MEASURING THE EFFECTIVENESS AND PERFORMANCE OF E-GOVERNMENT PORTALS IN THE KINGDOM OF SAUDI ARABIA

BY

HAIFA FAHAD M AAL-ZUABI

A dissertation submitted in fulfilment of the requirement for the degree of Doctor of Philosophy in Information and Communication Technology

Kulliyyah of Information and Communication Technology International Islamic University Malaysia

MAY 2014

ABSTRACT

The purposes of this study are to investigate the effectiveness of e-government implementation in Saudi Arabia, explore the underlying factors for the efficient performance of e-government portals, address the gaps and problems that have emerged in e-government portals, examine the impact of the problems found in egovernment plan and the needs of its citizens, give the recommendation on the improvement of the performance of e-government portals in order to serve Saudi citizens and its users in the most effective manner. To achieve these purposes, the study used variety of theoretical frameworks namely; model desirability and acceptance of the technology by the citizens, effectiveness, indicative assessment, performance analysis, the obvious benefits and the desirability of its users. The samples of this study are of two types, the first sample cohorts were the experts in information technology and the second samples were the Saudi citizens, who are the portal users. Three instruments were employed in this study namely; the first one was e-government questionnaire adopted from the United Nations administered to the group of experts, the second questionnaire was a developed one administered another group of experts and the third instrument was administered to 300 portal users to measure the portal's success factors. The findings of the study showed the comparison among the three portals that the Ministry of Interior portal is the most effective one compared to other portals followed by the Safeer's portal and the Ministry of Labor portal. The experts' perceptions on the ease of use of the Ministry of Interior portal are not different from the perceptions of users. Almost all the experts and users agreed that the features of the Ministry of Interior portal are well designed in terms of its interface and graphics. In addition to that, the results of this study showed that the portal of the Ministry of Interior is effectively designed and has achieved a high level of system efficiency and performance. However, the study pointed to a decline in the performance of the portal of the Ministry of Labor for ease of use by users and that the site design does not win the overall satisfaction as well. Majority of the experts and citizens are satisfied with the ease of use of the Safeer's portal followed by the portal of the Ministry of Labor and with the quality of the portal of the Ministry of Interior. Based on this, the study suggests to the government of Saudi Arabia to improve the ease of use of the portal of Safeer for all students and provide the highest level of protection and security to enhance the quality of its performance to be users' friendly and save their time also for the other portals. The study also recommends the improvement on the high level of performance of portal of the Ministry of Interior even if it is the best in comparison with the other portals.

