Using smart applications in delivering government services in the UAE: Factors of adoption and satisfaction

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Abstract

This study addresses the public adoption and satisfaction factors of government e-services in the United Arab Emirates. A special emphasis is placed on the quality of digital platforms, mainly smart applications. This quantitative research is based on three distinct models: Technology Acceptance Model (TAM), E-Service Quality Model, and Web Trust Model (WTM). A survey questions was designed and distributed to a sample of 300 Emiratis using government E-services. The findings revealed that participants greatly appreciate and trust the electronic services provided via smart applications; they particularly appreciate the ease of use and the quality of the information posted. Respondents highlighted some of the factors that motivated their use, such as information disclosure strategy, and interactivity.

Introduction

The rapid developments related to the use of information and communication technologies have prompted many governments around the world to enhance their smart systems to provide services to their citizens in a more efficient manner. It should be noted in this context that the UAE is one of the first countries that sought to activate its smart services provided to all users, citizens, and residents, as it is ranked the second in the GCC countries and the Arab world, according to the government development index. Moreover, the UAE ranks 20th among the most advanced countries in the e-government development index in the Asian continent, and among the 50 most advanced countries in the e-participation index globally. Having said that, this paper addresses the factors that attract users in the UAE and their trust in smart applications as a form of e-government services.

The Concept Of E-government

The term e-government appeared through a vision presented by Al Gore, former US Vice President in 2000, where he aimed to link the citizen to various government services in an electronic way that contributes to reducing the cost-of-service provision, improving performance, and speeding up the implementation to achieve efficiency and effectiveness in providing government services to the public in all sectors and regions. E-government is defined as the use of communication and information technology by government organizations to provide various government services to organizations and individuals through technical means and tools based on integrated administrative, technological, and communication rules and systems. E-government services are divided into services from government to government (G2G), services from government to citizens (G2C), services from government to business organizations (G2B), services from government to civil society organizations (G2SC), and citizen-to-citizen (C2C) services (Almarabeh & Abu Ali, 2010).

Smart government (known also as m-Government) is defined as a part of e-government services that depend on the provision of government services through modern applications based on smartphones and tablets (Farshid & Ghyasi, 2004). The success of the e-government depends on the presence of several elements that are determined by the elements of information technology and the presence of an advanced technical structure in the country, the elements of the organizational and administrative aspects responsible for providing electronic services, the legislative elements that determine the legal and procedural aspects of service provision, and the societal elements associated with the society's adoption of modern technological applications (Ramo &adro, 2005). The importance of e-government is determined by the fact that it contributes to the delivery of government information and services through multiple technical channels, which helps in improving the service and its quick and easy access to citizens, which saves their time and effort, ensuring transparency, fairness, and credibility in service provision. It also contributes to breaking the temporal or geographical barriers that prevent the provision of services to the citizen in the appropriate place or time.

The annual report on the benefits of e-government initiatives in the USA (2014), summarizes the advantages of electronic government services as follows:

- Works to provide government services in an integrated manner through official platforms for both citizens and business organizations.
- Works on linking and coordinating within a single governmental body and between governmental bodies and each other.
• Enables the government to establish approved patterns for providing services, business, and data.
• Supports continuous communication and interaction with citizens without temporal or spatial limits.
• Supports transparency in government work and builds trust with the public.
• Being compatible with technical developments in the field of information and communication technology.
• Achieve efficiency at work.
• Ability to monitor the public's opinions and evaluation of its services, supported by customer service policies.

Online Government Communication And Factors Of Adoption:

Government communication aims to provide reliable, clear, and authentic information to the public about government policy, activities, and services, through direct and effective contact with the public (Bousmit, 2016). It guarantees openness to society through effective communication and interaction with the public to whom the information is transferred with accuracy and transparency; this facilitates its involvement in decision-making processes.

Kumar et al. (2007) developed a model that illustrates the top three factors leading to the public's adoption of the use of e-government services: the ease of use, the availability of the information posted, and the quality of services provided. The model pointed out that the adoption process is also affected by the existence of systems and laws that govern the process of providing government services and providing security and privacy in use, as well as the technical development in society.

