The Role of Social Media in Changing Individuals' Intentions and Behaviors Toward E-government Services

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Abstract

E-government is the idea of government utilization of information and communication technologies to provide citizens with the interaction and communication opportunities with government through utilizing various digital media platforms. Moreover, government social media can be recognized as an efficient governmental tool to create and maintain effective relations between the government and citizens by providing a channel for information sharing and improving the transparency of the government. This research paper aimed to investigate the role of social media in changing individuals' intentions and behaviors toward e-government services. A quantitative descriptive approach has been employed in this research paper. The descriptive method was represented by reviewing several previous studies regarding the study topic. While, the quantitative data reflected the collected data through the distribution of an online survey, the pre-designed online survey was distributed through social media sites including Facebook, WhatsApp, Twitter and other commonly used social media platforms. The study sample consisted of 120 randomly selected from Jordanian social media users' population. The results of this study indicated that there is a significant positive relationship between the role of social media in changing individuals' intentions and behaviours toward e-government services, in addition to the existing positive relations between individuals' intentions and behaviors to use e-government services and their actual use of these services.

Keywords: social media, intentions, behaviors, e-government, Jordan.

1. Introduction

One of the basic governmental priorities is to provide individuals with the best services. The main aim of government plans is to enhance ongoing communications with citizens, especially those who lived in sparsely populated and remote places (Ottoum & Suleiman, 2011). Therefore, governments seek to employ new technological developments and follow the fast improvement of information and communication technology (ICT) (M. Alomari et al., 2012), which led to the idea of utilising e-government services through employing ICT tools to improve public services (Giri & Shakya, 2019). Khalid et al. (2021) considered government websites as sites for distributing and accessing needed information by various users. Several factors could influence individuals' intentions and behaviors toward e-government services (Muttaqin & Susanto, 2019), for example, users improved trust in e-government services and the wide spread and knowledge regarding such services could develop the acceptance of e-government services. Moreover, social media engagement in individual's daily life has a direct impact on users' intentions and behaviors (Sitthipon et al., 2022).

According to the benefits and usefulness of e-government services, Jordanian government paid huge efforts to develop individuals trust in e-government services adoption (Ottoum & Suleiman, 2011). The main purpose behind employing e-government services is to improve individuals' engagement and enhance connections between the citizens and government (S. Sharma, Kar, et al., 2022).

Social media is recognised as an efficient tool for developing customer satisfaction and engagement through enhancing information sharing, which as a result influence individual intentions, behaviors and decision-making (Grover et al., 2022). Social media is defined as "a group of Internet-based applications built on the ideological and technological foundations of Web 2.0 that allow for the creation and exchange of User Generated Content" (Kaplan & Haenlein, 2010). This connection platform includes various tools such as Facebook, Twitter, YouTube, LinkedIn, etc. the idea of employing social media to serve the governmental plans started to be noticed since 2011, and more specifically through the Arab spring, and it was considered as a reasonable tool that connects citizens with governments through enabling them expressing their opinions, and providing governments with citizens feedbacks (Zavattaro, & Sementelli, 2014). The feasible characteristics of social media and their popularity enables various individuals to have more in-depth and detailed information which make them more aware regarding governmental practices (Mergel, 2013a; Mossberger & Crawford, 2013). Hence, this research

paper aims to investigate the role of social media in changing individuals' intentions and behaviors toward e-government services.

1.1 Research Problem & Questions:

Although the importance of e-government services, but there is a noticeable shortage in the real usage of these services. This could be explained due to the lack of experience of the Jordanian government (Rehman et al., 2012). AL-Rababah & Abu-Shanab (2010) mentioned that Jordanian e-government project did not reach to the desired level of awareness; as only 31.2% of Jordanian citizens utilised electronic government services.

Furthermore, as clarified earlier, several previous researches have investigated various factors that could influence individual intentions and behaviors toward e-government services, but there is a clear shortage that investigated this norm in Jordan specifically, which in turn reflects the need for more research to have more detailed information regarding this topic in Jordan, and to examine more recent topics in this field such as the idea of using social media on e-government services acceptance.

Therefore, the problem of this study represents through investigating the role of social media in changing individuals' intentions and behaviors toward e-government services through answering the following questions which are:

1. What is the role of social media in changing individuals' intentions toward e-government services?
2. What is the role of social media in changing individuals' behaviors toward e-government services?
3. To what extent do the individual's usage intention and behaviors affect the actual usage of e-government services?

1.2 Research Hypotheses

H1: Social media has a significant positive role in changing individuals' intentions toward e-government services.
H2: Social media has a significant positive role in changing individuals' behaviors toward e-government services.
H3: individual's usage intention and behaviors have a significant impact on their actual usage of e-government services.