ملخص البحث

هدفت هذه الدراسة إلى الكشف عن مدى فعالية تطبيق البوابات الحكومية في المملكة العربية السعودية، معرفة العوامل الأساسية لأداء ناجح لتلك البوابات، وللتعرف على المشاكل التي ظهرت فيها وأثر هذه المشاكل على مشروع تطبيق الحكومة الالكترونية في السعودية وإعطاء التوصيات المستخرجة من الدراسة لتطوير أداء هذه البوابات وذلك لخدمة المواطنين السعوديين بأكثر الطرق فعالية. ولتحقيق هذه الأهداف، تم استخدام العديد من الإطارات النظرية مثل: نموذج استحسان وقبول للتكنولوجيا من قبل المواطنين، الفعّالية، التقييم الإرشادي، تحليل الأداء، الفوائد الجلية واستحسان المستخدم لها بشكل عام. وعلى هذا، تم اختيار العينتين الأولى منهما هي مجموعة من الخبراء في تقنية المعلومات والثانية هم مستخدوا البوابات من المواطنين . وقد استخدمت الباحثة ثلاث أدوات، الأولى هي استبيان لمراحل الحكومة الالكترونية التابع للأمم المتحدة الموزع على مجموعة من الخبراء، أما الاستبيان الثاني تم تطبيقه لمعرفة أهم عوامل نجاح البوابات الالكترونية على مجموعة أخرى من الخبراء وأما الاستبيان الثالث فقد تم تطبيقه على ٣٠٠ مستخدم للبوابات. أشارت نتائج هذه الدراسة أن بوابة الحكومة الداخلية قد تطورت بشكل فعّال مقارنةً بالبوابات الأخريات. ومع ذلك، فقد تم اعتبار بوابة السفير على أنها الأكثر تطوراً مقارنةً مع بوابة وزارة العمل.إن تصورات الخبراء لسهولة استخدام بوابة وزارة الداخلية ليست مختلفة بشكل كامل عن تصورات المستخدمين. ووافق كل من الخبراء و المستخدمين على أن بوابة وزارة الداخلية تمتاز بتصميم جيد للواجهة و الرسومات المستخدمة. كما أظهرت نتائج هذه الدراسة أن تصميم هذه البوابة هو تصميم فعَال، بالإضافة إلى تحقيق مستوى عال لفعالية النظام و الأداء. وأيضا أشارت الدراسة إلى تدني أداء بوابة وزارة العمل بالنسبة إلى سهولة استخدامها من قبل المستخدمين، وعدم نيل تصميم الموقع الرضا الكلي أيضاً. كما أثنى الخبراء على مستوى الأمان و الموثوقية المتواجدة في البوابة الحكومية، و قبولهم لأداء هذة البوابة. كما أظهرت نتائج تحليل الأداء لبوابة السفير، أن هناك نسبة كبيرة من المواطنين والخبراء قد أثنوا على سهولة استخدام الموقع وأنه لا يوجد فرق كبير بالردود من قبل الخبراء والمستخدمين حول نقاط الضعف والقوة للبوابة. من خلال النتائج يوجد الكثير من الهفوات للحكومة الالكترونية فيما يتعلق بالتصميم والأداء وسهولة الاستخدام. ومثالاً على ذلك، تدبي مستوى فعالية استخدام بوابة وزارة العمل مقارنةً مع وزارة الداخلية بينما بوابة سفير تم الإجماع من قبل العينة على أنها الأفضل استخداما من بين البوابات الحكومية المذكورة في هذة الدراسة على الرغم من ضآلة مستوى الحماية في بوابة سفير وبوابة وزارة العمل بينما تميزت بوابة وزارة الداخلية بالجودة العالية والتنسيق. وأخيرا، أوصت هذه الدراسة حكومة المملكة العربية السعودية على العمل على تطوير سهولة استخدام بوابة السفير و ذلك بتوافر استخدامها لجميع الطلاب . بالإضافة إلى، توفير أعلى مستوى من الحماية والأمان لتعزيز جودة الأداء وتوفير الوقت، و تطوير تصميم الرسومات في الموقع لسهولة الاستخدام من قبل المستخدمين. على الرغم من أن بوابة وزارة الداخلية قد بلغت مستوى عالى من الأداء مقارنة بالبوابات الأخريات.

APPROVAL PAGE

The dissertation of Haifa Fa	had M Aal-Zuabi has been ap	oproved by the following
	Imad Fakhri Alshikhali Supervisor	_
	Asadullah Shah Internal Examiner	_
	Mohammad Alrabbah External Examiner	_
	Md.Yousuf Ali	_
	Chairman	

DECLARATION

I hereby declare that this dissertation is the result of my own investigation	n, except	
where otherwise stated. I also declare that it has not been previously or con-	currently	
submitted as a whole for any other degrees at IIUM or other institutions.		
Haifa Fahad M. Aal-Zuabi		
Signature Date		

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

DECLARATION OF COPYRIGHT AND AFFIRMATION OF FAIR USE OF UNPUBLISHED RESEARCH

Copyright © 2014 by International Islamic University Malaysia. All rights reserved.

MEASURING THE EFFECTIVENESS AND PERFORMANCE OF E-GOVERNMENT PORTALS IN THE KINGDOM OF SAUDI ARABIA

I hereby affirm that The International Islamic University Malaysia (IIUM) holds all rights in the copyrights of this Work and henceforth any reproduction or use in any form or by means whatsoever is prohibited without the written consent of IIUM. No part of this unpublished research may be reproduced, stored in a retrieval system, or transmitted, in any form or by means, electronics, mechanical, photocopying, recording or otherwise without prior written permission of the copyright holder.

