

Citizens' Perceptions towards e-Governance: Field Study

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Abstract—E-governance is an emerging and challenging initiative in developing countries. It is not only concerning the provision of services through the use ICT but rather entails building external interactions with citizen and businesses, enhancing democracy and trust of the political institutions of government. It embraces among other principles, openness, accountability and citizen engagement in public policy process. This study aims at finding users' satisfaction with three chosen dimensions of e-governance, namely: openness, collaborative governance, and participation. These dimensions of e-governance are neither studied before in the context of Arab countries and nor explored earlier in relation to some demographics variables. A study of 900 users of e-government in United Arab Emirates (UAE) was undertaken to examine how gender, age, education, nationality, and employment affect their satisfaction with e-governance. Generally, satisfaction ratings vary significantly with these variables. However, the overall level of satisfaction with the three attributes was less favorable. Knowing the differences of citizen's perceptions towards e-governance services would help policymakers in the design of effective e-governance strategy. □

Keywords—E-governance, United Arab Emirates, Citizens' perceptions.

I. INTRODUCTION

E-GOVERNMENT is an institutional approach focuses on carrying out decision related to services 'provisions. It uses information and communications technologies (ICT) to transform the traditional public sector by making it accessible, transparent, effective and accountable. The end result of the adoption of e-government is to create a more satisfied picture of government business processes. E-government is not only putting a computer on the desk of bureaucrats, rather, it aims to change the mentality of bureaucrats to treats citizens whether they are receipts or providers of government services as a valued customer of government or an important participant in decision-making. E-governance is wider concept which reflects the relationships between government employees, elected or appointed, and the wider society. As interpreted by Heeks, e-governance goes beyond the provision of simple service and builds an external interaction with the diverse stakeholders of government [1]. E-governance means building positive relationship between the governing and the governed through the integration of people, processes, information and technology to achieve governance objectives. E-governance can provide diverse and long lasting benefits to all stakeholders in the society. Such benefits are numerous

such as, among others, less corruption, greater convenience to business and industry, citizen empowerment through access to information, efficient and more effective public sector management. However, the achievement of these efforts, depends, largely; on how well the citizens who are the target users make use of them [2]. In developing countries and more specifically in Arab environment, e-governance presents unprecedented challenges due to the passive role of the citizen in the political process and the traditional nature of government-citizen relations.

The purpose of this paper is to further understanding of citizens' perceptions towards e-governance. The study utilized the subjective indicators to measure citizens' satisfaction with e-governance. The citizen' subjective evaluation is adopted in this study due the lack of objective official data on the quality of e-governance system by the public sector is either not collected or not available to the public. To the best of our knowledge, this research is the first study that addresses the issues of citizens' perception towards e-governance. Therefore, this study adds to the limited pool of researches which have examined the citizens attitudes towards several dimensions of e-governance in Arab countries. The results of this study hopefully will serve the current e-government initiatives of the Arab governments in reassessing the traditional conceptions of the role of the citizen and providing information to government officials to achieve the external as well as the internal strategic objectives of e-governance in terms of better coordination between the front-office and the back-office sides and for the sake of fulfilling the public needs of information and enhancing the government administration activities.

The citizen's demographic characteristics can significantly influence their perspectives towards e-governance services. However, there is a paucity of research on how demographic characteristics can influence citizens ' perception toward e-governance. Thus, this research is a step forward in measuring the level of citizens' satisfaction with respect to some aspects of e-governance. Specifically, this paper investigates empirically the citizens' opinions and perceptions of e-governance. Hopefully, the findings of this study can be utilized as information by top level administrators in Arab countries in reassessing the presence of their online data and information and be more realistic in recognizing the active role of the citizens in the political process.

