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# **Towards a Theory of SocioCitizenry: Quality Anticipation, Trust Configuration, and Approved Adaptation of Governmental Social Media**

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## **ABSTRACT**

The past few years have witnessed growing governmental interest in engaging citizens through social media. With this interest comes a genuine need to understand the process and outcomes of government–citizen interactions. Therefore, this article seeks to address this important issue by proposing and validating a SocioCitizenry theory that depicts government–citizen interaction through social media. The present study uses data gathered through two field surveys and analyzes the relationships among three main SocioCitizenry constructs: quality anticipation, trust configuration, and approved adaptation. The following factors are examined with respect to the aforementioned three constructs: differential influences of familiarity with social media and government services; perceived importance of interactions with government services; social media quality reputation; and family members' and friends' perceptions of social media quality. Overall, results show that anticipated governmental social media quality influences configured trust, which in turn influences the extent of approved adaptation. The implications of these results in research and practice are discussed.

**Keywords:** Governmental Social Media; SocioCitizenry; Quality.

## **1. Introduction**

Recent advances in social technologies are transforming government–citizen interactions (Alryalat, Rana, Sahu, Dwivedi, & Tajvidi, 2017; Rana, Dwivedi, & Williams, 2015). With a current base of more than 2 billion users, social media platforms have become major catalysts in changing how the government interacts with its constituents. Many governments worldwide are beginning to exploit social

media to shift their operational model from a centralized service to a networked model that favors many-to-many interactions with citizens. This transformation has created opportunities for governments to engage closely with the general public by providing citizens information about governmental operations while government personnel receive feedback regarding various public issues. The present study seeks to model this important government–citizen interaction through social media.

Several research efforts related to social media have sought to examine government–citizen interactions. However, diverse obstacles have hindered such attempts. Some recent reviews (Alryalat, et al., 2017) have declared that published research on this topic is problematic due to “a lack of theory-based research in the area” (p. 55). Other reviews (Boulianne, 2015; Estevez & Janowski, 2013; Kapoor et al., 2018; Skoric, Zhu, Goh, & Pang, 2016) have indicated that most relevant studies merely present broad discussions on interactions between the government and the general public. More specifically, studies discussing this subject tend to provide a general overview of government–citizen interactions without adequately theorizing and empirically verifying why and how citizens are driven to engage with a government’s social media within a particular social context (Agostino, 2013; Bonsón, Royo, & Ratkai, 2015; Cheng, Fu, & de Vreede, 2017; Chung, Andreev, Benyoucef, Duane, & O’Reilly, 2018; Fakhoury & Aubert, 2015; Mergel, 2013; Steenkamp & Hyde-Clarke, 2014). To address these challenges, scholars interested in understanding government–citizen interactions must pay greater attention to theorization (Alryalat, et al., 2017; Chung, Andreev, Benyoucef, Duane, & O’Reilly, 2017), measurement (Chung, et al., 2018), and relevant social contexts (Kapoor, et al., 2018; Ngai, Tao, & Moon, 2015). Thus far, no attempt has been made to examine these issues collectively. The current study seeks to fill this gap by enhancing topical knowledge in four major ways. First, this work develops and tests a new research-driven theory depicting the process of government–citizen interaction. Second, it measures the main constructs in the model using a citizen-focused, experientially founded view rather than simply counting usage frequencies or tapping general beliefs about technology usage as has been done in prior research. Third, it differentiates between the content and engagement-style dimensions of social media. Fourth, it considers the social context within which these interactions take place. Overall, the present investigation aims to situate government–citizen interaction in a theory-driven, robust research framework.

Given that scholarship on citizens’ interactions with governmental social media is continually evolving, the present article gathered valuable ideas from related disciplines interested in understanding human interactions. Two useful sources included uncertainty reduction theory (Berger & Calabrese, 1975) and social information processing theory (Fulk, Steinfield, Schmitz, & Power, 1987; Salancik & Pfeffer, 1978; Walther, 1992), each of which highlights the importance of socialized information in effective human interactions. Another important perspective relevant to cooperative exchange is principal–agent theory (Jensen & Meckling, 1976), which describes a relationship in which the principal (e.g., citizens) delegates work to the agent (e.g., government) who performs work according to a pre-contract (Eisenhardt, 1989). These well-established theories informed the current paper and may prove valuable in research regarding governmental social media.

The current study applies information from the above theories as a foundation to develop SocioCitizenry theory. This theory hypothesizes connections among three core constructs involving government–citizen interactions through social media:

anticipated quality, configured trust, and approved adaptation. *Approved adaptation* is defined as one's interaction with social media services to improve his or her knowledge of governmental operations and to communicate his or her reviews to the government. *Configured trust* represents one's perceptions of the congruence between the content and engagement attributes of governmental social media services and one's trust needs. *Anticipated quality* refers to one's perceptions of content meaningfulness and interactive engagement on a government's social media. The authors theorize that governments must be able to reduce uncertainty by aligning social media attributes with citizens' quality needs to engender trust and favorable interactions. Moreover, the authors argue these connections are shaped by information citizens receive from the surrounding social environment. This view supplements existing knowledge by presenting theoretically grounded components of social media adaptation in a governmental setting.