Affirmed by Haifa Fahad M. Aal-Zuabi	
G'	
Signature	Date

I dedicate this work:

To my dear merciful mother who always prays for me for guidance from the bottom of her heart, may Allaah protect her from all distresses

To my dear father who is a school in his patience and endurance, may Allaah protect him

To my husband Abdullmajeed for his endurance of my busyness.

To a slice of my liver, my son Abdullah and my daughter Sara for their patience for my busyness.

To all my brothers and sisters, may Allaah protect them.

To my distinguished lecturers whom I learnt a lot from them.

ACKNOWLEDGEMENTS

Praise be to Allaah the Lord of the worlds, and may the peace and blessings of Allah be upon the noblest Prophet Muhammad (sallallahu 'alaie wasallam), his household and all his companions.

I thank Allaah Who helps me to accomplish this thesis, then, my profound thank goes to my supervisor Dr 'Imad Fakhri AL-Shaikhili for his pieces of advice, counsel, his time and effort spent in the way of completing this work, I beseech Allaah to reward him tremendously.

I thank Dr. Professor Abdul Qadir Al-Fantukh, Deputy Minister at the Ministry of Higher Education for Planning and Information in Saudi Arabia for his pieces of advice and invaluable suggestions given to me for this thesis, may Allaah put that efforts in the scales of his good works.

My heartfelt thank goes to Dr. Feras Muhammed Al-Madani, Deputy Dean for the Scientific Research at the Northern Border University in Saudi Arabia for his assistance and his meticulous facilitation of all difficulties which assist me in finalizing this thesis, I beseech Allaah to reward him immensely.

Sincere thanks to the Dr. Jobair Mohammed Aljobair Secretary-General of the Association of Human Rights in Saudi Arabia for his support and encouragement may Allaah put that efforts in the scales of his good works.

My thanks goes to Saudi Cultural Attaché in Lebanon Mr-Mosaed Aljarah for his assistance may Allah put that efforts in the scales of his good works.

I thank Dr. Engineer Ali Mohammed Alkhouri, Director of the general of the Emirates Identity Authority in the United Arab Emirates for his advice and suggestions given to me may Allah put that efforts in the scales of his good works.

I shall never forget to thank Dr. Professor Asadullah Shah for his assistance and his pieces of advice I beseech Allaah to reward him immensely.

Also thanks to Professor Abdul Wahab Abdull Rahman and in specific all the teaching staff at the Kulliyyah of Information and communication Technology 'KICT, International Islamic University Malaysia, who had contributed greatly to the pilot test of the research instrument of this thesis.

My thank goes to the Ministry of Higher Education, particularly, Saudi Arabia Cultural Attaché in Malaysia and the Ministry of Internal Affairs spearheaded by Prince Dr. Bandar bin Abdullah Al-Mashari Al-Saud and Ministry of Labor for helping me during the implementation of this thesis.

Lastly, I thank all who had contributed to the completion of this thesis and all the participants.

May Allaah guide and guard all to what He loves and likes, He is the All-Hearer, All-Listener.

The Researcher Haifa Fahad Al-Zuabi

TABLE OF CONTENTS

Abstract	ii
Abstract in Arabic	iii
Approval Page	iv
Declaration	
Declaration of Copyright	vi
Dedication	vii
Acknowledgements	vii
List of Tables	xiv
List of Figures	XX
CHAPTER ONE: INTRODUCTION	1
Background of the Study	
Problem Statement	4
Research Objectives	5
Research Questions	
Scope and Justification of the Research	
Significance of the Research	7
CHAPTER TWO: LITERATURE REVIEW	
Introduction	
Accessibility, Usability, Transparency and Responsiveness to Citizen	
Request	
Usability Evaluation Framework on Six Selected Saudi E-Government	
Websites	
Acceptability of the E-Government in Saudi Arabia	
Effectiveness	
Effectiveness	
Cost	
DEA	
Technology Acceptance Model (TAM)	
Performance	
Heuristic Evaluation	
Effectiveness	
Satisfaction	
E-Government Stages Model	
Quality	
Cost	
Data envelopment analysis	
Conclusion	26
	25
CHAPTER THREE: THEORETICAL BACKGROUND	
Introduction	
E-Government	
Definition of E-Government	28

