilities: An Analysis of the Arab Countries in Africa & the Middle East', in *Proceedings of the DCCA 2007 1st International Conference on Digital Communications and Computer Applications*, Irbid, Jordan, 19-22 March 2007, pp 615-624.

Chatfield, A & **Alhujran, O** 2007b, 'The Role of Strategic Leadership in Driving Transformative E-Government: A Comparative Analysis of the Arab States in the Middle East', in *Proceedings of the 7th European Conference on E-Government*, Haagse Hogeschool, Den Haag, Netherlands, 21-22 June 2007, pp 71-80.

Chatfield, A & **Alhujran, O** 2007c, 'An Analysis of e-Government Maturity Models from a User-Centric Perspective: Toward a Public Value Proposition', in *Proceedings of the IEEE'07- The 2007 International Conference on e-Learning, e-Business, Enterprise Information Systems, and e-Government*, Monte Carlo, June 25-28, 2007, Resort, Las Vegas, Nevada, USA, 25-28 June 2007, pp 53-59.

Alhujran, O 2007, 'Determinants of E-Government Adoption and Diffusion in Jordan', PhD proposal presented in Consortium Doctoral Day and published in *Proceedings of the ACS/IEEE International Conference on Computer Systems and Applications, AICCSA '2007*, Amman, Jordan, 13-16 May 2007, pp 109-110.

Al-khamayseh, S, **Alhujran, O**, Aloudat, A & Lawrence, E 2006, 'Intelligent M-Government: Application of Personalization and Location awareness Techniques', in *Proceedings of the Second European Conference on Mobile Government*, Brighton, UK, 10-12 July 2006, pp 1-10.

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Acronyms

ATU	Attitude Toward Using
BI	Behavioural Intention
DOI	Diffusion of Innovation
ICT	Information and Communication Technology
IDV	Individualism/Collectivism
IMF	International Monetary Fund
IS	Information System
IT	Information Technology
ITD	Innovation Diffusion Theory
ITT	Information Technology Transfer
LTO	Long-term vs. Short-term Time Orientation.
MAS	Masculinity/Femininity
MoICT	Ministry of Information and Communication Technologies- Jordan
NITC	National Information Technology Centre -Jordan
PD	Power Distance
PEOU	Perceived Ease of Use
PPV	Perceived Public Value
PU	Perceived Usefulness
TAM	Technology Acceptance Model
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UA	Uncertainty Avoidance
UN	United Nations
WTO	World Trade Organisation