Critical Factors in the Adoption and Diffusion of E-government Initiatives in Oman

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This thesis is submitted in fulfilment of the
requirements for the degree of
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For My Parents, My Wife & Son

Declaration

"I, Hafedh AlShihi, declare that the PhD thesis entitled *Critical Factors in the Adoption and Diffusion of E-government Initiatives in Oman* is no more than 100,000 words length, exclusive of tables, figures, appendices, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other degree or diploma. Except where otherwise indicated, this thesis is my own work".

Signature: _____ Date: _____

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Abstract

Many significant barriers must be faced in the adoption and dissemination of e-government systems regardless of how advanced or modest a country is in terms of ICT infrastructure and deployment. This research has endeavored to investigate the impediments associated with the development and diffusion of e-government with a concentration on non-technical and country-specific factors. The focus of the research was on Oman's efforts to develop an e-government system, using advanced nations' experiences in the same domain to establish benchmarks.

Initially, this research undertook a general literature review to define the barriers to the uptake of e-government and to set and refine aims, scope and questions asked of the research. Subsequently, a more focused literature review was conducted on the experiences of advanced nation with e-government, to identify possible lessons for and solutions to barriers facing the take-up of e-government. In parallel, an exploratory case study of the Oman e-government project was conducted that aimed to test the extent to which the barriers and solutions drawn from the largely Western-centric literature apply in the Omani situation, and to investigate other possible cultural and country-specific barriers. Semi-structured interviews and face-to-face administered questionnaires were the primary data collection strategies used throughout the case study phase.

The study found that non-technical barriers in Oman, such as users' lack of IT knowledge and the absence of marketing campaigns, have negatively affected people's decisions to use the technology and inhibited decision makers from implementing or adopting technology initiatives. In addition, several country-specific limits to e-government growth were identified. Government decision makers in Oman were found to be prone to short-term planning, which prevents them from anticipating the long-term potential of e-government. Additionally, frequent structural changes within ministries, and the fact that the e-government project is not given high priority nor urgently needed at present, have contributed in delaying development of and improvements to such a system. Ultimately, this research delivered a socio-technical framework for adoption, detailing causes and effects of the critical factors in the adoption and diffusion of e-government initiatives in Oman.

Publications Arising From Thesis

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Abbreviations

ADSL	Asymmetric Digital Subscriber Line
AGIMO	Australian Government Information Management Office
ATM	Asynchronous Transfer Mode
ATO	Australian Taxation Office
B2C	Business-to-Consumer
B2B	Business-to-Business
CBO	Central Bank of Oman
DAC	Digital Arabic Content
E-government	Electronic Government
ESCWA	United Nations Economic and Social Commission for Western Asia
G2C	Government-to-Citizen
G2B	Government-to Business
G2G	Government-to-Government
G2E	Government-to-Employee
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GIS	Geographic Information Systems
GPRS	General Packet Radio Service
ICDL	International Computer Driving Licence
ICT	Information and Communication Technology
IPR	Intellectual Property Rights
ISDN	Integrated Services Digital Network
ISP	Internet Service Provider
IT	Information Technology
ITTF	Information Technology Task Force
ITTS	Information Technology Technical Secretariat
KOM	Knowledge Oasis Muscat
MMDS	Multi-channel Multipoint Distribution Service
MMS	Multimedia Message Services
MPLS	Multi-Protocol Label Switching
NOIE	National Office for the Information Economy
OAB	Oman Arab Bank
OCIPED	Omani Center for Investment Promotion and Export Development
OECD	Organisation for Economic Co-operation and Development
OIFC	Oman Investment and Finance Company
OmanTel	Oman Telecommunications Company
OMR	Omani Rial
PC	Personal Computer
PCT	Patent Cooperation Treaty
PDA	Personal Digital Assistants
PDO	Petroleum Development Oman
PKI	Public Key Infrastructure
RDI	Research, Development and Innovation

ROI	Return On Investment
ROP	Royal Oman Police
RTGS	Real Time Gross Settlement
SAP	Systems Applications and Products
SMS	Short Message Services
SWOT	Strengths-Weaknesses-Opportunities-Threats
TAM	Technology Acceptance Model
TRA	Telecommunications Regulatory Authority
TRIPS	Agreement on Trade-related Aspects of Intellectual Property Rights
UN	United Nations
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNPAN	United Nations Online Network in Public Administration and Finance
VDSL	Very high bit rate Digital Subscriber Line
VSAT	Very Small Aperture Terminal
W3C	World Wide Web Consortium
WAP	Wireless Application Protocol
WAI	Web Accessibility Initiative
WiFi	Wireless Fidelity
WLAN	Wireless Local Area Network
WLL	Wireless Local Loop
WTO	World Trade Organisation