G	Sovernment to E-Government	29
C	ategories of E-Government	32
Е	-Government Objectives	33
	Increasing the efficiency of public administration	
	Improving the delivery of public service to the citizens	34
	Improving citizens' quality of life	
Ir	nformation Technology and E-Government	
	echnological Evaluation of E-Government	
Е	-Government Services and Portal	37
S	ome Countries Practicing E-Government Project	40
	-Government Challenges and Obstacles	
Е	-Government in Kingdom of Saudi Arabia	43
	Introduction	
	The Kingdom of Saudi Arabia	
	People of Saudi Arabia	
	Demography of Saudi Arabia	
	Economy	
	Society and Culture	
Ir	nternet Facility Provision in Saudi Arabia	
	rograms Of E-Transactions (Yaseer)	
	he Status Of E-Government Services in Saudi Arabia	
Е	-Portal	53
	Introduction	53
P	ortals' Advantages	
	ortal Types	
	Web-Portal	
	E-Business Portal	56
	Self-Services Portal	
	E-learning Portal	58
	E-commerce Portal	
	E-government Portal	
	E-library Portal	59
P	ortal and Intranet	60
W	Vebsite and Portal	61
P	ortals' of Ksa	62
	Ministry of Interior (MOI)	62
E	-Services	
	A. MoIDiwan	65
	B. Civil Affairs	65
	C. Labor Importation	65
	D. Passports	66
	E. Traffic	66
\mathbf{N}	Inistry of Labor	67
S	afeer Portal For Saudi Students Studying Abroad	69
S	trategy	70
СНАРТ	ER FOUR: RESEARCH METHODOLOGY	72
	ntroduction	
R	esearch Design	72

Phase one	
Phase Two	77
Data Collection	78
Research Model	79
The Questionnaire Development	83
Reliability and Validity	84
Population and sampling	86
Data Analysis	86
Data Envelopment Analysis	86
Summary and Conclusion	
CHAPTER FIVE: DATA ANALYSIS AND RESULTS	88
Introduction	88
The Saudi Safeer Portal	90
Ministry of Labor portal	91
Interior Ministry Portal	92
The Saudi Safeer portal	
Accessibility	
Design	
Effectiveness	
E-services	
Performance	
Reliability	
Security	
Usability	
Ministry of Labor Portal	
Accessibility	
Design	
Effectiveness	123
E-services	126
Performance	
Reliability	129
Security	
Usability	
Ministry of Interior Portal	
Accessibility	
Design	
E-services	
Performance	
Reliability	
Security	
Usability	
Comparison among portals	
The comparison between experts and users	
Ministry of Safeer	
Ministry of labor	
Interior ministry portal	
Safeer portal	
Instrument reliability	

Acceptance of Safeer portal	203
Safeer portal effectiveness	
Heuristic evaluation factors	206
Performance expectancy, user's satisfaction, net benefits, and cost	
reduction factors	208
Ministry of interior portal	209
Acceptance of e-government portals	
The effectiveness	
Heuristic factors	212
Ministry of labor Portal	215
Acceptance of E-government portals	215
Portal effectiveness	
Heuristic evaluation factors	218
Performance expectancy, user's satisfaction, net benefits, and cost	
reduction factors	220
Best-performers	224
Efficiency histogram	
Best-performers	
Best-performers	
Efficiency histogram	231
Efficiency histogram	233
CHAPTER SIX: DISCUSSION OF FINDING	253
Introduction	253
Research question 1: what extent are e-government portals in	
Saudi Arabia being implemented?	253
Research question 2: What are the problems and gaps in these E-	
government portals?	256
Research question 3: What is the impact of the problems found in	
the E-government portals on the objectives of the e-government	
scheme and the needs of the citizens?	
Gender	266
Income	266
Social status	
Educational qualification	
Frequent use of computer	
Age	267
Research question 4: What are the critical factors for a successful	
performance of e-government portals?	268
Research question 5: What recommendations could be made to	
improve the e-government portals in order to serve the Saudi	
citizens in the most effective ways?	270
CHARGED GEVEN GONG VIGION AND DECOME TOWN A TYPE	~= ~
CHAPTER SEVEN: CONCLUSION AND RECOMMENDATION	
Conclusion and Recommendations	
Recommendation for Future studies	215
REFERENCES	277

