

**A FRAMEWORK TO STUDY FACTORS INFLUENCING THE  
ACCEPTANCE OF INFORMATION TECHNOLOGY IN YEMEN  
GOVERNMENT**

**By**

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**Thesis submitted to  
Othman Yeop Abdullah Graduate School of Business  
Universiti Utara Malaysia  
In Fulfillment of the Requirement for the Degree of Doctor of Philosophy**

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## ABSTRACT

Organizations around the world are looking for the development and keep up to date with emerging technology. Thus, they pay more intention to develop their technology infrastructure to improve productivity, effectiveness, or to adopt e-government. However, in reality, not all companies adopt and use effectively, or even use, information technology. And in reality, not all employees in organizations accept, adopt, and use effectively, or even use, information technology. When this happens, there is a gap between the ideal and the reality of the actual usage of information technology. As a result, there is need to study and understand the factors affecting the acceptance of technologies. This study aims to test the success of the technology acceptance model in Yemen culture. In addition, This study aims to investigate the factors influencing the acceptance of technology in Yemen public sector. This study developed a framework based on two theories, TAM 2 and UTAUT. In addition, the study added two important factors of organization culture and government support to the key factors in the theory of technology acceptance in order to provide better understanding for the factors influencing the acceptance of information technology among the individual perceptions. survey questionnaire was distributed to 53 government utilities and 357 cases were used in the analysis. Structural Equation Modeling AMOS 18 was used for the analysis of the proposed model, from a total 14 hypothesis, 11 were supported and three hypothesis were rejected. This study provided empirical evidence for the effects of new technology determinants in the government sector. In particular, it has successfully revealed that organization culture, government support, subjective norm, top management support and information quality are important determinants in influencing the adoption of technologies. The findings confirmed the theory of TAM and showed its potential capability in the Middle East, particularly in Yemen.

**Keywords:** Technology Acceptance Model, National Culture, Government Sector, Structural Equation Modeling, Yemen.

## ABSTRAK

Organisasi di seluruh dunia mengawasi dan berusaha untuk pembangunan dengan kemunculan teknologi baru. Oleh itu, mereka memberi lebih tumpuan membangunkan infrastruktur teknologi untuk meningkatkan produktiviti, keberkesanan atau untuk menerima pakai e-kerajaan. Walau bagaimanapun, pada hakikatnya, tidak semua syarikat menerima pakai dan menggunakan secara berkesan atau pun menggunakan teknologi maklumat. Pada hakikatnya, tidak semua pekerja dalam organisasi menerima, menerima pakai, dan menggunakan dengan berkesan, atau pun menggunakan, teknologi maklumat. Apabila ini berlaku, wujudlah jurang antara ideal dan realiti sebenar penggunaan teknologi maklumat. Oleh itu terdapat keperluan untuk mengkaji dan memahami faktor-faktor yang mempengaruhi penerimaan teknologi. Kajian ini bertujuan untuk menguji kejayaan model penerimaan teknologi dalam budaya Yaman. Di samping itu, kajian ini bertujuan untuk mengkaji faktor-faktor yang mempengaruhi penerimaan teknologi di sektor awam Yaman. Selain itu, kajian ini membangunkan satu rangka kerja yang berdasarkan dua teori; TAM 2 dan UTAUT. Di samping itu, kajian ini bertujuan untuk mengkaji faktor-faktor yang mempengaruhi penerimaan teknologi di sektor awam Yaman. Kajian ini juga menambah dua faktor penting iaitu budaya organisasi dan sokongan kerajaan kepada faktor-faktor utama dalam teori penerimaan teknologi untuk memberi kefahaman yang lebih baik tentang faktor-faktor yang mempengaruhi penerimaan teknologi maklumat dalam kalangan persepsi individu. Satu soal selidik telah diedarkan kepada 53 utiliti kerajaan dan 357 kes telah digunakan dalam analisis kajian. Structural Equation Modeling AMOS 18 telah digunakan untuk analisis model yang dicadangkan; daripada 14 hipotesis, 11 hipotesis telah disokong, dan tiga hipotesis ditolak. Secara khususnya, kajian ini telah berjaya mendedahkan bahawa budaya organisasi, sokongan kerajaan, norma subjektif, sokongan pengurusan atasan, dan kualiti maklumat adalah penentu penting dalam mempengaruhi penggunaan teknologi. Dapatan kajian ini mengesahkan teori TAM dan menunjukkan keupayaan potensi di Timur Tengah, khususnya di Yaman.

**Kata kunci:** Model Penerimaan Teknologi, Kebudayaan Kebangsaan, Sektor Kerajaan Structural Equation Modeling , Yaman

## ACKNOWLEDGMENT

I would like to express my Thankful for the Ministry of High Education in the Republic of Yemen for giving may the opportunity to conduct this study in lovely country the kingdom of Malaysia. Also, I would like to express my sincere to the Mister of The Ministry of technology Mr. Kamal AL-jabri and the Yemen telecommunication corporation for supporting me by approving the education holiday during the period of the study.