The rest of this article is structured as follows. The second section introduces SocioCitizenry theory. The third section details the selected hypotheses and supporting evidence from relevant research. The fourth and fifth sections describe the methodologies followed by two empirical studies, the first of which focuses on scale development with the second focusing on model testing. The sixth section discusses the findings of this paper and its implications, and the seventh and last section offers closing remarks.

## **2. SocioCitizenry: Bases & components**

### *2.1. The bases of SocioCitizenry*

The current study builds upon uncertainty reduction theory, social information processing theory, and principal-agent theory to shed more light on government-citizen interactions through social media or SocioCitizenry. One important aspect of these theories is their emphasis on the idea that knowledge is experientially founded and based on one's interpretation of the information (s)he receives from the surrounding social environment; such information pertains to people as well as people-made artifacts. Knowledge assimilation in this social context can be viewed as a process driven by experiences gained from extended interactions between an individual and his or her largely uncertain social milieu. In this sense, these theories underscore the importance of an individual's active participation in the social process and in constructing his or her own understanding through various mechanisms (e.g., persuasion and learning by example). Moreover, individuals' active participation in this process may help to fulfill some of their internal needs. Phye (1997) asserted that the social view encompasses issues relevant to understanding cognitive development as well as motivation and needs in a specific social context. Similarly, meeting individuals' internal needs is a prelude to certain overt social behaviors. For example, the work of Asch (1955); Deutsch and Gerard (1955); Sherif (1936) in social psychology has suggested that social contexts play an essential role in guiding individuals' attitudes and social actions.

Increasingly, users of modern digital artifacts such as social media face high levels of information uncertainty regarding the content and/or sender of a message. Individuals may attempt to cope with these ambiguities by increasing communication (Shannon & Weaver, 1949). Berger and Calabrese (1975) built upon this idea in their uncertainty

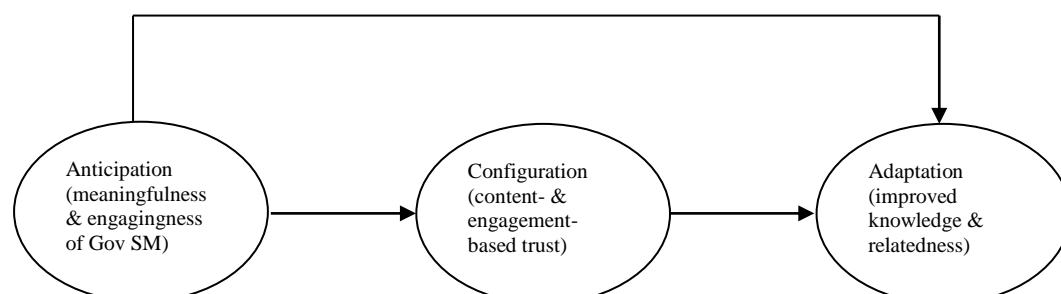
reduction theory, arguing that individuals seek additional information in situations where they lack an adequate sense of other parties' behaviors and intentions during the interaction process. Once an individual's information needs are satisfied, information certainty and social relationships should each improve. A close examination of the eight basic axioms of this theory reveals that the content of a message is important for decoding, and the style in which a message is presented is similarly crucial for effective communication.

Relatedly, individual users must recognize that social media use is socially constructed as users are inherently embedded in a social context that shapes their interactions with the media. According to the social information processing model (Fulk, Schmitz, & Steinfield, 1990; Fulk, et al., 1987), understanding situated or socialized media use is critical for productive human interactions. This model postulates that media characteristics and communication processes are important for securing effective communication. These suppositions are closely related to those of Salancik and Pfeffer (1978), who proposed several social information processing mechanisms in the context of job and task design. Walther (1992) extended the viewpoint of Fulk, et al. by arguing for a temporal factor; that is, given sufficient time, computer-mediated communication media could become as personal as face-to-face interaction. In the case of the present study, citizens' reactions to governmental social media services depend on their experiences and interactions with the social environment as well as the extent of their interactions with the government.

Principal-agent theory (Jensen & Meckling, 1976) addresses situations in which the relationship between two parties, namely the principal and the agent, is cooperative and asymmetrical. In the context of digital government, although the government performs work according to a pre-contract with citizens, civilian individuals possess limited information about the operations and practices of the government. Accordingly, citizens' trust in the government can create and maintain a positive rapport between the two. An important mechanism in cultivating relationships between principal and agent entities involves reducing information uncertainty, which can be governed through trust building and information quality improvement (Pavlou, Huigang, & Yajiong, 2007).