APPENDIX A.1 QUESTIONNAIRE (1) E-GOVERNMENT STAGE	284
APPENDIX A.2: QUESTIONNAIRE 2 (EXPERTS EVALUATION)	285
APPENDIX A.3: QUESTIONNAIRE (3) USERS EVALUATION	292
APPENDIX B: PUBLISHED PAPERS AND CONFERENCES:	297
APPENDIX C: NAMES OF THE ARBITRATORS	298

LIST OF TABLES

<u>Table</u>	Table No.	
2.1	Summary of the Litrature Review	10
12	The detail of the revised set of 10 heuristics	17
3.1	A comparison between traditional government and e-government	31
3.2	Evaluation for the services criteria	39
3.3	Population of Saudi Arabia according Age and Gender of the Respondent	46
3.4	The difference between the portal and intranet	60
3.5	Difference between website and portal	62
4.1	Factors of aacceptance of e-government portal, source and items	81
4.2	Effectiveness factors, number of statements and sources	81
4.3	Heuristic factors; number of statements, and source	82
4.4	Items and sources of pperformance expectancy, citizen satisfaction, net benefits, and costs	83
5.1	Frequency and percentage for The Saudi Safeer Portal	91
5.2	Frequency and percentage for Information Management System of Enterprises Labor Ministry	92
5.3	Frequency and percentage for Interior Ministry Portal	92
5.4	One-Way ANOVA for frequencies for the three portal.	93
5.5	LSD test result for the three portals	93
5.6	Mean and SD for the three portals	94
5.7	Summary of results	94
5.8	Respondents percentage, median, and mode of safeer portal	98
5.9	Respondents percentage, median, and mode of safeer portal	101
5.10	Percentage of responses, median, and mode of safeer portal	103

5.11	Percentage of Response, median, and mode of safeer portal	106
5.12	Percentage of Response, median, and mode of safeer portal	108
5.13	Percentage of Responses, median, and mode of safeer portal	110
5.14	Percentage of responses, median, and mode of safeer portal	113
5.15	Percentage of responses, median, and mode of safeer portal	116
5.16	Percentage of responses, median, and mode of MOL portal	119
5.17	Percentage of responses, median, and mode of MOL portal	122
5.18	Percentage of responses, median, and mode of MOL portal	125
5.19	percentage of responses, median, and mode of MOL portal	127
5.20	Percentage of responses, median, and mode of MOL portal	129
5.21	percentage of responses, median, and mode of MOL portal	130
5.22	percentage of responses, median, and mode of MOL portal	134
5.23	percentage of responses, median, and mode of MOL portal	137
5.24	Percentage of responses, median, and mode of MOI portal	140
5.25	percentage of responses, median, and mode of MOI portal	143
5.26	percentage of responses, median, and mode of MOI portal	145
5.27	percentage of responses, median, and mode of MOI portal	148
5.28	percentage of responses, median, and mode of MOI portal	150
5.29	percentage of responses, median, and mode of MOI portal	151
5.30	percentage of responses, median, and mode of MOI portal	155
5.31	percentage of responses, median, and mode of MOI portal	158
5.32	One-Way ANOVA for the three portals	159
5.33	Mean and SD for the three portals	160
5.34	Post Hoc LSD test result for the three portals	160
5.35	One-Way ANOVA of Accessibility for the three portals.	160
5.36	Mean and SD of Accessibility for the three portals	161
5.37	Post Hoc LSD test result	161

