

Using Social Media To Improve Behavioural Intention To Use E-Government: An Extension Of The Unified Model Of Electronic Government Adoption

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Abstract

Advancement of technologies made government systems more inclusive and participatory with their citizens through e-government. The major purpose of this paper is to understand how 'behavioural intention to use e-government is enhanced by improving transparency with the help of using social media. This paper integrates empirically tested relationships of variables and develops a conceptual model which could be useful to improve the efficiency of the e-government system. Usage of social media in the e-government platform will indirectly play a moderating role in between perceived risk and attitude which lead behavioural intention to use e-government. This study is significant for two reasons. First, it builds a conceptual model to improve the adoption rate of e-government with the help of social media and second, it could be used as an add-on to the Unified Model of Electronic Government Adoption (UMEGA). Theoretical and practical implications are discussed.

Keywords – e-government, Social media, UMEGA, Trust, Conceptual Model, Behavioural Intention.

Introduction

The advancement and prevalence of digital technologies demand the need for adopting e-services in every sector, including the government system. The digital transformation is reshaping the way institutions operate, enabling seamless communication, service delivery, and efficiency at unprecedented levels. The penetration of the worldwide internet has made e-services more effective, breaking down geographical barriers and allowing instant access to information and services. More than 4.5 billion people were using the internet at the start of 2020 (Chaffey, 2020), demonstrating the expansive reach of digital platforms.

E-governance, in particular, is changing the structure and system of the public sector around the world. It has made government systems more inclusive and participatory, allowing citizens to interact with their governments more easily and frequently. E-government is defined as "government's use of web-based technologies and applications, or e-services, that enhance the access and delivery of governmental services and information to the government's citizens, residents, business, governmental, and other relevant entities" (Solvak et al., 2019, pp. 39). This evolution has led to greater transparency, accountability, and efficiency in government operations. Most countries have already adopted digital technologies for their governance systems, with the adoption rate being exceptionally high. However, even with the broad reach of e-government, it has yet to achieve its full potential. Despite the progress, once adoption occurs, the growth in usage depth and duration remains limited (Solvak et al., 2019), indicating that there is still much work to be done in optimizing the effectiveness of digital governance. One of the technologies being increasingly adopted for e-services is social media applications. Social media platforms, which have seen remarkable growth in user numbers, provide a unique channel for governments to

engage with citizens, share information, and receive feedback. Reports show the massive growth of social media penetration in the recent past. By 2020, 3.8 billion people were active on social media, and trends suggest that more than half of the world's total population will soon be social media users (Chaffey, 2020). The sheer scale of this number reveals the widespread popularity of social media among the public, and governments can leverage this trend to strengthen their governance systems. Social media's interactive nature offers a powerful tool for fostering citizen engagement, enabling more direct and immediate communication between governments and their citizens.

This study is to conceptualize a model which shows how the usage of social media in e-governance leads to behavioural intention to use e-government by adopting the UMEGA (Unified Model e-government Adoption) developed by Dwivedi et al. (2018). Understanding how social media can facilitate the adoption of e-government services can help policymakers design more effective strategies to increase citizen participation and enhance the overall efficiency of e-government initiatives.

Unified Model E-Government Adoption

UMEGA has been developed exclusively for e-government-specific context. The researchers developed the model by adopting technology acceptance models and the same is depicted in Figure 1. They argue that the constructs from the original technology adoption models were found to be inappropriate for the e-government context.

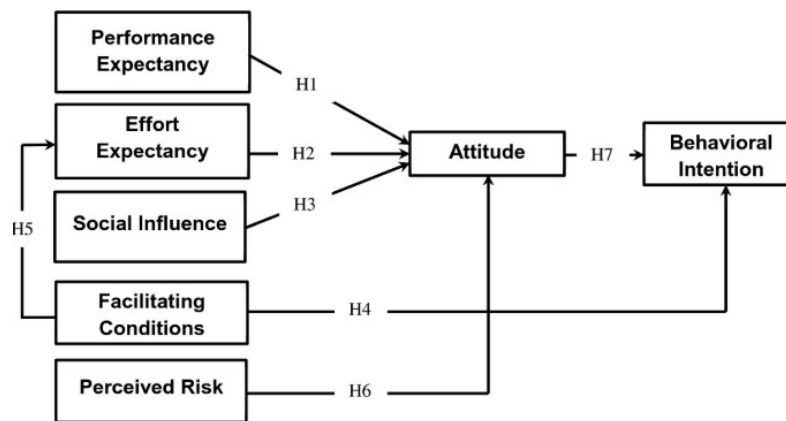


Figure 1 :UMEGA (Developed by Dwivedi et al. (2017)).