Based on the above discussion, a citizen's interaction with governmental social media can be considered an adaptation process. It starts with citizens' interactions with governmental social media where citizens seek to reduce information uncertainty and then transforms into a purposeful quest by citizens to foster predictability by aligning media characteristics with their interaction needs. Finally, the process culminates with citizens' social media approval. This process is influenced by the information citizens receive from the surrounding social environment within which they construct their reality of the adaptation process. More specifically, this process argues that social media quality can serve as an anticipation mechanism to reduce citizens' information uncertainty. In this sense, citizens co-create content by adding meaning to control expectations. Although this predictability is necessary to encourage government-citizen interaction, it may not be sufficient to ensure the desired impact. Therefore, uncertainty reduction efforts can be reinforced by configuring trust in governmental

Fig. 1. A high-level view of the SocioCitizenry theory



social media to suit citizens' interaction needs. Citizens can be considered co-creators of trust in social media (Kamboj, Sarmah, Gupta, & Dwivedi, 2018) because they can accept or reject its fit with the use context. The byproduct of these two factors is higher citizen interaction with governmental social media. In the long run, this outcome, along with citizen-centric digital policies, can encourage citizens' favorable interactions in national policy and development objectives. This study terms the aforementioned active process and relationships *SocioCitizenry theory* (Fig. 1).

## 2.2. *Approved adaptation*

Citizens' mindful interactions with online governmental resources comprise one of the most important goals e-governments have sought to achieve since their inception. Organizations' failure to develop proper social media metrics that achieve their goals and evolve from their respective context can pose serious challenges (Chung, et al., 2018). Without engaging citizens through digital means, the governments will face difficulties establishing, developing, and maintaining the desired level of relationship with their constituents. In such a complex system, citizens also build experiences that guide their actions (i.e., adaptation) to make better use of their environment (Holland, 1995). Citizens actively acquire experiences by interacting with governments in many ways, particularly through awareness of and participation in public affairs (Mossberger, Tolbert, & McNeal, 2008; Norris, 2001). Once citizens learn of governmental operations or actions, they are better prepared to participate more effectively in public affairs as suggested by principal-agent theory. Citizens' engagement with the government through social media can render this positive interaction beneficial for both parties (Aladwani, 2015). Indeed, citizens are recipients of knowledge as well as active builders of it (Kamboj, et al., 2018) by approving a continued relationship with and offering feedback to the government. In this article, the authors assume an adaptation view and differentiate between two outcomes: improved knowledge and enhanced relatedness.

*Improved knowledge* refers to one's mindful interactions with social media services to improve his or her knowledge of governmental operations. Government operations generally cover all types of practices such as making decisions, suggesting policies, implementing programs, maintaining data, and announcing alerts in the case of emergencies, among other tasks (Aladwani, 2015; Bertot, Jaeger, & Grimes, 2012). Citizens expect their government to establish adequate mechanisms to maintain citizens' awareness of governmental actions. The government's transparency in this regard is essential for achieving many of its objectives (Bertot, et al., 2012) along with citizens' aspirations (Alryalat, et al., 2017). Openness around governmental operations promotes positive beliefs toward the actions of the government while encouraging social accountability overall (Norris, 2001).

*Enhanced relatedness* refers to one's mindful interactions with social media services to communicate his or her views to the government. Using social media, citizens can interact with the government in various ways such as by reading posts, posting comments, sending suggestions, asking questions, sharing evaluations, voicing complaints, and offering praise (Aladwani, 2014). The main objective of these communications is to convey citizens' views to the government on issues they consider important (Alryalat, et al., 2017). These views may focus on salient public

issues and/or participation in public debates (Hossain, Dwivedi, Chan, Standing, & Olanrewaju, 2018). Governmental issues at the center of public debates can span various domains including emergency response, economic conditions, education, healthcare, and domestic security. Adopting citizen-centered digital artifacts that encourage civilian participation and engagement is integral to helping the government establish and maintain fruitful relationships with its citizens.

### 2.3. *Trust configuration*

This study seeks to examine trust issues in the context of governmental social media by introducing the concept of configured trust. Until now, a large and expanding body of research has explored the notion of trust in e-government. The main stream of e-government scholarship has focused on different aspects of trust, including trust in the e-government portal, trust in the government itself, trust in e-government-provided services, and trust in the technological infrastructure upon which the e-government is based (Carter & Bélanger, 2005; McKnight, 2005; Scott, DeLone, & Golden, 2016; Srivastava & Teo, 2009; Teo, Srivastava, & Jiang, 2009; Venkatesh, Thong, Chan, & Hu, 2016). More recent attention has been paid to various aspects of trust in social media (Aladwani, 2018a; Kamboj, et al., 2018; Liu, Lee, Liu, & Chen, 2018; Park, Choi, Kim, & Rho, 2015). Despite the importance and usefulness of prior studies, research has yet to approach trust from a configuration angle or to differentiate between trust in content and trust in engagement style. The present investigation thus aims to enrich current theory and practice in this area by addressing these important issues. Based on aforementioned reference theories, citizens desire and encourage a shared-trust reality. This mutual understanding between citizens and the government requires exchanging various content and style cues to cultivate trust between two parties who often lack adequate information about one another's behaviors and intentions prior to interacting. This shared-trust reality is also referred to as *configured trust*. Therefore, this study highlights the need to assess trust from a more focused perspective that incorporates two components: content-based and engagement-based trust.