5.38	One-Way ANOVA for the design of the three portals	161
5.39	Mean and SD for the design of the three portals	162
5.40	Post Hoc LSD test result	162
5.41	One-Way ANOVA on the effectiveness of the three portals	162
5.42	Mean and SD of the effectiveness of the three portals	163
5.43	Post Hoc LSD test result	163
5.44	One-Way ANOVA on E-service for the three portals	163
5.45	Mean and SD on E-service for the three portals	164
5.46	Post Hoc LSD test result	164
5.47	One-Way ANOVA on Performance for the three portals	164
5.48	Mean and SD on Performance for the three portals	165
5.49	Post Hoc LSD test result	165
5.50	One-Way ANOVA on Reliability for the three portals	165
5.51	Mean and SD on Reliability for the three portals	166
5.52	Post Hoc LSD test result	166
5.53	One-Way ANOVA on Security for the three portals	166
5.54	Mean and SD on Security for the three portals	167
5.55	Post Hoc LSD test result	167
5.56	One-Way ANOVA on Usability for the three portals	167
5.57	Mean and SD on Usability for the three portals	168
5.58	Post Hoc LSD test result	168
5.59	Matching experts and users' factors	169
5.60	Medians for the safeer portal factors	170
5.61	Descriptive Statistics for safeer portal	171
5.62	Ranks for safeer portal	172
5.63	Test Statistics for safeer potal	174
5.64	Medians for the factors of ministry of labor portal	181

5.65	Descriptive Statistics for ministry of labor portal	182
5.66	ranks for ministry of labor portal	183
5.67	Test Statistics for ministry of labor potal	185
5.68	Medians for the factors of interor minisitry portal	192
5.69	Descriptive Statistics for interior ministry portal	193
5.70	ranks for Interior ministry portal	194
5.71	Test Statistics for Interior ministry potal	196
5.72	Cronbach's alpha reliability of the key respondents' responses toward factors of Safeer portal	203
5.73	Cronbach's alpha reliability of key respondents' responses towards the acceptance of Safeer portal factors	203
5.74	Frequency of the key respondents' responses for the acceptance of Safeer portal factors	204
5.75	Mean and standard deviation of key respondents' responses for the acceptance of Safeer portal factors	204
5.76	Cronbach's alpha reliability of key respondents' responses towards the effectiveness of Safeer portal factors	205
5.77	Frequencies of key respondents' responses for the effectiveness of Safeer portal factors	205
5.78	Mean and standard deviation of key respondents' responses for the effectiveness of Safeer portal factors	205
5.79	Cronbach's alpha reliability of key respondents' responses towards the heuristic evaluation factors of Safeer portal	206
5.80	Frequencies of the key respondents' responses for the heuristic evaluation factors of Safeer portal	206
5.81	Mean and standard deviation of key respondents' responses for the heuristic evaluation factors of Safeer portal	207
5.82	Cronbach's alpha reliability of key respondents' responses towards the performance expectancy, user's satisfaction, net benefits, and cost reduction of Safeer portal factors	208
5.83	Frequencies of the key respondents' responses for the performance expectancy, user's satisfaction, net benefits, and cost reduction of Safeer portal factors.	208

5.84	Mean and standard deviation of key respondents' responses for the performance expectancy, user's satisfaction, net benefits, and cost reduction of Safeer portal factors	208
5.85	Cronbach's alpha of the questionnaire factors	209
5.86	Cronbach's alpha coefficient of e-government acceptance factors (n=100)	210
5.87	Frequencies of key respondents' responses for the acceptance of E-government portals factor (n=100)	210
5.88	Frequencies of the respondents' responses on the acceptance of e-government portal	210
5.89	Mean and standard deviation of the acceptance of e-government portals	211
5.90	Cronbach's alpha coefficient of effectiveness factors	211
5.91	Respondents' responses on effectiveness factors	211
5.92	Mean and standard deviation on effectiveness	212
5.93	The Cronbach'salpha coefficient of respondents' responses on heuristic factors	212
5.94	Respondents' responses on heuristic factors	212
5.95	Mean and standard deviation of key responses for heuristic factors	213
5.96	Cronbach's alpha coefficient of key respondents' responses for performance expectancy, user's satisfaction, net benefits and cost reduction	214
5.97	The key respondents' responses for performance expectancy, User's satisfaction, net benefits, and cost reduction	214
5.98	Mean and standard deviation of key respondents' responses for performance expectancy, user satisfaction, net benefits, and cost reduction.	215
5.99	Cronbach's alpha reliability of key respondents' responses towards Ministry of labor portal factors	215
5.100	Cronbach's alpha reliability of key respondents' responses towards the acceptance of the Ministry of labor portal factors	215
5.101	key respondents' responses for the acceptance of Ministry of labor portal factors	215