2. Literature Review

In recent years, social media has recognised as one of the most commonly utilized communication platforms that can be accessed easily by anyone through the existence of an internet connection, and it is also considered as the most favorable connection channel for a huge number of individuals. Such a shift encouraged governments to utilize this channel to get the desired benefits of social media. This section came to review the definition of social media, the relation between e-government and social media, and investigate the status of e-government in Jordan specifically as follows:

2.1 Social Media Definition

Nowadays, the social media concept is recognized as one of the interesting topics that could attract several researchers, consultants, and experts that can add beneficiaries for their users (Kaplan & Haenlein, 2010). It changed the idea of using the web, as social media altered the domain of self-to-group content generation according to the level of participation and cooperation among developers and users.

The importance of social media platforms has been confirmed through their characteristics, which include collaboration, participation, empowerment, etc. (Magro, 2012). It enhances content sharing and individual participation.

Social media was classified into internal and external based technology (Snead, 2013). It aids in sharing participants ideas and thoughts that help promote democracy. The social media time pattern helps users to share their constructed and publicized content to be seen by other concerned individuals at the same publishing time, which helps others to participate with others with their comments and thoughts.

Social media is also defined a set of actions and events that encompass content creation, social interaction and incorporation of ICT activities. According to Mansoor (2021) the active users of social media worldwide in 2020 reached to 3.8 billion. Studies indicated that effective and strategic use of social media can enhance problem solving and decision-making efficiency at the societal level (Linders, 2012).

Furthermore, government social media can be defined as the profile of social media that generated and operated through a governmental institute (Tang, 2021). Government social media has been recognized as an efficient governmental tool to create and maintain efficient relations between the government and citizens by providing a channel for information sharing and improving the transparency of the government.

In summary, social media has altered the role of individuals from being a content reader to become a content creator and a transformer/ publisher, and it enable two-way information flow which make it as an essential getting feedback method.

2.2 E-government and social media

The governmental implementation of social media is a novel method to get in touch with citizens in an informal method. These contact methods could support the traditional communication channels. Furthermore, e-government utilizes the one-direction communication between the public and governments (Mossberger, Wu & Crawford, 2013). The budget of public organizations cannot afford the continuous developments in the ever-evolving technology, and the improved expectation of citizens, led to the essential need to find more innovative approaches to have better delivery of the services to citizens.

Therefore, the existence of social media and different connection methods could help the government to find information dissemination channels with the public and encourage them to help the public participating in political discourse activities (Linders, 2012). Moreover, several factors influenced governments to employ social media to communicate with the public, including the common use of social media by citizens, especially for getting governmental news and information, in addition to the government's desire to find the most suitable and efficient media to cover the environment and departmental needs (Mergel, 2013b).

E-government is the idea of government utilization of information and communication technologies to provide citizens with the interaction and communication opportunities with government through utilizing various digital media platforms (Almarabeh & AbuAli, 2010). So, social media is recognised as a significant tool for performing governmental plans and business. The main aim of utilizing social media is to make governments more interactive and enable them to reach citizens comfortably anytime and anywhere. Therefore, it is essential for governments to utilize social media to have a higher communication and trust with individuals, mainly if it used to offer an active channel to share information to listen, monitor and respond to the citizens demands.

2.3 E-government in Jordan

Jordan is recognised as a Middle East country with a strong history of ICT initiatives and good governance commitment (Ciborra & Navarra, 2005: p.142). Jordanian e-government is realised as a national plan that is introduced by his Majesty King Abdullah II. The main goal of E-government initiative is to develop the delivered services and the performance of government through enhancing their services accuracy, transparency, efficiency, accountability, time and cost (Abu-Faraj et al., 2023). Jordanian government also paid huge efforts to develop e-government services, although it is recognised as it is in their initial stages (Alomari, Sandhu, & Woods, 2010).

The REACH initiative (1999-2005) is realised as the initial interest in E-government development in Jordan, which mainly reflected the real situation in Jordan and the desired goals to be accomplished in Jordan according to the Jordanian ICT sector in this duration. The year of 2006 is realised as the first presence of Jordan online, and more specifically the first official launch of e-government in Jordan. This website was designed to be as "a one-stop-shop portal" for all services delivered by governments which was divided into three main types which are: government to business (G2B), government to citizen (G2C), and government to government (G2G) (Abu-Shanab & Abu Baker, 2011).

E-government services should be delivered to citizens smoothly, and at the same time, citizens should feel confident and have the ability to utilize these services (MoICT, 2013).