*Content-based trust* refers to one's perceptions regarding the congruence between the content attributes of governmental social media services and one's trust needs. With simple many-to-many communication capabilities, social media has witnessed exceptional growth in the content produced, consumed, and shared by citizens. Although governments have begun to identify valuable opportunities for leveraging social media, they have also come to realize that engaging citizens effectively via these applications requires unique content characteristics including reliability, dependability, and accuracy (Fogg & Tseng, 1999; McKnight, 2005). Citizens often attempt to align these cues from social media realities with their own interpretations of the same. When citizens accept or reject governmental content, they convey an unambiguous signal to governmental social media accounts regarding appropriate content features. Thus, citizens' beliefs about the reliability, dependability, and accuracy of social media are configured by citizens assigning meaning to content originally produced by the government.

*Engagement-based trust* is defined as one's perceptions of the match between the engagement attributes of governmental social media services and one's trust needs.

Citizens' favorable trust perceptions of a government's social media can be cultivated by ensuring that an account's engagement style closely matches that of citizens. Engagement-based trust in this study is in line with the conviviality of the engagement construct (Aladwani, 2002, 2018b) and the benevolence aspect of trust in technology, which emphasizes technology helpfulness (McKnight, Carter, Thatcher, & Clay, 2011). In contrast to the views of McKnight et al. and Aladwani, the notion of trust in engagement style as presented in this study is a configured form of trust wherein citizens adapt to experiences and interpret received style cues. Therefore, citizens' beliefs about the helpfulness, attentiveness/politeness, and constructiveness of governmental social media accounts exist because citizens endow these features with meaning. As soon as a citizen acknowledges the appropriateness of the engagement style, (s)he sends an embedded message to the governmental social media account about acceptable style characteristics. Yet trust in engagement style (e.g., helpfulness, attentiveness/politeness, and constructiveness) should not be confused with content-based trust; occasionally, even confrontational or unfriendly accounts can produce accurate content.

#### 2.4. *Quality anticipation*

In this study, the authors focus on *anticipated social media quality*, defined as one's perceptions of content meaningfulness and interaction engagingness. Much of the literature on information technology quality has discussed pre-internet data and information quality (DeLone & McLean, 1992; Marschak, 1971; Redman, 1992; Snively, 1967; Wang & Strong, 1996; Zmud, 1978), software quality (Boehm, 1981), user documentation quality (Doll & Torkzadeh, 1987), and website quality (Aladwani & Palvia, 2002; Loiacono, Watson, & Goodhue, 2007; Palmer, 2002). Interest in the notion of social media quality has increased in recent years (Aladwani, 2017, 2018b; Zhang, Barnes, Zhao, & Zhang, 2018). Despite these topics' importance, published studies have neglected to frame social media quality as an anticipation mechanism for reducing citizens' content and engagement uncertainties. According to reference theories, media characteristics and communication processes are each important in securing valuable exchange of information and ideas. Along this line of thought, the following section presents arguments for including two new quality types: content meaningfulness and interaction engagingness.

*Content meaningfulness* refers to one's perceptions of the match between the content attributes of governmental social media services and one's quality needs. The literature has approached social media content quality from two different angles. The first stream of research has examined the problem from either a conceptual modeling view (Lukyanenko, Parsons, & Wiersma, 2014) or a machine learning view (Edwards, Edwards, Spence, & Shelton, 2014), whereas the second stream has assessed content quality from users' perspectives. For instance, Aladwani (2017) conceptualized content quality as a four-dimensional construct consisting of reflective, stimulated, practiced, and advocated dimensions. Aladwani and Palvia (2002) developed and validated the user-perceived website quality construct, which comprises four components including content quality. They defined *content quality* as the extent to which individual users perceive website content to possess favorable features including clarity, completeness, and relevance. The current study examines the congruence between these content meaningfulness attributes and citizens' needs.



Once a citizen concedes to received content meaningfulness cues, (s)he sends an embedded message to a governmental social media account regarding acceptable content quality characteristics.