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II. LITERATURE REVIEW

A. Meaning of E-Governance

E-governance nowadays becomes the mantra and the key success factor for governments in the presence of increased citizen's expectations, evolving societies, fiscal demands and fierce competitive era. E-government is the use of internet by public sector organizations with aims of better access and delivery of services to its clients. It marks the most revolutionary shift in governance and the fundamental institutional change of the way government operates and transforms its relationship with citizens, businesses and other governments. Government bureaucracies are typically described as rules, processes, and input oriented. E-Government has been perceived as a reply to such ills. Accenture, a leading consulting, technology, and outsourcing, viewed e-governance as using new technologies to strengthen relationships with citizens. E-governance defines and assesses the impacts of ICT on the practices, attitudes and behaviors on the different spectrum of the society. E-governance, according to some researchers, e-governance is not only concerning the provision of services through the use of electronic mean but rather entails building external interactions [1], enhancing democracy and trust of the political institutions of government [3], [4]. The UNESCO definition [5] is: "E-governance is the public sector's use of information and communication technologies with the aims of improving information and service delivery, encouraging citizen participation in the decision making process and making government more accountable, transparent and effective. E-governance is the use of electronic tool to facilitate efficient, speedy and transparent process of disseminating information to the public, and other agencies for carrying out its administrative duties E-governance involves new styles of leadership, new ways of debating and deciding policy and investment, new ways of accessing education, new ways of listening to citizens and new ways of organizing and delivering information and services. E-governance is generally considered as a wider concept than e-government, since it can bring about a change in the way citizens relate to governments and to each other. E-governance can bring forth new concepts of citizenship, both in terms of citizen needs and responsibilities. Its objective is to engage, enable and empower the citizen. It is assumed that the adoption of information and communication technology by government organizations can enhance the practice of e-governance. E-Governance integrates the human and the human side of technology. It integrates people, processes, information, cultural, and environment in achieving the governance objectives. Through this integration e-governance can contribute towards enhancing the democracy, transparency, accountability and respect of the rights of the citizens [6]. The aims of e-governance is the continuous improvements of government performance, increasing citizens access to information and knowledge about the political process and thus achieving greater involvement of the citizens in political choices. In developing countries and more specifically in Arab environment, e-governance presents

unprecedented challenges due to the passive role of the citizen in the political process and the traditional nature of government-citizen relations. The e-governance can support and sustain good governance by providing all stakeholders (citizens and businesses) of UAE of better public service delivery, a better transparent information and easier access to the political authorities.

B. Theoretical Background

Earlier studies on e-governance have identified several issues such as users' acceptance; awareness of e-government; usage of ICT in governments; functionality, trust, access, quality and interoperability of the government Website [7], [8], [9], [10], [11]. Most of these studies have either examined the applicability of existing model such as SERVQUAL, Technology Acceptance Model (TAM) or developing a modified model and linking different issues such trust, awareness, functionality, quality with e-governance acceptance or usage and few studies have investigated the impact of demographic variables on the citizens' attitudes towards e-governance [12]. The majority of these studies were conducted in developed countries and in industrialized world. Few studies related to electronic government were carried out in developing countries [9].

Research conducted on the acceptance information systems (IS) are numerous. Researchers such as [7], [9], [13], [14], [15] have examined several concepts related to the users' acceptance of the IS. The study of Al Shibly and Tadros [9], examined empirically several issues related to employee's acceptance of electronic government such as system quality, information quality, perceived ease of use and perceived and the findings showed that all these issues effect on electronic government acceptance. In studying the extent to which an IS is used and adapted by potential users, Venkatesh et al. [7] found that the perceived usefulness and perceived ease of use affect users' attitudes for IS acceptance.

In studying which factors are determining the adoption of e-government and e-governance, Al-Shafi and Weerakkody [15], found that effort expectancy, social influences and facilitating conditions determine citizens' behavioral intention towards e-government. In investigating the factors affecting the acceptance and use of e-government services in Saudi Arabia, Alshehri et al., [16] found that dimensions of Website quality such as content, appearance, accessibility, ease of use, and design as well as effort expectancy, performance expectancy and facilitating conditions directly affect citizen adoption of e-government services. Other study on assessing citizen adoption of e-government initiatives in Gambia, Lin et. al., [17] found that information quality, perceived usefulness, perceived ease of use, attitude toward using, and behavioral intention have a significant and strong influence on Gambia's e-government usage intention. In a study of how Technology Acceptance Model (TAM) explain and predict users' acceptance of information technology in Gambia, Lin et. At., found that the core constructs of the TAMs (information quality, perceived usefulness, perceived use and behavioral intention significantly affects Gambian citizen' attitudes to use

e-government services. Al-adawi et al., [14] investigated how citizens perceived e-government as a primary government interaction channel and the factors that affect their level of usage. The study found that the nature of trust in e-government is the main reason which influence citizens' usage of e-government. In studying users' assessment of e-governance online services, Agrawal et al., [13] found that reliability, resourcefulness and utility are that most influential dimensions of e-governance online-service quality. An exploratory study by Gilmore and Souze [18] of assessing the quality of e-governance services in India using face-to-face interview of 30 consumers in the state of Hyderabad, the researchers found that most of the respondents ranked user requirement design category, reliability of services, knowledge of service provider and ease of access as the most essential factors in determining the quality of e-governance services.