The Economic Growth Plan (EGP) of the Jordanian government have declared in 2017 that the main purpose behind automating its procedures is to reach e-government by 2020. Moreover, more than 100 services have been widely used by citizens and businesses in 2018, while this number is expected to reach 131 in 2019 and 293 in 2020 (Ghazal, 2018). According to the UN e-government survey (2018), Jordanian e-government services ranked 8th regionally and 98th globally.

The implementation of e-government in Jordan can be developed by enhancing citizens engagement and participation in local economic improvement plans, enhancing the accessibility of citizens to the governmental services, reflecting more empowerment of citizens and less" governmental control over public data", in addition to integrating governmental resources. E-inclusion, which can be accomplished through having the efficient engagement of all individuals in e-government plans, is considered significant to develop the social and economic empowerment through the use of ICT by different citizens types, especially those who are clearly included by the UN, including blind, young, old, poor, immigrants, women and illiterate individuals (UN, 2012). The status of Jordan is recognized as a late-improved stage as the Jordanian government seeks to offer more information sources through the National Government Portal (www.jordan. gov.jo), the National Mobile Portal, the National Contact Center (NCC), and National SMS Gateway (Jordan times, 2017).

On the other hand, several challenges have been appeared while using e-government services in Jordan (Al-Hujran et al., 2013). Moreover, Al-Jaghoub et al. (2010) mentioned that a high portion of Jordanian citizens never employed e-government services.

Therefore, recognizing the factors that could affect the real implementation of e-government services among Jordanian citizens is realised as a critical policy concern. This could help policymakers in having better insights regarding designing e-government services. As a result, this could help in enhancing the level of citizen's utilization of such services, additionally, the results of this study could be attractive for governmental agencies to develop e-services either for current or future users.

3. Methodology

A quantitative descriptive approach has been employed in this research paper. The descriptive method represented through reviewing several previous literatures regarding the study topic.

While, the quantitative data reflected the collected data through distributing an online survey, which recognised as a significant tool to collect data from a wide sample in an effective, accurate and affordable manner (Zikmund et al., 2010; Babin & Zikmund, 2015). The study tool consisted of two main sections, where the first section includes the respondent's demographic data, which includes gender, age, educational level, and professional situation. while the other section represents the main study questions. Five Likert Scale has been employed for measuring and answering the survey questions. The online pre-designed survey was distributed through using social media sites including Facebook, WhatsApp, Twitter and other commonly used social media platforms. The collected data through this survey were analysed through SPSS. The study population included all social media users in Jordan whose age ranged from 20to more than 50 years, while the study sample consisted from (120) randomly selected sample from the study population.

Respondents were asked to read the questionnaire instructions and research purpose carefully before answering the questionnaire. The first questionnaire section included respondents' demographic data, such as gender, age, education and professional situation (see Table (1) below). It was found that the majority of the study sample members were female, and their percentage was (75.8%) and the male percentage was (24.2%), and in the age variable, the majority of the sample members were between 20–29 years old, and their percentage was (50%), and the age group over 50 years was the least frequent group, and it was their percentage (7.5%) and the majority of the sample members were students, with a percentage of 38.3%.

Table (1): Respondents Demographic Profile

Variable		Frequency	Present
Gender	Male	29	24.2
	Female	91	75.8
Age	20-29	60	50.0
	30-39	32	26.7
	40-49	19	15.8
	more than 50	9	7.5
Education	college graduates	87	72.5
	postgraduate degrees	16	13.3
	Tawjihi	17	14.2
Work	Unemployed	10	8.3
	Student	46	38.3
	Working student	18	15.0
	Employed	12	10.0
	Retired	34	28.3
Total		120	100

4. Data Analysis & Discussion

4.1 Descriptive analysis summary

- ***Descriptive analyses for role of social media in changing individuals' intentions toward e-government services.***

Means and standard deviations were calculated, and table (2) below represents the results:

Table (2): Mean and Standard Deviation for Social Responsibility

no	Statement	Mean	Stander deviation	important	Rate
3	Social media self-efficacy could positively influence my intention to adopt e-government services.	4.5	.534	high	1
1	I have the intention to follow and review all new feeds and adds on social media platforms regarding e-government services.	4.25	.939	high	2
2	The social media influence factors could affect my intentions toward using e-government.	4.17	.895	high	3
4	Knowledge sharing through social media platforms regarding e-government services could improve my intention to use them.	4.06	.895	high	4
5	I intend to pay more attention to getting more information regarding the usefulness of e-government services usefulness.	4.05	.770	high	5
	Over all mean	4.21	0.515	high	

Table (2) above shows the mean and the standard deviation for "the role of social media in changing individuals' intentions toward e-government services", that the values of the arithmetic averages varied (4.05-4.5), as paragraph (3) of it states that "Social media self-efficacy could positively influence my intention to adopt e-government services." represents the higher average value (4.5) and a standard deviation (.534), while the paragraph (5), which states "I intend to pay more attention to getting more information regarding the usefulness of e-government services," represents the lowest mean value (4.05) and standard deviation (.77) Moreover, the overall mean (4.138) with standard deviation (.515) was of" high " relative importance.