Smith (2011) emphasized that there is a mutual relationship between several values that government organizations adopt and push the public to use their electronic services with confidence, as adopting the values of efficiency, integrity, transparency, and accountability helps to build trust among the public in services and make them trust them and adopt their use. Sheila & Kent (2009) explained that achieving dialogue through the website of any organization requires paying attention first to identifying the needs of the audience using the site, then supporting the site with interactive files and multimedia, in addition to paying attention to links and providing communication tools for those in charge of the site. And finally, the need to pay attention to encouraging the public to interact, conduct dialogue, and express its opinion and comment.

Alateyah, Crowder & Wills (2014) found Trust, the accuracy of the information, the variety of services provided, and ease of use are factors influencing public attitudes towards government services and motivating them to use them, while factors such as the unavailability of some services as expected, the lack of experience and confidence are the factors negatively affecting the public's adoption of the use of digital platforms.

Electronic And Smart Government In The United Arab Emirates:

The UAE government has invested heavily in e-services, which have enabled citizens and businesses to access services more quickly and conveniently. E-services are digital services provided by the government, such as online forms, payment systems, and other digital tools. These services are designed to make it easier for citizens to access government services without having to physically visit a government office or wait in line. This is especially beneficial for those who live in remote areas or who have limited mobility. The UAE government has invested heavily in e-services over the past few years, intending to make it easier for citizens to access government services. The UAE's e-government portal provides citizens with access to a range of services such as visa applications, passport renewals, and tax payments. It also provides information on a range of topics such as health care, education, and employment opportunities. The UAE's e-government portal also allows businesses to register their companies online and apply for licenses and permits quickly and easily. This makes it easier for businesses to operate in the country without having to go through lengthy paperwork processes or wait in long lines at government offices. In addition to providing convenient access to services, the UAE's e-government portal also helps reduce costs associated with providing these services. By streamlining processes such as visa applications and tax payments, the government can save money on staff costs and other expenses associated with providing these services manually. The UAE's investment in e-services is part of its commitment to becoming a leader in digital transformation. The country is investing heavily in technology infrastructure such as 5G networks and artificial intelligence (AI) systems that will help improve efficiency across all sectors of society.
Overall, the UAE's investment in e-services has made it easier for citizens and businesses alike to access essential services quickly and conveniently. This has helped boost economic growth by making it easier for businesses to operate within the country while also reducing costs associated with providing these services manually.

Al-Khoury 2012 highlighted four criteria adopted by the emirate's government during the consolidation of the smart strategy: transparency, participation, technology support and development, cost reduction for the citizen, and efficiency achievement.

**Literature Review**

Lately, it has become imperative for governments worldwide to enhance their capacity to strategically use emerging digital technologies and develop innovative digital public services to confront and overcome the pandemic (Lee, 2022). With the rapid development of digital technologies, digital government transformation (DGT) has been legitimized in response to the pandemic, contributing to innovative efficacy, but it also has created a set of challenges, dilemmas, paradoxes, and ambiguities. Hooda et al (2022) have conducted an empirical analysis using meta-analytic structural equation modeling (MASEM) methods on findings gathered from 90 prior studies on e-government. Results show that trust plays a central role in users' intention to use and use e-government systems.

Sharma et al (2021) identified the key challenges facing CSCs and determine their hierarchical relationships in the context of rural India. The findings revealed that "longer travel time and transaction cost", "low digital literacy", and "low awareness" of e-government services are among the key challenges CSCs face in rural India. The authors suggested several recommendations to all the stakeholders involved in the management of CSCs to improve the delivery of e-government services in rural India. In another research paper, the authors tried to determine the intervening role of process and government support in enhancing the social entrepreneur's economic well-being. The authors recommended focusing on the satisfaction of such intermediaries for sustainable inclusion into the digital mainstream (Eom, & Lee, 2022).