Previous studies show that demographic and other individual characteristics play an important role in the citizens' attitudes toward technology. It was found that these factors have significantly affect citizens' adoption of e-government services (Mwangakal [2]. The findings of these studies gave evidence that the usage government website by citizens is not only determined by the interoperability, functionality, trust, reliability and resourcefulness of the websites, but also the perceptions of citizens have toward the e-government services which might be influenced by the demographic characteristics such as gender, education, nature of employment...etc. In the adoption and usage pattern of a system, the topic of e-governance is a new and emerging one, especially if one examine this pattern within the context of Arab countries. Researchers have given greater attention to the supply side of e-government related issues such as strategies and policy (Beynon-Davies [19] Choudrie et al.,[20], technical issues (Cottam et al., [21]; George, [22], Functionality, trust, quality, and interoperability (Venkatesh et al., [7]; Al Shibly and Tadros, [9]; Agrawal [13]; Al-adawi et al,[14]; al-Shafi and Weerakkody,[15]), however, little attention has been given to the citizens perspective. This research is a step forward in measuring citizens' perceptions of some selected aspects in e-governance and thus adding to the few researches done in this area, especially within the context of a Sub Region of developing World, namely Arab Countries.

Choudrie and Dwivedi [12] examined the citizens awareness and adoption of e-government initiatives in the United Kingdom (UK), employing data collected from the households. Findings of this suggest that demographic characteristics of citizens such as age, gender, education and social class have an imperative role in explaining the citizen's awareness and adoption of e-government services in the household. Rhee and Kim [23] examined the influence of socio-demographic factors towards the adoption and use of the Internet in South Korea using data extracted through face-to-face interview with more than 1000 respondents and they found that the social support from family members has as much effect on the internet users' perceptions. Other characteristics, such as age, educational and the perception of

the benefits from internet use proved to be significant factors in the internet adoption as well. But income level has no effect on internet adoption. Singh et al., [11] examined the potential of e-governance initiatives in reducing the corruption of three countries, namely, India, Ethiopia and Fiji. The study surveyed citizens perception of how e-governance could fight corruption in those three countries. The study found that e-governance initiatives, in the perceptions of respondents, positively related to improved government-citizen relationships and corruption reduction. To further understand, citizens attitudes towards e-government and e-governance within a UK context, Kolsaker and Lee-Kelley [8] collected data from 3000 citizens of a relatively prosperous town in South-East England. Findings indicate that users and non-users perceive moderate value in e-government for knowledge acquisition and communication, but little as a vehicle of democratic engagement. Furthermore, those using e-government frequently are more positive than those using e-governance. In examining the factors that are associated with the level of citizen satisfaction with government transparency, Jun and Wang [24] found that younger generation are the most active users of e-government website and free in expressing their opinions related to issues of service delivery compared to older generation. Furthermore, the results indicate that older generation tends to be more satisfied with the transparency of the local government in service delivery. Another study by Al-Shafi and Weerakkody [15], examined citizen' s adoption and usage of the national Qatari e-government services, found that facilitating conditions and behavioral intention have influenced citizens' use of e-government services in Qatar. Furthermore, the study investigated the impact of some demographic characteristics such Age, Gender and Education and found that e-government adoption in the state of Qatar differ significantly in terms of gender, age and education. To understand how e-government transforms public governance in developing countries, a study was conducted by Mwangakala [2] to examine the impact of demographic characteristics in the citizen's usage of government websites. The results revealed that Age and Education level directly affected citizen's willingness and continuance intention to use government websites, while income level did not have an effect in the citizen's willingness to use government websites.