- ***Descriptive analyses for the role of social media in changing individuals' behaviors toward e-government services***

Means and standard deviations were calculated, and table (3) below represents the results:

Table (3): Mean and Standard deviation for role of social media in changing individuals' behaviors toward e-government services

no	Part	mean	Stander deviation	important	Rate
5	I believe that social media platforms could enable the government to communicate with individuals, which in turn will influence their behaviors toward using e-government services.	4.41	.705	high	1
3	I behave more confidently when using e-government services to accomplish my governmental transactions.	4.19	.791	high	2
2	I will recommend others to use e-government services through using social media platforms.	4.17	.774	high	3
6	The perceived awareness that generated through social media could positively influence my behavior toward using e-government services.	4.15	.733		4
4	I believe that I did right when using e-government services, according to what it is published on social media regarding e-government advantages and usefulness.	4.01	.798	high	5
1	According to what it is published about e-government services on social media, I will use these services on a regular basis.	3.74	.939	high	6
	Overall mean	4.11	.533	high	

Notice from table (3), which represents the mean and the standard deviation role of social media in changing individuals' behaviors toward e-government services, that the values of the arithmetic averages varied (3.74-4.41), and paragraph (5) of it states, "I believe that social media platforms could enable the government to communicate with individuals, which in turn will influence their behaviors toward using e-government services. "With the highest average value (4.41) and a standard deviation (0.705), but paragraph (1) that states, "According to what is published about e-government services on social media, I will use these services on a regular basis." is the lowest mean value (3.74) and standard deviation (.936), while the overall mean (4.11) with a standard deviation (0.533) represented a high moderate relative importance.

- ***Descriptive analyses for the effect of individual's usage intention and behaviors on the actual usage of e-government services***

Means and standard deviations were calculated, and table (4) below represents the results:

Table (4): Mean and Standard deviation for the effect of individual's usage intention and behaviors on the actual usage of e-government services

No	Part	mean	Stander deviation	important	Rate
2	E-government services trust and the users' intentions for using services enhance e-government services real usage.	4.52	.607	high	1
1	I often want to use all new e-government services.	4.51	.660	high	2
3	I have a permanent intention to always be a user of e-government services.	4.08	.835	high	3
5	I feel positive while using e-government services.	3.87	.930	high	4
4	I have a real intention to encourage my family and friends to use e-government services.	3.77	1.03	high	5
	Overall mean	4.15	.561	high	

Table (4) above represents the mean and the standard deviation for "The effect of individuals' usage intention and behaviors on the actual usage of e-government services", that the values of the arithmetic averages varied (-3.77) 4.52, as paragraph (2) of it which states that "E-government services trust and the users' intentions for using services enhance e-government services real usage "has the higher average value which reached (4.52) and a standard deviation (0.607), while paragraph (4) which states "I have a real intention to encourage my family and friends to use e-government services." own the lowest mean value (3.77) and standard deviation (1.03), while the overall mean (4.11) with standard deviation (0.533) was of "high" moderate relative importance.

- **The First Main Hypothesis**

The first main hypothesis of the study is: social media has a significant positive role in changing individuals' intentions toward e-government services, to test the first main hypothesis, simple linear regression analysis was performed as clarified in table (5) below:

Table (5): Linear Regression analysis for first hypothesis.

"t" value	"t" sig	B	Stander error	R	R²	"F" value	"F" sig
3.742	0.000	0.355	0.95	.326	0.106	14.005	0.000

Table (5) shows the presence of a statistically significant effect at the level of significance ($\alpha<0.05$) for the role of social media in changing individuals' intentions towards electronic government services, where the "t" value reached (3.742) with statistical significance (0.000). (R) reached a value of (0.326), which indicates the existence of a correlation coefficient between the role of social media in changing individuals' intentions toward using e-government services, and (R^2), which represents the coefficient of determination that explains the variance occurring in changing individuals' intentions toward e-laboratory services, explained by (10.6%) through social media and the rest due to other variables not mentioned in the model. The value reached (0.106), and the F-value reached (14.005) with a p-value of (0.000). This confirms the significance of the regression.