Afrizal and Wallang (2021) conducted a comprehensive review of the unified theory of acceptance and use of technology (UTAUT) to see the intention of the Indonesian community in using e-government. The findings showed that performance expectancy, effort expectancy, social influence, and facilitating conditions is an important factor appropriate for seeing the intention of the citizen in using e-government.

Moreover, several studies addressed the topic in the MENA region context; Almaiah and Nasereddin (2020) studied the effective factors that could play an important role in the decision of Jordanian citizens to adopt e-government services. The study employed the UTAUT model by introducing new constructs, namely, 'website quality', 'trust of the internet', and 'trust of government', to study the adoption of e-government services in the Jordan context. Based on the results, 'website quality', 'trust of internet', 'trust of government', 'performance expectancy', 'effort expectancy', and 'facilitating conditions' factors were shown to have a positive effect on behavioral intention to use e-government services. However, the influence of 'social influence' was found to be insignificant to the participants' behavioral intention to use.

Alsarraf et al (2022) have examined the process relating Kuwait's e-government service quality to trust in government; they proposed a theoretical model and particularly confirmed the mediating role of perceived effort in the link between e-government service quality and trust in government. The findings improve the understanding of the behavioral process linking satisfaction with citizens' trust in the government. Ayyash et al (2022) have examined the effect of Arab cultural dimensions on employees' adoption of KSA e-government services by adaptation of the cultural dimensions concept as theorized by the Hofstede cultural model and nepotism as well as face-to-face interactions as derived from the literature review. The results revealed that high power distance, low uncertainty avoidance, high collectivism, high masculinity, face-to-face interactions, and nepotism contributed positively to employees' adoption of e-government services in public sector organizations.

In the UAE, Al Sayegh et al (2022) have investigated factors that influence e-government adoption among public sector departments in the United Arab Emirates (UAE). The authors found that performance expectancy and facilitating conditions have positive effects on e-government adoption Obaid and Ahmed (2021) noted a direct impact on user satisfaction with e-government attributes (Information quality, service quality, and system quality). They proposed a model that can be used as
guidance for the development and implementation of e-government strategies for the UAE government. Hujran et al (2021) highlighted that the UAE is quite advanced regarding smart government, as most governmental entities scored “High” and above on the use of innovative and disruptive technologies in various domains. The smart government maturity model proved its efficacy and value in evaluating the UAE’s smart government initiative.

In the meantime, Zhao et al (2019) have developed and tested a new research model in the context of e-government adoption in the United Arab Emirates. The overall findings suggest that e-government adoption is influenced by the reciprocal interactions of personal, behavioral, and environmental factors. According to the authors, when formulating an e-government strategy, policymakers need to address in a holistic and integrative way the issue of the e-government environment and its alignment with citizens’ Internet use preferences and personal factors. Jasimuddin et al (2017) have emphasized the role of social influence, ease to use, and trust in technology as the important determinants of the intention of digital technology adoption in the UAE. Farouk (2013) has conducted a comprehensive analysis of forty accounts of ministries, federal agencies, councils, and local bodies in the UAE; findings revealed a multiplicity of contents published in terms of the goal, the information provided, the method of presenting the content and the nature of public participation; the study identified a set of guiding standards that govern the process of managing government organizations’ accounts on these sites.

Previous studies showed an increased demand for the use of electronic services in the public sphere, including in the United Arab Emirates. The focus was put on the content provided via e-government services as well as the behaviors of users. This study will address the topic from a specific angle: The uses of e-government smart applications in the UAE. (Alharmoodi & Lakulu 2020).

**Problem**

The study deals with the use of services provided through smart applications in the United Arab Emirates. The main question is formulated as follows: To what extent do users in the UAE trust smart applications as e-government services? The authors focus specifically on the level of acceptance, use, and satisfaction of e-government service users.

**Objectives**

- Measuring the acceptance level of smart applications as e-government services among users in the UAE.
- Assessing the awareness level of opportunities provided by smart applications as e-government services in the UAE.
- Determining the degree of trust in smart applications as e-government services in the UAE.