*Interaction engagingness* refers to one's perceptions of the match between the engagement-style attributes of governmental social media services and his or her quality needs. This study proposes the following interaction engagingness attributes vis-à-vis governmental social media: interactivity (responds to and seeks followers' comments), adaptability (responds quickly to followers' demands), and timing flexibility (meets followers' needs at all times). These three engagingness characteristics align with other conceptualizations proposed in relevant research (Aladwani, 2002, 2018b; Aladwani & Palvia, 2002; Norman, 2013). Studies have shown recent signs of greater dialogue and interactivity between government and citizens using social media (Mossberger, Wu, & Crawford, 2013), suggesting that such interactivity influences citizens' attitudes toward digital government (Hung, Chang, & Kuo, 2013). Some scholars have also argued that personalization cues could reduce information overload (Li & Unger, 2012), whereas adaptability/flexibility could influence competence (or perceived performance expectancy) with technology (Chan et al., 2010). Based on individuals' experiences and interpretations of engagement signs, citizens can develop interaction engagingness. Accordingly, citizens' beliefs about the interactivity, adaptability, and timing flexibility of governmental social media are triggered when citizens attach meaning to these features. That is, when a citizen accepts them, (s)he conveys a message to governmental social media about acceptable interaction engagingness characteristics.

### *2.5. Personal and normative influences and outcomes*

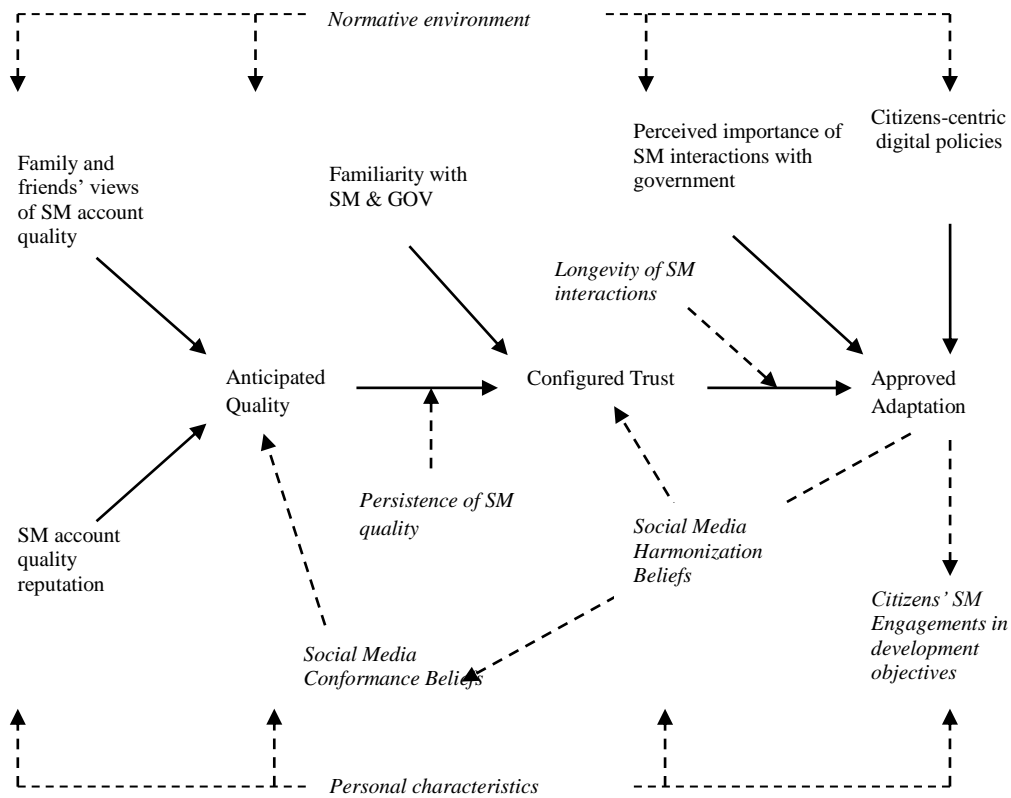
Based on prior research, the authors of the present study identified four drivers behind citizens' engagement in social and political activities: individual, family, friends, and environmental factors. Several scholars have examined the influence of personal characteristics, such as familiarity, on the adoption of digital artifacts (Cheng, et al., 2017; Gefen, 2000; Komiak & Benbasat, 2006; Ngai, et al., 2015). Likewise, studies have cited the importance of a normative environment, including social, technological, political, economic, and cultural factors, in the performance and adoption of digital artifacts in government settings (Aladwani, 2016; Kling, 1980; Zhao, Shen, & Collier, 2014). Social influences have been found to shape how an individual interprets cues from his or her social environment (Deutsch & Gerard, 1955). Similarly, social influences could provide the knowledge necessary to understand how users react to governmental social media. Research has suggested that reputation influences the public's attitudes toward blogs (Hsu & Lin, 2008), perceived credibility (Heilman, 1974), and e-government utilization (Huang, Brooks, & Chen, 2009). In addition, many governments around the world have begun to adopt citizen-centric digital policies to transform service delivery and provide citizens with adequate means of accessing these services.