In their tested model, they found the mediating role of attitude between perceived risk and behavioural intention. Perceived risk has a significant negative impact on attitude and attitude has a significant positive impact on behavioural intention. They considered perceived risk as an important factor, especially for the non-adopters of any e-government system. The relationship between attitude and behavioural intention has been discovered in many of the technology acceptance models. UMEGA has reexamined these relationships in the e-government context and confirmed its strong significant effect and its importance in the e-government adoption model. The authors of UMEGA postulated that behavioural beliefs have an underlying influence on an individual's attitude toward performing behaviour.

Social media usage and transparency

Using social media by the government provide information dissemination, communication and participation channels whereby citizens can deliver public services easily. This communication made government as well as citizens make informed decisions and closer in the sense that they are accessible via convenient devices such as smartphones (Song & Lee, 2016). Song and Lee (2016) found the positive impact of using social media on developing trust through creating transparency. Numerous nations have adopted information and communication technologies to enhance government transparency, recognizing that transparency and the right to access government information are crucial elements of a thriving democracy (Bertot et al., 2012). Social media are very popular and it is very familiar to most people in this digital age. The many-to-many interaction ability of social media and its usage in the governance system leads to transparency of the system where it works. It has transformed how people interact with one another and with the government (Bertot et al., 2012). According to consumer psychology, shorter and less detailed contents and messages will be more effective than detailed information given by websites (Porumbescu, 2016). Bertot et al. (2012) listed and examined the prominent types

of social media in terms of transparency in the context of the US, which are blogs, wikis, social networking and media-sharing, microblogging, and mashups. They found that the usage of social media can provide a substantial foundation for the development of transparent and open government.

Social media in government is a platform for interaction between government and citizens. Specifically, and in line with previous models the model posits the following proposition:

P1: Usage of social media will be positively related to transparency in the government system.

Transparency and trust in government

Trust has always been a significant component in impacting the behaviour of the consumers and has been demonstrated to be of greater importance in uncertain situations like online contexts. Access and usage of e-services may involve transaction in which financial and personal information is submitted via the Internet. Fraudulence in online is a severe concern that creates anxiety for users. Due to this reason, lack of trust is one of the most challenging impediments to people engaging in e-services. Building online trust is a challenge for all e-service providers. Trust is also important in e-government for the effective adoption and use of electronic public services (Papadopoulou, Nikolaidou & Martakos, 2010).

Transparency is commonly understood as the free flow of information, and when applied to government, it embodies the concept of open government (Park & Blenkinsopp, 2011). According to the Asian Development Bank's widely referenced definition from 1995, transparency entails 'making information accessible to the general public and providing clear insights into government rules, regulations, and decisions.' (Park & Blenkinsopp, 2011). Ball (2009) suggests that transparency is gradually encompassing discussions on accountability within the realm of good governance.

Transparency is generally defined as the open flow of information and governmental transparency equates to open government (Park & Blenkinsopp, 2011). The definition of transparency by the Asian Development Bank (1995) is 'the availability of information to the general public and clarity about government rules, regulations and decisions'. (Park & Blenkinsopp, 2011). Ball (2009) suggests that transparency is starting to subsume accountability in public discourse about good governance. (Park & Blenkinsopp, 2011). Park and Blenkinsopp (2011) and Kang and Hustvedt (2014) empirically found that consumer perception of transparency was a strong factor that positively influenced trust.

Increased transparency will be beneficial to all stakeholders. Transparency makes the trustee's interests absolutely clear and the trustor able to check the associated details and it makes the trustor more confident in his trust judgments (Hara, 2012). The definition of transparency can encompass factors such as the comprehensiveness, clarity, and inferability of information, but it basically begins with "the availability of information about an actor that allows the other actors to monitor the workings or performance of the first actor" (Song, C., & Lee, J. 2016). Transparency and openness of the public sector entities can promote citizens' trust in governments (Bonson et al., 2012). Bonson et al. (2012) highlighted the potential contribution of Internet technology to enhance the transparency and openness of public sector entities. This transparency and openness are considered as positive values to increase citizen's trust in governments.

The model argues that citizens' use of social media in government shapes their perceptions of transparency in government, which, in turn, affects their trust in government. The study argues that citizens' perceptions of government transparency mediate the link between their use of social media in government and their trust in government. (Song & Lee, 2016).