Also, I would like to express my grateful and appreciation for my wife and my 3 children Moataz, Sohail and Nisma for all the patient and support they gave it to me. Also, all the grateful for my brother Mr. Mohamed AL Haderi for everything he did for me to finish my study.

All the thanks and appreciation to Assoc. Prof. Dr. Razli Che Razak and Dr. Faridahwati Binti Mohd Shamsudin for the directions and advices. Moreover, all the thanks and appreciation to Dr. Zainol Bidin for the directions and advices.

In addition, I would like to express my sincere gratitude and appreciation for Associate professor Dr. HJ Hamzah B. Abdrahman, Director of the Executive Development Center, my supervisor for his supervision, valuable directions, encouragement and the understanding during the processes of my thesis.

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## LIST OF ABBREVIATION

<b>IT</b>	Information technology
<b>YR</b>	The Yemeni Rial
<b>CIA</b>	The Central Intelligence Agency
<b>ICT</b>	Information and communication technology
<b>USA</b>	United state of america
<b>PC</b>	Personal Computer
<b>UTAUT</b>	Unified theory of acceptance and use of technology
<b>TAM</b>	Technology Acceptance Model
<b>BEA</b>	Bureau of Economic Analysis
<b>OCAM</b>	Office, Computing and Accounting machinery
<b>IPE</b>	Information Processing Equipment
<b>ERP</b>	Enterprise resource planning
<b>CSE</b>	Computer self-efficacy
<b>GCSE</b>	General computer self-efficacy
<b>SCSE</b>	Syystem computer self-efficacy
<b>IS</b>	Inforamation system
<b>EMR</b>	Electronic Medical Record System
<b>SN</b>	Subjective norm
<b>WebCT</b>	Web communicate technology
<b>POLNET</b>	police office interanet
<b>TPB</b>	Theory of planned behavior
<b>TRA</b>	Theory of reasoned action
<b>TMS</b>	Top management support
<b>UNESCO</b>	United Nations educational, Scientific and Cultural organization
<b>CEO</b>	Chief executive officer

<b>SEM</b>	Structural Equation Modeling
<b>AMOS</b>	Aviation maintenance, repair, and operations system
<b>GLS</b>	Generalized list square
<b>OLS</b>	Ordinary list square
<b>MDIL</b>	Maximum likelihood
<b>DF</b>	Degree of freedom
<b>Sig</b>	Significant
<b>KMO</b>	Kaiser-Meyer-Olkin Measure of Sampling Adequacy
<b>AVE</b>	Average Variance Extracted
<b>X<sup>2</sup>/df</b>	Minimum Discrepancy <b>CMIN</b> / Degree Of Freedom <b>DF</b> )
<b>GFI</b>	Goodness of Fit
<b>AGFI</b>	Adjusted Goodness of Fit index
<b>NFI</b>	Normed Fit Index
<b>TLI</b>	The Tucker-Lewis index
<b>RFI</b>	The relative fit index
<b>RMSEA</b>	Root Mean Square Error of Approximation
<b>Cult8</b>	Culture 8
<b>Cult15</b>	Culture 15
<b>Cult17</b>	Culture 17
<b>Cult23</b>	Culture 23
<b>Cult25</b>	Culture 25
<b>Cult28</b>	Culture 28
<b>Top1</b>	Top management support 1
<b>Top2</b>	Top management support 2
<b>Top4</b>	Top management support 4
<b>Top6</b>	Top management support 6
<b>Top7</b>	Top management support 7

<b>Gov2</b>	Government support 2
<b>Gov3</b>	government support 3
<b>Gov6</b>	Government support 6
<b>Gov7</b>	Government support 7
<b>Effic4</b>	Self-efficacy 4
<b>Effic5</b>	Self-efficacy 5
<b>Iqua4</b>	Information quality 4
<b>Iqua6</b>	Information quality 6
<b>NNFI</b>	Non-Normed Fit Index
<b>NFI</b>	Normed Fit Index
<b>RMR</b>	Root Mean Square Residual
<b>ECVI</b>	The expected cross-validation index
<b>p</b>	probability
<b>Y</b>	Estimated value
<b>T-value</b>	Test value
<b>EASE</b>	Ease of use
<b>Useful</b>	Usefulness
<b>Intention</b>	Intention behavior to use
<b>BI</b>	Intention behavior to use
<b>Norm's</b>	Subjective norm
<b>Quality</b>	Information quality



## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.0 Introduction**

Countries and governments try to develop and extend their business and economies throughout the world by building relations and agreements. Enhancing trade relations between countries and governments is possible with the application of information technology. The spread of information technology (IT) across the globe is unstoppable because of the benefits it offers. Many organizations are willing to invest huge sums of money on information technology to support different strategic and operational objectives for the purpose of gaining competitive advantage (Venkatesh, Morris, Davis, & Davis, 2003).

From the government point of view, the advent of IT is beneficial as it does not only allow ease of communication with the rest of the world, but it also enables the government to offer better quality services to the general public. The use of IT in government agencies marks the establishment of e-government. But unfortunately, acquiring appropriate IT is not a sufficient condition for utilizing it effectively. Equally important is the acceptance of the government employees of the new technology (Traunmuller & Lenk, 2002).

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