Moreover, approved adaptation is accompanied by two possible outcomes: individual and societal. At the individual level, approved adaptation of social media could contribute to positive beliefs about the appropriateness of social media in harmonizing citizens and the government. These beliefs could in turn stimulate trust in governmental social media along with positive beliefs about social media as the mechanism through which citizens can interact with the government. The latter beliefs

(i.e., conformance beliefs) could then foster citizens' expectations regarding how social media quality suits their needs. Individual users' perceptions of the importance of digital artifacts could also encourage the use of such artifacts (Swanson, 1974). Therefore, knowledge assimilated from social contexts can be considered a dynamic process motivated by experiences gained from interactions between citizens and the government. At the societal level, some scholars have argued that digital governments should strive to reach higher goals, such as achieving various development objectives and needs (Janowski, 2015). Several reports have indicated that the positive impact of digital government on development objectives may even outweigh the associated set-up costs. Schuppan (2009) reported several broad impacts of digital government on Ghanaian, Tanzanian, and Kenyan societies. Miyata (2011) noted substantial improvements in the quality and governance of a public project after introducing digitization, although no clear cost-reduction effects could be identified. Zavattaro, French, and Mohanty (2015) found that "positive sentiment is more likely to engender digital participation" (p. 333). Approved adaptation of governmental social media could therefore lead to meaningful individual and societal outcomes.

Based on prior research, the proposed SocioCitizenry theory also postulates several moderated relationships. As suggested by Walther (1992), longer interactions between two parties via a computer-based communication artifact enhance each party's perceptions of its social presence. Thus, the length of social media interactions could govern the relationship between configured trust and approved adaptation. Moreover, the persistence of social media quality performance could moderate the relationship between anticipated social media quality and configured social media trust. The temporal persistence of social media service performance may heighten individual users' perceptions of their own social media competence, ultimately boosting trust in social media services. The previously discussed influences and outcomes describe the bases and components of SocioCitizenry theory. Section 3 explains why and how citizens perceive, internalize, and act upon governmental social media.

Fig. 2. A detailed view of the SocioCitizenry Theory



### 3. Research hypotheses

Figure 2 depicts an illustrative yet complex theory of social environment leading to the adaptation of governmental social media. The figure includes several antecedents, consequences, mediators, and moderators. This investigation does not address all influences in the proposed theory; omitted contextual influences were considered constants. As explained by Johns (2006), "... many potential contextual influences are constants in a particular research study. This is a fact of life in much organizational research - part of the 'omitted variables' problem. While we cannot study every aspect of context in a given project, producers and consumers of research can sensitize themselves to how context affects organizational behavior, whether or not it has been formally measured in a given study" (p. 388).

Fig. 3. The research model

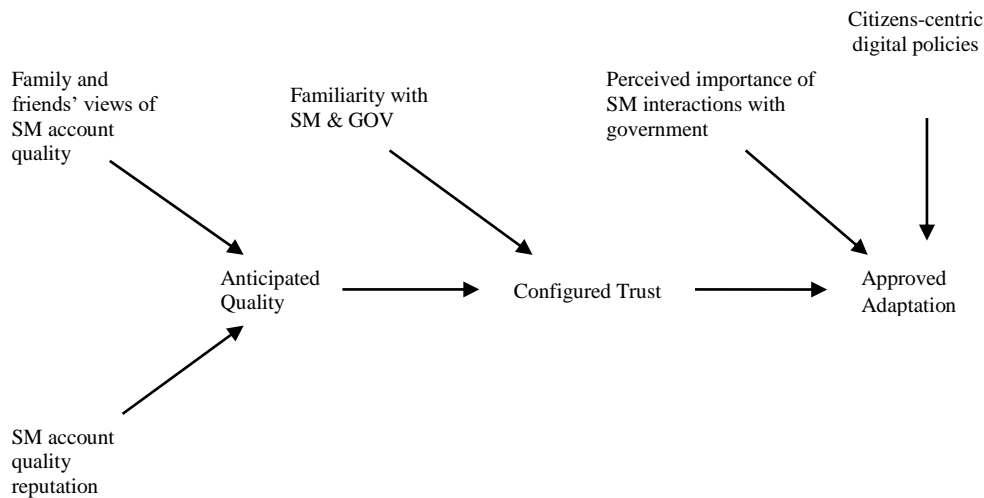


Figure 3 depicts the research model used in this study. The model theorizes that anticipated social media quality can influence configured trust, which can in turn influence the extent of approved adaptation. The figure also summarizes how some contextual variables can shape the aforementioned relationships. The following section describes these relationships in detail.