**Research Questions**

RQ1. What is the level of acceptance of smart applications as e-government services among users in the UAE?

RQ2. How do users in the UAE perceive the opportunities provided by smart applications as e-government services (efficiency, achievement, accuracy, privacy, compensation, and communication facilitator)?

RQ3. To what extent, do users in the UAE trust smart applications as e-government services?

**Theoretical Framework**

The researcher identifies the following three models as determinants of the methodological and applied aspects of the study:

**Technology Acceptance Model (Tam)**

TAM is a model that explains the factors influencing the public’s acceptance of the use of modern technological means, as the model identified these factors in the public’s awareness of the benefits accrued from its use of new technology, as well as the
extent of its awareness of the ease of using this technology in a way that saves its time and effort (Park, 2009).

**E-Service Quality Model (e-SERVQUAL model).**

This model is developed by Zeithaml, Parasuraman & Malhotra in 2002. The model shows the following factors as determinants of service quality:

- **Efficiency:** It is related to the customer’s ability to quickly access the service through the website and obtain the necessary information and services.
- **Fulfillment:** It is related to the quality with which the service is provided electronically.
- **Reliability:** It is related to the quality of the site from a technical and formal point of view.
- **Privacy:** It is related to the website maintaining the privacy and confidentiality of customer data.
- **Responsiveness:** It is related to the ability of the site and its employees to respond quickly to the customer's problems or inquiries.
- **Compensation:** It is related to the ability of those responsible for the site to compensate the customer for any material losses that may be incurred.
- **Contact:** It is linked to the ease of communication with the site and those in charge of it, through more than one means of communication (Zeithaml et al. 2002).

**Web Trust Model (WTM)**

WTM is a model that shows the stages of user confidence in the website, as the model shows that the quality of the information, the quality of the website's technical system, and the quality of the services provided lead to motivation towards dealing with and using the website. The model assumes that if it is satisfied with the use in terms of quality, time, accuracy, ease and safety, which leads to achieving the required benefits, then it trusts the site and deals with it again. The model also confirms the correlation between the user's confidence in the organization and his confidence in its website, which leads to his confidence in the services provided through the website (Segovia et al. 2009).

**Method**

The study belongs to descriptive research as defined by Halaris (2007). It employs a survey to gather information and analyze data related to factors of adoption, and satisfaction of smart applications used as e-government services in the UAE.

**Sample and sampling**

The sample includes citizens of the United Arab Emirates familiar with internet services. Due to the explorative aspect of this research, the authors chose to use a random quota sample. The following table shows the characteristics of the study sample, drawn from three emirates: Dubai, Sharjah, and Ajman.

Table 1. Sample characteristics
Table 1
Sample characteristics

<table>
<thead>
<tr>
<th>Category</th>
<th>number</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Males = 100</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>Females = 200</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>18 to 29 years = 100</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>30 to 44</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>45 years and above = 100</td>
<td></td>
</tr>
</tbody>
</table>

Data collection

A questionnaire was designed to answer the research questions based on three standards as follows:

Technology acceptance

Eight phrases were incorporated; the first batch (four expressions) was specific to measure the benefits achieved from use while the second batch aims to measure the public's perception of ease of use.

Perceived opportunities and qualities of smart government services: It includes (28) sentences, each of which consists of four words that represent one of the elements of quality: efficiency, achievement, accuracy, privacy, response, compensation, and communication.

Confidence/ trust in smart government services

It includes eight phrases to measure the extent of public confidence in these services.

Statistical coefficients and tests

The authors used means and standard deviation as well as the T-test, to compare the averages, and the F-test (One-way ANOVA) to identify the differences. The Pearson correlation coefficient was also used to measure the relationship between variables. The factor analysis was used to interpret the correlation coefficients between the expression, to reach the common factors that describe the relationship between variables and their interpretation. using the spss.23 statistical program.