III. OBJECTIVES OF THE STUDY

Researches on users' satisfaction of e-government have been extensively performed in developed countries and to a lesser extent in developing countries. The present study is an attempt to measure of users' satisfaction with some aspects of e-governance in Arab countries. Specifically, the paper examines empirically, the users opinions and perceptions as indicators in judging whether there is (or not) a good practices of e-governance in Arab countries. The study is an attempt to measure the level of users' satisfaction with three dimensions of e-governance namely: **Openness; Collaborative governance; Participation.** **Openness** is measured by six items Likert scale and it is interpreted to mean the real

possibility of consulting or acquiring government information and the ease with which citizens can find, digest and use of information. Access to information is enabling the empowerment of citizens, helping them to control service delivery to their benefits and giving them the power to hold governmental institutions accountable for service delivery. E-governance can help creating a **collaborative** mode for sharing information among the government institutions and between them and the public. The digital era of governance has replaced the hierarchical and silos-based culture of public administration with more collaborative approach to knowledge and information sharing among government institutions. ICT may enable the integration of information and services from various government agencies to help citizens and other stakeholders get seamless services [25]. Collaboration is needed in front-office through better services to customers and back-office to bring more efficiency and interoperability in government. This dimension is measured by six items of Likert scale. **Participation** reflects the utilization of internet technology to increase citizens' involvement with government. This includes the extent by which citizens feel part of active participants in democracy and whether being consulted and their opinions are matters in decision making process. Citizens involvement in policy and decision making processes constitute the heart of electronic participation. E-participation contains three benchmarks, namely E-information, E-consultation, and E-decision making. E-information measure the extent to which the national government provide information on the internet to be used as the basis of citizens' participation. E-consultation is the forth and back interaction between the government and its citizens. The focus is on the stakeholder interaction. E-decision making provides evidence of the real changes in public policies as resulted from citizens' inputs and feedback [26], [27]). This dimension is represented by 8 items of Likert scale.

These three dimensions (openness, collaborative governance, and participation) constitute the key constructs to e-governance. Reaching good level of e-governance will mean better information systems, more informed citizens and empower them to realize the fruits of democracy. The objective of this study is to measure the extent by which government institutions transfer the relationship with citizens from a passive to active participation. The transition from passive information access to active citizen participation will support and simplify governance for all parties (government, citizens and businesses) in Arab countries.

IV. METHODOLOGY AND DATA COLLECTION & ANALYSES

Based on published literatures on e-governance [28], [29], [6], [30], [8], [11]), the Author selects three dimensions of e-governance, namely, Openness; Collaborative governance; and Participation. A structured questionnaire was utilized in collecting the data about users' satisfaction with e-governance practices. In spite of the well known limitations of this approach to data collection, the structured approach was, on the balance, deemed reasonable in producing satisfactory data. The questionnaire consists of two parts. Part (1) contains

questions on the respondents' nationality, the type of employment; sex; and educational level. Part (2) of the questionnaire contains twenty items which measure the three dimensions of e-governance. Each of the three dimensions is measured using a Likert scale (ranging from 1 – strongly disagree to 5 – strongly agree). A pilot test was conducted using thirty users internet technology to ascertain the clarity of the instrument and accordingly, revisions were made to eliminate ambiguities, inadequate wording, and hidden biases. A Cronbach's coefficient alpha was computed to assess the reliability of the items used in measuring respondents' perception of three e-governance dimensions. A satisfactory coefficient of 0.89 was attained.

The study focuses on citizens who use e-government and have internet access to file applications or using e-government in their work. The researcher preferred to distribute the questionnaires on a face-to-face basis to eliminate any misunderstanding. Only Citizens who were willing to participate and fill the questionnaire were approached using simple random sampling. Three intercept locations were chosen within the municipality of Sharjah and Dubai, namely: Sahara Mall, Sharjah City Center Mall, and Dubai City Center.

Through 30 days of intensive work, the researcher and two trained students managed to obtain responses from 30 random users of e-government daily, resulting in an overall sample of 900 users. The data gathering was carried out in October 2012 between 5:00 pm to 8:00 pm. Fifty three percent of the respondents were female. Table I shows the respondents' profile in terms of the levels of measurement for each independent variable of this study. The respondents' perceptions with three dimensions of e-governance represent the dependent variable while the respondents' demographics data were chosen as independent variables.

The means, reliability assessment, and T-test were carried out using the SPSS statistical package. The level of significance was set at the conventional 0.05. The Scheffe method of multiple comparisons was used to determine the significantly differing categories for each independent variable (sex, age, nationality, type of employment, and educational level) for post hoc analysis.