Therefore, the following proposition is posited:

P2: *Transparency* will be positively related to *Trust* in the e-government system.

Role of trust in the e-governance adoption model

Benamati et al. (2010) defined trust as the "willingness of a party to be vulnerable to or depend on the actions of another party in situations of risk". (Mpiganjira, 2015, pp.623). Trust is a highly complex, multi-dimensional and context-specific topic studied in diverse disciplines. In all disciplines, a common and important characteristic found in this phenomenon is its involvement of the relationship between two parties, the trust and the trustor (Papadopoulou, Nikolaidou, & Martakos, 2010).

In the context of e-government, Song and Lee (2016) found out the mediating role of citizens' perceptions of transparency between the use of social media in government and trust in the government. Many prior studies have discovered that trust reduces the perceived risk of an online transaction. (Grazioli, et al., 2000) empirically tested and found that trust moderates the relationship between risk and attitude.

The researcher has done an extensive literature review in the area of e-government to understand the role of social media and trust in the e-government system. Articles deal with these keywords (e-government, Social media and Trust) reviewed and presented in Table-1 and Table-2 to understand the overview of the status of the research in this context. The major variables or keywords of the study are reported in the second column which will be useful for the researchers to understand the extension of studies conducted and the gaps of the research in this field. In Table-2, the frequency of articles has been resulting from the search of the SCOPUS database.

Table-1. Articles that studied trust, social media and E-Government.

Authors	Variables/Keywords of the study
Alryalat et al. (2017)	E-Government; Electronic Government; Engagement; Framework; Participation; Social Media
Arshad and Khurram (2020)	Citizen participation; e-government; Government social media; Government trust; Perceived responsiveness; Perceived transparency.
Bonsón et al. (2012)	Corporate dialogue; Local e-government; Online transparency; Social media; Web 2.0
Chatfield et al. (2015)	Citizen-centric e-governance; Government surveillance disclosure; Citizens' trust; Government's trust; Twitter;
Evans et al. (2018)	Electronic records management; Government–citizen trust relationship; Local government
Lee et al. (2019)	Collaborative governance; Digital government; E-government adoption model; Health risk communication; Information-communication technology; Public health; Social media; Sustainable development
Mearns et al. (2015)	E-government; ICTs; Social media; Street-level bureaucrats; Youth sector
Orzech et al. (2018)	Civil servants; Digital literacy; E-government; Online privacy; Public sector; Trust
Park and Lee (2018)	Adoption of E-Government: Trust in govt information; Performance expectancy; Effort expectancy; Application acceptance; Social media competence; Facilitating conditions; Perceived risk
Porumbescu (2017)	E-government; international public administration/governance; public administration; transparency; Perceptions of Govt. trustworthiness; Public sector social media.
Porumbescu (2016)	Citizen satisfaction; E-government; ICT; Public management; Public sector social media; Trust in government; Quality of life
Reddick and Anthopoulos (2014)	Channel choice; E-government; Social media; Digital divide; User satisfaction; Nature of interaction, Security and Privacy (Trust)
Saxby (2015)	Biometrics; Citizenship; Digital citizen; E-governance; Globalisation; Identity assurance; Internet of things; Rights; Surveillance; Surveillance
Song and Lee (2016)	Perceived transparency; social media in government; trust in government

Table-2. Review on articles of Social media and E Government/E Governance.

Authors*	No. of articles	Keywords**
Bertot et al., (2010); Linders (2012); Chun et al. (2012); Bertot et al., (2012) Jaeger (2010); Mossberger et al. (2013)	123	Social media AND E-government/E-governance

Porumbescu (2016); Reddick and Anthopoulos (2014); Mearns et al. (2015); Orzech (2018)	14	Social media AND Trust AND E-government/E-governance
Bonsón et al. (2012); Song and Lee (2016); Porumbescu (2017); Chatfield et al. (2015); Alryalat et al. (2017)	8	Social media AND Trust AND Transparency AND E-government/E-governance
Lee et al. (2019); Park and Lee, (2018)	3	Social media AND Trust AND Risk AND E-government/E-governance
Evans et al. (2018)	1	Social media AND Trust AND Transparency AND Risk AND E-government/E-governance

* Authors of most cited articles. **Keywords used for searching.

Dwivedi et al. (2018) emphasized the criticism for using conventional information systems constructs for not taking constructs like transparency and trust in an e-government-specific context. Trust has the ability to reduce the perception of negative consequences and create confidence in such a way that it mitigates the effect of risk on attitudes towards the trustee and behave favourably to the transaction (Grazioli et al., 2000). When trust is high, the negative impact of risk on users' attitudes about the site will be less (Grazioli et al., 2000). Thus, these relationships replicated in this model and listed as propositions.