From all above, it can be noticed that hypothesis one was accepted as social media has a significant positive role in changing individuals' behaviours toward e-government services.

- **The Second Main Hypothesis**

The second main hypothesis of the study is: social media has a significant positive role in changing individuals' behaviors toward e-government services. To test the second main hypothesis, simple linear regression analysis was performed as clarified in table (6) below:

Table (6): Linear Regression analysis for second hypothesis

"t" value	"t" sig	B	Stander error	R	R²	"F" value	"F" sig
6.533	0.000	.543	.483	0.515	0.266	42.684	0.000

Table (6) shows the presence of a statistically significant effect at the level of significance ($\alpha<0.05$) for social media's role in changing individuals' behaviours toward e-government services, where the "t" value reached (6.533) with statistical significance (0.000). (R) reached a value of (0.515), which indicates the existence of a correlation coefficient between the role of social media in changing individuals' behaviours toward e-government services, and (R^2), which represents the coefficient of determination that explains the variance occurring in changing individuals' behaviours toward e-laboratory services, explained by (26.6%) through social media and the rest due to other variables not mentioned in the model. The value reached (0.266) , and the F-value reached (42.684) with a p-value of (0.000). This confirms the significance of the regression.

From there, it can be said that hypothesis two was accepted as "Social media has a significant positive role in changing individuals' behaviours' toward e-government services".

- **The Third Main Hypothesis**

The third main hypothesis of the study is: individuals usage intention and behaviors have a significant impact on their actual usage of e-government services, and for the purposes of testing the third main hypothesis, simple linear regression analysis was performed as clarified in table (7) below:

Table (7): Results of Testing the Impact main hypothesis

Model Summery		ANOVA		Coefficients				
R	R^2	F	Sig F*	Variable	B	standard error	T	Sig T*
.523	.273	21.984	.000	Intentions	.108	.098	1.099	.040
				Behaviors	.492	.095	5.186	.000

*The effect is statistically significant at the level ($\alpha \leq 0.05$)

Table No. (7) above shows that the influence of individuals' independent variable intention and behaviors to use e-government services has a significant impact on their actual use of these services, as the calculated F value reached (21.98) and the significance level (sig = 0.000) was less than 0.05. The correlation coefficient (R = 0.523) shows that using intention and behaviors have a significant impact on their actual use of e-government services. The coefficient of determination ($R^2 = 0.273$) shows that the variance in use of intentions and behaviors can represent (27.3%) of the variance in (use of e-government services).

The values of the regression coefficients for the variable's sub-dimensions (intentions, behaviors) are displayed in table (10). The table makes it evident that the table shows that the value of B for the Intentions dimension, it was (0.108) and the calculated T value was (1.099) at a significant level (0.000). It is less than 0.05, meaning that at the significance level ($\alpha < 0.05$) there is a significant positive effect. The table shows that the dimension of behaviors its value of B and T value was (0.492) and (5.186) at a significance level of (0.000), i.e. less than 0.05, which indicates the presence of a significant positive effect at ($\alpha < 0.05$).

Therefore, hypothesis number three that stated "individual's usage intention and behaviors have a significant impact on their actual usage of e-government services" was accepted.

5. Conclusions & Recommendations

The continuous new technological developments have a direct and noticeable impact on how individuals perform their tasks, in addition to altering the followed governmental procedures to communicate and perform their functions. Nowadays, social media is recognised as one of the best communication platforms that can be accessed easily by anyone through the existence of an internet connection, and it is also considered the most favorable connection channel for a huge number of individuals. Such a shift encouraged governments to utilize this channel to get the desired benefits of social media. This study contributes to the existing literature by highlighting the role of social media in changing individuals' intentions and behaviors toward e-government services, especially in Jordan. Theoretical results showed that the main aim of utilizing social media is to make governments more interactive and enable them to reach citizens comfortably anytime and anywhere. More specifically, in Jordan, the main goal of E-government initiative is to develop the delivered services and the performance of the government by enhancing their services' accuracy, transparency, efficiency, accountability, time and cost.

While, analytical results indicated that social media self-efficacy could positively influence individuals' intentions to adopt e-government services, It is also clarified that E-government services trust and the users' intentions for using services enhance e-government services real usage. The results of this study also revealed a positive, significant correlation between the role of social media in changing individuals' intentions toward using e-government services. In addition, the results clarified the positive relation between the role of social media in changing individuals' behaviours toward e-government services. Moreover, results showed that individuals intentions and behaviors to use e-government services have a significant impact on their actual use of these services. This study recommends paying more attention to governmental efforts to activate and promote social media utilization to develop their connection and getting citizens feedback on their practices and plans.

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