5.102	Mean and standard deviation of key respondents' responses for the acceptance of Ministry of labor portal factors	216
5.103	Cronbach's alpha reliability of key respondents' responses towards the effectiveness of Ministry of labor portal factors	216
5.104	Key respondents' responses for the effectiveness of Ministry of labor portal factors	217
5.105	Mean and standard deviation of key respondents' responses for the effectiveness of Ministry of labor portal factors	217
5.106	Cronbach's alpha reliability of key respondents' responses towards the heuristic evaluation factors of Ministry of labor portal	218
5.107	key respondents' responses for the heuristic evaluation factors of Ministry of labor portal	218
5.108	Mean and standard deviation of key respondents' responses for the heuristic evaluation factors of Ministry of labor portal	218
5.109	Cronbach's alpha reliability of key respondents' responses towards the performance expectancy, user's satisfaction, net benefits, and cost reduction of Ministry of labor portal factors	220
5.110	key respondents' responses for the performance expectancy, user satisfaction, net benefits, and cost reduction of Ministry of labor portal factors	220
5.111	Mean and standard deviation of key respondents' responses for the performance expectancy, user's satisfaction, net benefits, and cost reduction of Ministry of labor portal factors	220
5.112	Analysis of units' efficiency scores	223
5.113	Percentage of number and value of best-performers	225
5.114	Efficiency histogram	226
5.115	Analysis of units' efficiency scores	227
5.116	Percentage of number and value of best-performers	228
5.117	Efficiency histogram	231
5.118	Analysis of units' efficiency scores	232
5.119	Percentage of number and value of best-performers	230
5.120	Efficiency histogram	234
5.121	Gender frequencies of key informants: male and female	235

3.122	From 5000 - 10000 SR, 10001 - 15000 SR, and More than 15000 SR.	236
5.123	material status of key informants; frequencies; single, married and others	237
5.124	key informants education levels frequencies	238
5.125	key informants; average hours of computer use in week	239
5.126	Key informants; age distribution in 5 categorical intervals	239
5.127	Gender frequencies of key informants; male and female	240
5.128	Income frequency distribution of key informants; Less than 5000 SR From 5000 - 10000 SR, 10001 - 15000 SR, and more than 15000 SR.	241
5.129	material status of key informants; frequencies; single, married and others	242
5.130	key informants education levels frequencies	243
5.131	key informants; average hours of computer use in week	244
5.132	Key informants; age distribution in 5 categorical intervals	245
5.133	Gender frequencies of key informants; male and female	246
5.134	Income frequency distribution of key informants; Less than 5000 SR From 5000 - 10000 SR, 10001 - 15000 SR, and More than 15000 SR.	247
5.135	marital status of key informants; frequencies; single, married and others	248
5.136	key informants education levels frequencies	249
5.137	key informants; average hours of computer use in week	250
5.138	Key informants; age distribution in 5 categorical intervals	251