TABLE I
DEMOGRAPHIC BACKGROUNDS OF THE RESPONDENTS

| Demography | N=900 | % |
|--------------------|-------|----|
| Gender | | |
| Male | 423 | 47 |
| Female | 477 | 53 |
| Age | | |
| 20 – 30 | 405 | 45 |
| 31 – 40 | 270 | 30 |
| 41 – 50 | 225 | 25 |
| > 50 | 90 | 10 |
| Education | | |
| Postgraduate | 135 | 15 |
| Degree | 585 | 65 |
| Diploma | 180 | 20 |
| Nationality | | |
| UAE | 180 | 20 |
| Other-GCC | 135 | 15 |
| Arab-Non GCC | 585 | 65 |
| Type of Employment | | |
| Public | 270 | 30 |
| Non-Profit | 225 | 25 |
| Private | 405 | 45 |

V. RESEARCH QUESTIONS

This paper is aimed at investigating the users' satisfaction with e-governance and this level of satisfaction covers three aspects of e-governance, namely: Openness; Collaborative governance; and Participation. Users' satisfaction with these three aspects is examined in terms of four categorical independent variables namely: sex, nationality, type of employment, and educational level. The following questions are addresses for achieving the objective of this research:

1. Does gender affect the level of satisfaction of citizens with e-governance as represented by the above three aspects?
2. Does age affect the level of satisfaction with the three dimensions of e-governance?
3. Does education affect the level of satisfaction of citizens with e-governance as represented by the above three aspects?
4. Does nationality affect the level of satisfaction of citizens with e-governance as represented by the above three aspects?
5. Does the nature of employment affect citizens' satisfaction level with e-governance as represented by the above three aspects?
6. What is the overall satisfaction of respondents with three chosen constructs (openness, collaborative governance, and participation) of e-governance?

VI. FINDINGS

To answer, the first research question a T-test was performed to determine whether sex affects users' perceptions of the value of using e-government portals for citizen involvement. Table II shows that there are significant

differences on all three dimensions of satisfaction with e-governance between the sexes. From this table, it is evident that the means for males and females are not only significant but are generally higher for the men in all three dimensions, namely, collaborative governance, participation and the openness.

TABLE II
T-TEST FOR USERS' SATISFACTION WITH E-GOVERNANCE BY SEX

| E-governance Dimensions | Sex | No | Mean | Std. Dev. | T Value |
|--------------------------|--------|-----|------|-----------|---------|
| Openness | Male | 280 | 2.48 | 1.12 | 2.88* |
| | Female | 320 | 2.08 | 0.98 | |
| Collaborative Governance | Male | 240 | 2.44 | 1.06 | 2.94* |
| | Female | 340 | 1.96 | 0.97 | |
| Participation | Male | 240 | 2.22 | 1.22 | 3.01* |
| | Female | 340 | 1.86 | 1.02 | |

$\alpha \geq 0.05$

With regard to age, the respondents were classified into four categories and these are: 20 -30 years; 31 – 40 years; 41 – 50 years; and above 50 years. One-way analysis of variance was carried out to answer the second research question. Table III shows that there are significant differences in the level of satisfaction based on the ages of the respondents on all dimensions of e-governance. To determine which groups differed significantly Scheffe multiple comparison was performed. The results show that the respondents aged above 50 years are more satisfied compared with the respondents who less than 50 years. This means that there positive correlation between the age of respondents and the level of satisfaction with e-governance' dimensions. The higher age of the respondents, the positive satisfaction towards these dimensions of e-governance.

TABLE III
ONE WAY ANALYSIS OF THE MEAN DIFFERENCES IN USERS' SATISFACTION BY AGE

| E-governance Dimensions | 20-30 | 31-40 | 41-50 | > 50 | F |
|--------------------------|-------|-------|-------|------|--------|
| | I | II | III | IV | |
| Openness | 1.88 | 2.10 | 2.54 | 3.09 | 10.21* |
| Collaborative Governance | 1.93 | 2.16 | 2.92 | 3.34 | 11.68* |
| Participation | 1.67 | 2.01 | 2.52 | 2.97 | 9.54* |
| N | 130 | 220 | 170 | 80 | |

* $\alpha \geq 0.05$, Scheffe M.C. for significantly differing groups: openness: (I-II), (I-III), (I-IV). Collaborative Governance: (I-II), (I-III), (I-IV).E-participation: (I-II), (I-III), (I-IV).