P3: Trust will be moderating the Perceived risk and Attitude

P4: Attitude will be positively related to Behavioural Intention

Based on these supports, a model is conceptualized (Figure 2)

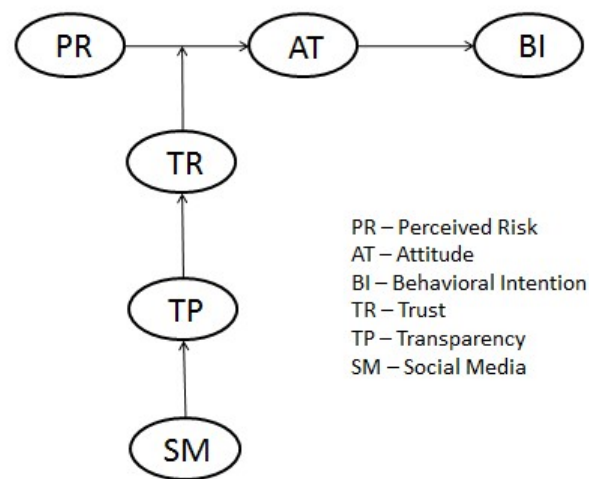


Figure 2. Proposed conceptual model

Theoretical and Managerial Implications

The main objective of the study was to investigate how or whether the usage of social media by the public sector will lead to the adoption of e-government by citizens. With the help of empirical research findings, this study gives clarity on the effect of using social media to improve the behavioural intention to use e-government. This clear understanding of how could social media usage lead to the adoption of e-government, the relationship between variables relating to the use of social media and behavioural intention will give an orientation for the effective implementation.

Usage of social media in an e-government setting will indirectly play a moderating role in between perceived risk and attitude which lead behavioural intention to use e-government. The mediating role of transparency in the relationship between social media and trust is well established by Song and Lee (2016). Social media could be used in e-government, aiming for improving the transparency of the system. This approach of using social media in e-government resulted in creating trust among people towards the e-government system. The perceived risk might be high for new users and the number of new users might be high in developing countries. Moreover, Trust is formed gradually over time based on an individual's prior experience (Park et al, 2018). Therefore, the adoption of social media oriented to develop trust will be more effective in the developing countries where the implementation of the e-government process is going on.

As e-government services are transactional in nature, risk plays a significant role in users' decision-making process on the adoption of e-government. As a solution to this concern, by creating transparency in the system, governments can create trust among the people and this trust feeling reduce the impact of perceived risk on attitude toward e-government. This could be used as an add-on to the e-government adoption model, UMEGA. By considering this, the effectiveness of using e-government adoption models would be high. As many people are already familiar with some of the social media, it could be easy to implement the plan and motivate people to use it. Even though the relationships are not empirically tested by the authors, all the relationships are well supported by previous empirical studies.

Conclusion

The adoption of e-government services, along with the factors influencing citizens to embrace such services, will continue to be a subject of conversation, study, and investigation for years to come. As governments worldwide move toward digital transformation, understanding the motivations and barriers faced by citizens in using e-government platforms becomes increasingly important. With rapid advancements in technology, the integration of digital tools in government systems is expected to accelerate. This diffusion will extend across all age groups and demographic boundaries, making e-government services more accessible to citizens irrespective of their geographic location. Social media applications, in particular, will play a critical role in bridging this gap, as their wide reach and ease of use provide an effective platform for governments to communicate with and engage diverse populations.

However, as this conceptual model is based on existing literature and prior empirical research, its practical applicability remains to be validated. Empirical validation is essential to determine the real-world effectiveness of the proposed model and to assess whether the factors identified in previous studies truly influence citizens' behavioural intentions to adopt e-government services. This provides an opportunity for future researchers to extend this work by developing an integrated model that synthesizes findings from various studies. Conducting a meta-analytical review could help clarify the relationships between the various variables involved in e-government adoption, such as trust, perceived usefulness, ease of use, social influence, and access to technology. Such an integrated approach would allow for a more comprehensive understanding of the factors driving e-government adoption and would enable the development of more refined strategies for promoting digital governance. Moreover, these e-government adoption models will be invaluable in addressing the challenges and barriers associated with implementing e-government transformation. By identifying and mitigating these issues, governments can facilitate smoother transitions to digital services, ensuring that e-government initiatives are more widely accepted and utilized by the public.

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