### 3.1. Configured trust and approved adaptation

In theory, encouraging citizens to deal with digital government services requires trust building (Warkentin, Gefen, Pavlou, & Rose, 2002). Empirical support for this assertion is overwhelming (Carter & Bélanger, 2005; McKnight, 2005; Scott, et al., 2016; Srivastava & Teo, 2009; Teo, et al., 2009; Venkatesh, et al., 2016). In the context of social media, citizens' trust must be gained to convince them to engage with the government indirectly via an unidentified account manager (Aladwani, 2018a; Cheng, et al., 2017; Kamboj, et al., 2018; Liu, et al., 2018). Uncertainty reduction can be achieved by configuring trust in the content and communication style of governmental social media to suit citizens' interaction needs. Unfavorable cues emanating from an account's content and/or engagement style may indicate that the communicator is "careless or incompetent" (Lea & Spears, 1992). Managing a governmental social media account focusing on reliable, dependable, accurate content that suits citizens' needs will foster a positive image of the account's transparency. In addition, a governmental social media account that interacts with citizens in an attentive, helpful, and constructive manner and fits citizens' needs will surely promote recipients' favorable perceptions of the account's transparency and level of relatedness. When citizens interpret these signals positively, they co-create circumstances that reduce content and engagement uncertainty. Given an adequate level of content- and engagement-based certainty cues, citizens will be encouraged to interact favorably with governmental social media accounts. Thus, the authors hypothesize that

H1: Configured social media trust will positively influence approved adaptation.

### *3.2. Anticipated quality and configured trust*

The quality attributes of digital artifacts serve as important antecedents of trust (Everard & Galletta, 2005; Lowry, Vance, Moody, Beckman, & Read, 2008; Nicolaou & McKnight, 2006). In the digital government context, several studies have confirmed this relationship. Venkatesh, et al. (2016) found support for the influence of information quality on trust in e-government services. Lee and Levy (2014) found that information quality substantially influences citizens' trust in e-government systems. Likewise, information quality has been revealed to correlate strongly with trust in a social media setting (Cheng, et al., 2017). The quality of governmental social media can influence trust in it. Social media characteristics and communication processes ground citizens' perceptions of quality. For example, a citizen's quality evaluation of a social media account quickly reveals what the account has to offer to him or her. This perception, or belief, represents an evaluation of the capability/characteristics of the social media account to meet its goals and informs other important beliefs (e.g., engagement style) and outcomes (e.g., trust in social media). Citizens who have access to comprehensive, clear, and relevant information that fits their needs will perceive a social media account positively and thus be encouraged to trust it. An account's quality features serve as catalysts to reduce information uncertainty and enable citizens to anticipate informational and behavioral cues, which can encourage confidence in governmental social media. Social media can raise citizens' awareness of government's operations and practices. This awareness, based on uncertainty reduction theory, can act as a mechanism to reduce uncertainty about the government's intentions and actions while serving as a prerequisite to evoke citizens' trust perceptions. Increasing information certainty is a key mechanism facilitating trust in online interactions and the adoption of digital artifacts (Nicolaou & McKnight, 2006; Yi, Yoon, Davis, & Lee, 2013). Positive quality cues from a governmental social media account can create an initial sense of confidence in the account to elicit favorable citizen perceptions regarding the usefulness of its content and engagement style. Thus, the authors hypothesize that

H2: Anticipated social media quality will positively influence configured trust.

### *3.3. Personal and normative influences*

Personal and normative variables - familiarity with social media and government services, perceived importance of social media interactions with the government, quality reputation of a given social media account, family members' and friends' opinions of account quality, and citizen-centric digital policy - are likely to influence citizens' ratings of the government's social media anticipated quality, configured trust, and/or approved adaptation. For example, citizens' perceived importance of interactions with government services will likely encourage their engagement with the government via social media. This variable is tied to the notion of perceived value, which plays a significant role in individuals' acceptance of digital artifacts in the public sector (Aladwani, 2013). Moreover, one's familiarity with social media and government services is likely to engender his or her trust in and approval of governmental social media. Findings from e-commerce research have shown familiarity to be an important precondition for trust in that it increases communication

in a group setting (Cheng, et al., 2017) and influences consumers' intentions to adopt digital artifacts (Komiak & Benbasat, 2006). In addition, the reputation of internet-based artifacts has been found to be essential in shaping individual users' adoption decisions (Casalo, Flavian, & Guinaliu, 2008). In a similar vein, a recent study (Huang, et al., 2009) confirmed that perceived reputation and credibility were important for the acceptance of government digital artifacts. Research has also shown that family members' and friends' views of account quality can influence citizens' evaluations accordingly (Shih & Huang, 2014). Last but not least, research has revealed that governments' favorable (or unfavorable) digital policies can encourage (or discourage) citizens' adoption of government digital artifacts (Burroughs, 2009). Thus, the authors hypothesize that

H3a: The perceived importance of social media interactions with government services will positively influence approved adaptation.