To answer the third research question, the respondents are classified according to their level of education and the means and one-way analysis of variance was applied to determine if the attainment of specific level of education would influence the users' perceptions of the value of e-governance as represented by the above three dimensions. From Table III, it is clear that the educational level of the respondents significantly affects the users' perceptions the value of e-governance' dimensions. The table reveals that respondents with higher educational level perceive greater value to e-governance dimensions. The F values were significant at ($\alpha \geq$

0.05). And to determine significantly differing groups, the Scheffe method of multiple comparison was employed.

TABLE IV
ONE WAY ANALYSIS OF THE MEAN DIFFERENCES IN USERS' SATISFACTION
ACCORDING TO EDUCATIONAL LEVEL

| E-governance Dimensions | High School I | 2-Yrs Diploma II | 4-Yrs Degree III | Postgraduate Masters & above IV | F |
|--------------------------|---------------|------------------|------------------|---------------------------------|--------|
| Openness | 1.61 | 2.01 | 2.44 | 3.01 | 14.21* |
| Collaborative Governance | 1.42 | 2.06 | 2.42 | 2.98 | 11.68* |
| Participation | 1.52 | 1.87 | 2.32 | 2.77 | 10.54* |
| N | 60 | 120 | 330 | 90 | |

* $\alpha \geq 0.05$, Scheffe M.C. for significantly differing groups: **openness:** (I-II), (I-III), (I-IV). **Collaborative Governance:** (I-II), (I-III), (I-IV). **E-participation:** (I-II), (I-III), (I-IV).

To examine the means differences and groups differences as attributed to nationality, the respondents were grouped into three categories: citizens of United Arab Emirates (UAE), residents of Gulf Cooperative Council (GCC), and residents of other Arabs. Table IV shows that the perceptions of UAE' citizens towards the three dimensions of e-governance are greater compared to GCC and other Arab residents. The table reveals that there are statistical differences in the means' value in favor of the UAE citizens compared to other two groups. The Scheffe multiple comparison shows that in all three dimensions of e-governance there is differences between the three categories of nationality and in favor of category I (UAE) compared to II (GCC residents), and I and II compared to (III) other- Arab residents.

TABLE V
ONE WAY ANALYSIS OF THE MEAN DIFFERENCES IN USERS' SATISFACTION
ACCORDING TO NATIONALITY

| E-governance Dimensions | UAE I | Other- GCC Residents II | Other- Arab III | F |
|--------------------------|-------|-------------------------|-----------------|-------|
| Openness | 3.21 | 2.78 | 2.44 | 9.78* |
| Collaborative Governance | 2.93 | 2.52 | 2.13 | 8.67* |
| Participation | 2.54 | 2.12 | 1.88 | 6.54* |
| | 180 | 90 | 330 | |

* $\alpha \geq 0.05$ Scheffe M.C. for significantly differing groups: **E-openness:** (I-II), (I-III). **Collaborative Governance:** (I-II), (I-III). **E-participation:** (I-II), (I-III).

To answer the last research question of whether the nature of employment of the respondents influence their attitudes towards the value of the three dimensions of e-governance. T – tests were carried out and the results are displayed in Table V. On all the three dimensions of e-governance, the respondents perceptions employed in the public sector differed significantly from others employed in the private and Non-profit sectors with regards to the value attached to the aforementioned dimensions. It is also apparent that the means values are differed among the three groups, with those employed in the public sector perceived the value of the three dimensions more positively compared to others.

TABLE VI
T-TEST FOR USERS' PERCEPTIONS WITH E-GOVERNANCE ACCORDING TO
SECTOR OF EMPLOYMENT

| E-governance Dimensions | Public | Private | Non-Profit | T Values |
|--------------------------|--------|---------|------------|----------|
| Openness | 2.98 | 2.14 | 2.48 | 6.56* |
| Collaborative Governance | 3.08 | 2.33 | 2.74 | 7.12* |
| Participation | 2.87 | 2.13 | 2.56 | 5.56* |
| | 190 | 230 | 180 | |