Researchers conducted the survey after getting the approval of the ethical committee in the college. The questionnaire included informed consent, all participants read and approved it before filling out the form.

Findings

1. E-government services acceptance (RQ1)

To measure the audience acceptance of smart applications for e-government services, the authors explored tow variables:

- Realizing the benefits from the use;
- Realizing the ease of use.

Table (2) show the results:

Table 2. Realizing the benefits of the use of smart applications as e-government services
Table 2

<table>
<thead>
<tr>
<th>Realizing the benefits of the use of smart applications as e-government services</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart applications save time for the customer.</td>
<td>4.45</td>
</tr>
<tr>
<td>Smart applications contribute to the development of the well-being of life.</td>
<td>4.38</td>
</tr>
<tr>
<td>Smart applications are the basis of smart government.</td>
<td>4.24</td>
</tr>
<tr>
<td>I tend to deal with Smart applications rather than dealing in person at the government agency.</td>
<td>3.76</td>
</tr>
</tbody>
</table>

Realizing the ease of using smart applications as e-government services

| The continuous progress in developing the capabilities of managing e-services in organizations. | 4.34 |
| All government agencies and departments are eligible to use smart applications.          | 3.78 |
| The private data available through smart applications is tightly secured.               | 3.31 |
| Customers can easily use smart applications due to their simplicity and accuracy      | 3.04 |

With regard to the respondents' perception of the benefits obtained with smart applications, Table No. 1 indicates that users of smart government applications see that they save time and effort, as the arithmetic average of approval of this item rose to 4.45; they also believe that they contribute to achieving the well-being of life (means = 4.34). Participants consider the basis of smart government (means = 4.24) and their preference to deal with government services through these applications instead of direct dealing (means = 3.76).

Concerning the perception on the ease of use, the participants indicate that it is related to the people in charge who are working on simplifying the manipulation of smart applications to clients (means = 4.34); they also consider that all government institutions in the UAE are ready to use these applications (means = 3.78). As for their confidence in securing data, a great portion was reassured (means = 3.31).

To sum up, data indicate that the participants seemed convinced of the benefits of using smart government applications, while part of them still hesitant about the ability to secure personal data. This requires continuous effort by governmental organizations in enhancing the quality of smart applications in terms of handling.

2. **Government smart application quality (RQ2)**

To measure how the audience evaluate the quality of the e-government services, authors chose to explore the following variables:

1. Efficiency
2. Achievement
3. Accuracy
4. Privacy
5. Response
6. Compensation
7. Connection

Table (3) shows the following results:

Table (3) Government digital services quality
<table>
<thead>
<tr>
<th>Government digital services quality</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Efficiency</strong></td>
<td></td>
</tr>
<tr>
<td>1- The site loads at an appropriate speed.</td>
<td>3.85</td>
</tr>
<tr>
<td>2- Searching within the website or application is easy.</td>
<td>3.81</td>
</tr>
<tr>
<td>3- I reach the required service or information quickly.</td>
<td>3.92</td>
</tr>
<tr>
<td>4- The website or application is easy to use.</td>
<td>3.83</td>
</tr>
<tr>
<td><strong>Achievement</strong></td>
<td></td>
</tr>
<tr>
<td>5- It is available through smart applications</td>
<td>4.01</td>
</tr>
<tr>
<td>6- Smart applications provide services that meet my needs</td>
<td>3.98</td>
</tr>
<tr>
<td>7- Smart applications provide accurate information</td>
<td>3.51</td>
</tr>
<tr>
<td>8- Smart applications include understandable info and steps of use</td>
<td>3.81</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td></td>
</tr>
<tr>
<td>9- The design of smart applications is clear so that I can deal with it easily</td>
<td>3.94</td>
</tr>
<tr>
<td>10- Smart applications secure interactive tools</td>
<td>4.18</td>
</tr>
<tr>
<td>11- Smart applications provide diverse communication tool</td>
<td>4.12</td>
</tr>
<tr>
<td>12- Smart applications provide useful links</td>
<td>4.10</td>
</tr>
<tr>
<td><strong>Privacy</strong></td>
<td></td>
</tr>
<tr>
<td>13- The privacy policies are clear</td>
<td>3.74</td>
</tr>
<tr>
<td>14- I trust that entering my data will be safe</td>
<td>3.91</td>
</tr>
<tr>
<td>15- I pay the required fees securely.</td>
<td>4.06</td>
</tr>
<tr>
<td>16- The terms of use are clear</td>
<td>3.99</td>
</tr>
<tr>
<td><strong>Response</strong></td>
<td></td>
</tr>
<tr>
<td>17- It is possible to communicate with customer service</td>
<td>3.44</td>
</tr>
<tr>
<td>18- All my inquiries are answered quickly.</td>
<td>3.46</td>
</tr>
<tr>
<td>19- All my inquiries are answered in a timely manner.</td>
<td>3.69</td>
</tr>
<tr>
<td>20- All my inquiries are taken care of &amp; the response is useful</td>
<td>3.78</td>
</tr>
<tr>
<td><strong>Compensation</strong></td>
<td></td>
</tr>
<tr>
<td>21- It is interesting to communicate with customers via smart apps.</td>
<td>3.64</td>
</tr>
<tr>
<td>22- Customer service takes care of our problems</td>
<td>3.43</td>
</tr>
<tr>
<td>23- Compensatory measures are taken if error occurs</td>
<td>3.67</td>
</tr>
<tr>
<td>24- Complaints are dealt with quickly</td>
<td>4.15</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td></td>
</tr>
<tr>
<td>25- There are diverse tools for communicating via smart apps.</td>
<td>4.23</td>
</tr>
<tr>
<td>26- An e-mail is available for dealing with customers if needed</td>
<td>4.30</td>
</tr>
<tr>
<td>27- Contact information is available through telephone or fax</td>
<td>4.30</td>
</tr>
<tr>
<td>28- There are links to the organization's accounts on social networking sites</td>
<td>4.15</td>
</tr>
</tbody>
</table>

The data indicate that the quality of smart applications appears linked with efficiency, achievement, accuracy, privacy, response, compensation, and communication.

Efficiency: Findings show positive responses related to the quick access to information through smart applications.

Achievement: A positive perception was noted concerning the benefits achieved by using smart applications, mainly providing accurate information, clear and understandable procedures, and steps to follow.

Accuracy: A positive feedback was tracked in terms of design, interactivity, and the presence of useful links.
Privacy: Respondents appreciate the privacy policies, and security of customer data.

Response: Respondents value the quality of services provided, the communication flow, and responses to their inquiries.

Compensation: A positive trend toward the efficiency of examining customer complaints was noted; compensating users in a satisfactory manner for any errors that may occur was appreciated as well.

Communication: The flow of communication and interactivity was valued.

3-Trust in government smart applications (RQ3)

Table (4) Trust in government smart applications

<table>
<thead>
<tr>
<th>Trust in government smart applications</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart government platforms and applications provide good and useful services.</td>
<td>4.49</td>
</tr>
<tr>
<td>Smart government platforms and applications save customer's time</td>
<td>4.46</td>
</tr>
<tr>
<td>Smart government platforms and applications have the latest technologies of use, interaction, and communication.</td>
<td>4.12</td>
</tr>
<tr>
<td>Smart government platforms and applications are accurate and professional</td>
<td>4.12</td>
</tr>
<tr>
<td>Dealing with Smart government platforms and applications is safe.</td>
<td>4.10</td>
</tr>
<tr>
<td>Smart government platforms and applications are accurate and easy tools</td>
<td>3.96</td>
</tr>
<tr>
<td>I Recommend others to use Smart government platforms and applications</td>
<td>3.79</td>
</tr>
<tr>
<td>I use Smart government platforms and applications continuously</td>
<td>3.43</td>
</tr>
</tbody>
</table>

The data indicates that the benefits achieved such as saving time, accuracy of services, security and ease of use are among the factors that drive users to switch to smart applications. It has to be highlighted that among criteria that affect the participants’ confidence are those related to the quality of the design, the interactivity, and the privacy and security standards.