LIST OF FIGURES

<u>Figure</u>	<u>e No</u> . <u>P</u>	age No.
1.1	Organizational structure of the thesis	8
2.1	Technology Acceptance Model	14
2.2	IS success model	20
2.3	Conceptual model proposing quality dimensions to assess e-serviquality of government portals	ce 24
3.1	Map of the Kingdom of Saudi Arabia	44
3.2	The status of Saudi e-government	50
3.3	The rank of Saudi Arabia in providing online services	51
3.4	the location of Saudi Arabia in leading e-government countries	52
3.5	location of Saudi e-government in relative to Asia countries	52
3.6	Mobile channels to services provision	53
3.7	The research model to measure the portal effectiveness (BinMasre 2007)	k, 54
3.8	The architecture of an e-Business portal (Hu & Zhong, 2004)	57
3.9	Example to distinguish between the intranet and portal (Monitorin 2010)	ig, 61
3.10	The MoI website and MoI portal login	63
3.11	The MOI portal interface	64
3.12	The MOI portal interface	65
3.13	The Ministry of Labor	67
3.14	Information Management System of Enterprise	69
3.15	Safeer portal	70
4.1	three steps of first phase of research design	73
4.2	factors of experts evaluation	76

4.3	The design of the second phase	77
4.4	The research Framework.	80
4.5	The flow chart of Questionnaire design	84
5.1	A histogram of frequency for the three portals.	93
5.2	Absolute key informants' responses frequency	99
5.3	Absolute key informants' responses frequency	101
5.4	Absolute key respondents' responses frequency.	104
5.5	Absolute key respondents' responses frequency.	106
5.6	Absolute key respondents' responses frequency	108
5.7	Absolute key respondents' responses frequency	110
5.8	Absolute key respondents' responses frequency	114
5.9	Absolute key respondents' responses frequency	117
5.10	Absolute key respondents' responses frequency	120
5.11	Absolute key respondents' responses frequency	123
5.12	absolute key respondents' responses frequency	125
5.13	absolute key respondents' responses frequency.	128
5.14	Absolute key respondents' responses frequency	129
5.15	absolute key respondents' responses frequency	131
5.16	absolute key respondents' responses frequency	135
5.17	absolute key respondents' responses frequency	138
5.18	absolute key respondents' responses frequency	141
5.19	absolute key respondents' responses frequency.	144
5.20	absolute key respondents' responses frequency	146
5.21	absolute key respondents' responses frequency	148
5.22	Absolute key respondents' responses frequency	150
5.23	absolute key respondents' responses frequency	152
5.24	absolute key respondents' responses frequency.	156

5.25	absolute key respondents' responses frequency	159
5.26	Efficiency graph of Ministry of labor portal	223
5.27	values of best-performers (%)	225
5.28	Efficiency histogram	226
5.29	efficiency graph of the Minisitry of interior	227
5.30	values of best-performers (%)	228
5.31	Efficiency histogram	230
5.32	efficiency graph of the Minisitry of safeer	231
5.33	values of best-performers (%)	232
5.34	Efficiency histogram	234
5.35	A histogram of gender frequencies of key informants; male and female	235
5.36	A histogram of income frequency distribution of key informants; Less than 5000 SR, From 5000 - 10000 SR, 10001 - 15000 SR, and more than 15000 SR.	236
5.37	A histogram of key informants; material status, single, married, and others	237
5.38	A histogram of education levels of key informants	238
5.39	A histogram of key informants; average hours of computer use in a week	239
5.40	A histogram of key informants; age distribution in 5 categorical intervals	240
5.41	A histogram of gender frequencies of key informants; male and female	241
5.42	A histogram of income frequency distribution of key informants; Less than 5000 SR, From 5000 - 10000 SR, 10001 - 15000 SR, and more than 15000 SR.	242
5.43	A histogram of key informants; material status, single, married, and others	243
5.44	A histogram of education levels of key informants	244
5.45	A histogram of key informants; average hours of computer use in a week	245

5.46	A histogram of key informants; age distribution in 5 categorical intervals	246
5.47	A histogram of gender frequencies of key informants; male and female	247
5.48	A histogram of income frequency distribution of key informants; Less than 5000 SR, From 5000 - 10000 SR, 10001 - 15000 SR, and more than 15000 SR.	248
5.49	A histogram of key informants; marital status, single, married, and others	249
5.50	A histogram of education levels of key informants	250
5.51	A histogram of key informants; average hours of computer use in a week	251
5.52	A histogram of key informants; age distribution in 5 categorical intervals	252