* $\alpha \geq 0.05$

Although the primary objective of this study is to examine the influence of the 4 independent variables on the value attached to three dimensions of e-governance, it is informative to know the overall level of the significant attached by the respondents to each of these three dimensions. Table VI provides the mean values of importance given to each dimension of e-governance identified in this study. Table VI shows that the means value at all three dimensions are within 2 and 3 which indicate less favorable value. There are numerous explanations for less favorable perceptions given by the respondents. One plausible factor could be the lack of awareness among the respondents about their roles in the overall political and social life. Factors which might be contributed to this lack of awareness are the paternalistic nature of the relationship between the citizens and their governments which in turn created one sided direction of this relationship from upper level to lower level. Another plausible explanation is that the essence of e-governance requires clear, understood and transparent laws and procedures by those governed. This issue in Arab countries could be hindered by lack of competent administrators and policymakers who themselves are not clear on various rules and procedures. In most of Arab countries, as the case, of other developing States, that the rules and procedures might be explicitly defined in the constitution or statutes but there is either a lack of clarity to these rules or procedures or indiscriminate application of them. The low perceptions of the respondents to the three dimensions of e-governance could be attributed to the low level of trust in knowledge and information sharing between those working in government institutions in one side and the community in the other side. Factors such social, political, and even technological might contribute to the low trust in information sharing in most of Arab countries, with exception of the countries in the GCC (Gulf Cooperative Council). Low trust whether is attributed to political, social or technological factors might impede the development of collaborative mode of governance between within the government or between the government and the public. Arab countries within GCC, for example, UAE is enjoying a healthy level of technological, political, and social trust. Therefore, it is not surprised to find that UAE and other Arab countries in GCC are highly rated by UNDESA [31] in most of the indices of e-government development and this in turn put them in advantageous position to reap the benefits of better collaborative governance.

TABLE VII
THE OVERALL MEAN VALUE OF THE RESPONDENTS TO THREE DIMENSIONS
OF E-GOVERNANCE

| E-Governance Dimension | Mean Ranking |
|--------------------------|--------------|
| Openness | 2.47 |
| Collaborative Governance | 2.41 |
| Participation | 2.22 |

1 - 2 Unfavorable; 2 - 3 Less Favorable; 3 - 4 Favorable; 4 - 5 More Favorable

VII. DISCUSSION

The objective of this research paper is to investigate the influence of four independent variables, namely, gender, education, nationality and the nature of employment on the value attached by citizens on e-governance. The study identified three areas of citizen's perceptions of e-governance, namely: **openness** which means the real possibility of consulting or acquiring government information and the ease with which the government website portals can assist citizens to find, digest and use of information; **collaborative governance** which is interpreted to mean the extent by which ICT may enable the integration of information and services from various government agencies to help citizens and other stakeholders get seamless services; and **participation** which reflects the extent by which citizens feel part of an active participants in democracy and whether being consulted and their opinions are matters in decision making process and found that there were significant differences in the value attached to these three dimensions attributable to gender, education, nationality and the type of employment sector.

The overall mean value of the respondents' perceptions towards the three dimensions of e-governance in less favorable. The mean values for the three dimensions range between 2.22 and 2.47. This indicate that the introduction of new system, such as e-government or e-governance might face a number of barriers for citizens and government. Overcoming these barriers might present further challenges to government and citizens. In the case of Arab countries, the citizens play passive role in the political process and the traditional nature of government-citizen relations. The government in Arab countries still plays the paternalistic role in the economic and political life of their citizens. Most citizens have a minimal understanding of how government operations are carried out or how decisions are made. This lack of awareness might explain why most of the respondents in this study have shown less favorable attitudes towards the three dimensions of e-governance.

The results of this study indicated that there are significant differences between men and women in all three aspects of e-governance identified in this study, namely openness, collaborative governance and participation. male respondents have shown more favorable value of e-governance measured by those aspects compared to female. These differences might be attributed to high expectations of men and the cultural and political environment which conditions female perceptions compared to men.. These results are in conformity with the findings of Al-Shafi and Weerakkody,[15] and Choudrie and Dwivedi [12].

With regard to the age variable, the results clearly indicated that citizens who are older (above 40 and above 50 years) are more satisfied on the three dimensions of e-governance. The greater life experience, maturity and adaptability with services provided by government might count with for higher satisfaction among the old respondents. These factors might influenced elderly citizens to form less radical behavior over years compare to younger citizens. Another explanation is that because young citizens have more inclination to use the government website, they are more exposed to the government website problems and this might explain why they are less satisfied compared to elderly citizens' uses of government services. These findings are inconsistent with Mwangakala [2] study but they are in conformity with Jun and Wang [24] study.