To measure the differences between groups, gender, and age in the use of smart applications, as well as their awareness of the quality of electronic services provided, and their confidence in them, the authors used the T-test to compare the means of two groups to compare the averages of males and females; the F-test was used for one-way ANOVA to identify the extent of differences between the means of the age groups. Findings can be summarized as follows:

- There are statistically significant differences between males and females in perceiving the ease of smart applications, according to the Technology Acceptance Model. Where the value of (T) was 5.625, which is a function at a significant level of 0.000, in favor of males compared to females in the study sample, where the arithmetic mean for males was 32.25, and for females 30.43.

- There are statistically significant differences between males and females in perceiving the quality of smart applications, according to the quality of electronic services model, where the value of (T) -4.434, which is a function at a significant level of 0.000, in favor of females compared to males, where the arithmetic mean came for females it is 111.82 and for males it is 105.16.

- There are statistically significant differences between males and females in the extent of trust in smart applications, according to the trust model in the Internet, where the value of (T) -5.053, which is a function at a significant level of 0.000, in favor of females compared to males, where the arithmetic mean came for females 33.17 and for males it is 31.76.

- There are statistically significant differences between each of the three age groups: (from 18 to less than 30), (from 30 to less than 45), and (over 45), in perceiving the usefulness and ease of smart applications, according to a model Technology acceptance. Where the value of (F) came to 19.276, which is a function at the level of significance of 0.000, in favor of the
Discussions And Conclusion

Findings revealed that participants accept using smart applications as e-government services. They value their ease of use, availability, efficiency, delivery, accuracy, privacy, responsiveness, compensation, and communication; they claim their trust particularly in terms of their accuracy, speed, and security, which motivates them to increase their use. Perceived qualities of smart applications lie in ease of access, clarity of information, interaction with customers, availability of communication, and multiplicity of services provided by Emirate government. These results are in line with what has been concluded by Halaris, Magoutas, Papadomichelaki, Gregoris (2007), who indicated in their study on assessing the quality of electronic services that the evaluation depends on the ease of obtaining the service via the Internet, the benefits it provides, and the extent of satisfaction achieved from it. Obeid and Ahmed (2021) also indicated that there is a direct impact on users’ satisfaction with e-government features such as the quality of information available and the service provided.

Moreover, smart applications seem to provide participants in this study with access to real-time data related to government services, programs, and policies, making the government more accountable and transparent. The mentioned factors seem to enhance participants’ engagement and offer to them opportunities to participate in government decision-making processes. In the same vein, Lee, Kim and Ahn, (2011) have emphasized the correlation between each of the quality of electronic services and trust in their use as factors influencing public adoption of these services.

In the meantime, the findings highlighted the important to maintain and update the application to ensure that it continues to meet the changing needs of users and the government. This involves fixing bugs, adding new features, and updating the application to comply with changing regulations and standards. Sharma et al. (2021a), in a different context (India), also suggested improving the delivery of e-government services to enhance the level of usage.

Limitations:

The study was limited to citizens of the United Arab Emirates, which represents a motive for future studies to identify the level of adoption by residents of the country for smart applications and their perception of the opportunities they provide, as well as the restrictions that users face in this regard.

Conclusion

Emirati citizens participating in this study seem to be aware of the benefits offered via smart applications to proceed with electronic government services, that they confirm to be using. As for the factors for adoption, they state the ease of use (from procedural point of view); participants also positively evaluate the quality of services provided through these applications, mainly in terms of the availability, achievement, accuracy, privacy, response, compensation, and communication. This determines that the smart applications that provide electronic government services in the UAE are able to attract customers, which predicts a development towards regular use.
The authors recommend the continuous development of smart platforms and applications for government services that contribute to the provision of basic information and customer assistance based on an effective method of communication and interaction.

References