With reference to education, the findings indicate that those respondents with higher level of education have shown more positive attitudes with all three dimensions of e-governance compared to less educated respondents. This might be attributed to the level of maturity of individual who has a higher educational attainment. Respondents with higher educational credential are more rational and objective in assessing the value of e-governance compared with others who have less educational qualifications. These findings confirm the results of Rhee and Kim [23]; Choudrie and Dwivedi [12]; and Mwangakala [2].

Regarding the country of origin, the results show significant differences among respondents' perceptions of the three e-governance aspects. Respondents holding UAE nationality have shown positive favorable attitudes towards these three dimensions compared to respondents holding different status of citizenship. These results might be attributed to overall satisfaction of UAE' citizens with performance of government institutions in terms of the attainment of political and economic goals compared to others who residents in UAE and holding different nationality. The less favorable perceptions with e-governance aspects of residents from other Arab countries might be attributed to instability of their political system, inferior performance of government organizations and low level of awareness of what is going on in their countries.

With reference to the type of employment sector of respondents, the results indicate that those who work in the public sector have positive appreciation for the value of e-governance measured by the three dimensions (openness, collaborative governance, participation). In all three dimensions of e-governance, respondents who work in Non-profit and private sectors showed less satisfaction, compared to those who are working in the public sector. These results could be attributed to many factors such as the general biases towards the types and the quality of information and services provided by government websites portal. This might have influenced those respondents who work in the public sector, and also the adversarial relationship between the two sectors might have influenced the responses of those working in the private sector. With regard to those working in Non-profit sector, the responses were less adversarial compared to their counterpart in the private and this might be attributed to its

special relationship with public sector where great deal of funds and facilities are provided by the later in UAE.

It must, however, be noted that this study merely examined the influence of the 5 independent demographic factors on level of satisfaction with information and services embedded in the aforementioned dimension of e-governance in UAE. To the extent that Arab countries shared similarities on the social, cultural, political, e-governance challenges and obstacles facing Arab countries are also alike [32]. Therefore, precautions should be taken in considering the generalization of the findings of this study on other Arab countries. The fact remains that the political, economic, regulatory, and social factors of UAE and other GCC countries are better compared to other Arab countries and this might explain why those countries are fared better on e- government index compared to the rest of Arab countries [33]. Consequently, the factors examined here may or may not be equally influential if they are applied to other countries.

VIII. CONCLUSION AND IMPLICATIONS

The aim of this paper is to increase understanding of citizens perceptions of e-governance. This paper presented the findings from data analysis of the survey that was conducted in UAE to examine citizens satisfaction with three dimensions of e-governance in Arab countries. The three dimensions are: Openness, Collaborative Governance, and participation. The study investigated the demographic differences in terms of (gender, level of education, nationality, and type of employment) as social indicators by employing the means, reliability assessment, T-test and Scheffe method of multiple comparisons and the results show that there is significant differences in level of satisfaction towards the three dimensions of e-governance.

We propose that the equality of e-governance services may have to give way to customization of government website to meet the unique needs of different groups. Gender, age, education and nature of employment affect clients' perceptions of the e-governance services provided. Therefore, the design and delivery services of government website must address the issue of the varied nature of the clients and how best the front-office and back-office management staff can coordinate efforts for flexibly serve their needs.

The less favorable satisfaction of the respondents with three dimensions of e-governance suggests that either there is a lack of awareness among them or there is low trust in government website. The e-governance literature has emphasized that citizens who use ICTs will benefit from services and consequently be encouraged to access the information and knowledge about the political process and be prepared to express opinions in order to bring clarity to the decision-making process. Empirically, this research has shown less satisfaction with e-governance dimensions and this might be interpreted to mean that politicians in Arab countries are reluctant to create a web-enabled public engagement due to the fear of losing power and therefore the constitution of the country should explicitly includes items of public participation and the right to access and acquire data and information. This

imply that the citizens needs of participation in the political process to be explored within the context of power relations between the government and its citizens.

To conclude, there is need for government to understand the citizens attitudes and their willingness to adopt government website. This paper suggests that demographic characteristics are important determinants of understanding the citizens perceptions towards e-governance. In addition, the governments of Arab countries should articulate new vision to modernize and transform the way its conduct business with citizens and how they relate to their constituents. Laws and procedures should transparent and clearly understood by both the governed and the governors. Collaboration within government should viewed as an approach of for achieving better governance and reaching development goals [32].

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