H3b: Citizen-centric digital policy will positively influence approved adaptation.

H4: Familiarity (with social media and governmental social media services) will positively influence configured trust.

H5a: Family members'/friends' views of the social media account will positively influence anticipated quality.

H5b: Reputation of the social media account will positively influence anticipated quality.

#### **4. Study 1 (scale development)**

The development process for the scales followed three generic steps (Aladwani & Palvia, 2002): (1) conceptualization, which focuses on content validity activities, (2) design, which focuses on construct validity and reliability analyses, and (3) normalization, which focuses on subsequent verification and nomological network of the scales (research model in this case).

Study 1 covered the first two phases of the development process (conceptualization and design phases). Based on the literature, the authors first pooled representative items for the different constructs. The initial pool consisted of 16 reflective and 6 formative indicators that measure approved adaptation (8), configured trust (8), and anticipated quality (6). The face and content validities of the selected items were assessed with the help of two experts who raised a few minor remarks including rewording some of the items and suggested an additional formative item for engagingness; this increased the pool of items to 23. Second, a pilot study was carried out using 27 students to examine the instrument and get feedback on the structure and language of the initial draft of the questionnaire. The participants expressed no major concerns.

Subsequently, exploratory convergent and discriminant validity as well as reliability analyses were carried out using data from a sample of university students. One hundred randomly selected students were solicited to participate in a study and fill out a web-based survey; the students met two criteria: own at least one social media account and follow the details of at least one governmental twitter account. Of the one

hundred invited students, eighty-three met the conditions and correctly filled the questionnaire; out of this number 55% ( $n = 46$ ) were female. Close to 54% of the sample consisted of freshman and sophomore undergraduate students. The average participant's age was 20.120 years ( $SD = 1.409$ ) and GPA was 2.528 ( $SD = .845$ ).

To examine validity and reliability, the 16 reflective indicators were examined using PLS-SEM (Ringle, Wende, & Becker, 2015). After deleting items with weak loadings, the final results revealed that the Average Variance Extracted (AVE) of all constructs exceeded 0.50 (ranging from 0.656 to 0.758). Composite Reliability (CR) scores for the scales were .881, .895, .851, and .904 for enhanced relatedness, improved knowledge, content-based trust, and engagement-based trust, respectively. Discriminant validity was examined by comparing the square root of each latent variable's AVE to its correlations with other latent variables. In every latent variable's case, the square root of AVE for the latent variable exceeded inter-correlations for that variable. Overall, these findings confirm the validity and reliability of the four reflective scales. The validity of formative was established by inspecting co-linearity scores of the items. Because of the high co-linearity score of one of the items (greater than the threshold of 5) and the possible conceptual redundancy, the authors decided to delete it. The remaining items were tested again looking for possible co-linearity problems and the results revealed none.

At the end of the second phase of scale development, the final set of items consisted of the following (see Appendix A). Six indicators tapped the two types of approved adaptations (divided evenly between improved knowledge and enhanced relatedness). Sample items state, "I follow the content of this social media account because it improves my knowledge of governmental operations", and "I interact with this social media account because it helps me communicate my views about governmental actions to public officials". The configured trust scale consisted of two subscales (content-based and engagement-based) with three indicators each. Sample items include "I count on the information about governmental operations that come from this social media account because it is reliable enough for my purposes" and "I trust the engagement style of this social media account because it is attentive enough for my purposes". The anticipated social media quality scale consisted of six indicators. Sample items state, "The information about governmental operations that come from this social media account is complete enough for my needs" and "The engagement style of this social media account is interactive enough for my purposes". Single item scales were used to tap importance of interactions with government social media services, account quality reputation, family/friends views of account quality, and citizens-centric digital policy. Two formative items were used in a scale to tap familiarity with social media and familiarity with government social media services. The responses to all scales were anchored around seven points: 1 ("Strongly disagree") to 7 ("Strongly agree").

## **5. Study 2 (model testing)**

After establishing the validity of the scales in study 1, study 2 verified the stability of the developed instrument (the normalization phase); and empirically tested the proposed research model using PLS-SEM (Ringle, et al., 2015).

Since it is extremely difficult to find an official database of social media users to sample participants from the target population (citizens interacting with governmental social media accounts in the country), a sample of two hundred individuals was randomly drawn by the authors from a list containing the names and contact details of both undergraduate students who are enrolled in a large higher institution in Kuwait as well as graduates from the same institution who are currently employed in various public and non-public organizations. The individuals were contacted in February of 2015 via email to request their participation in the study and to verify that the potential participant owns a social media account and currently follows the details of a governmental social media (Twitter) account. Of the two hundred contacted individuals, only one hundred and sixty-eight met the previous two conditions.

The authors then sent the questionnaire to the screened pool of names, and received one hundred and thirty responses or approximately 77% of the screened pool (after two follow-ups). The final sample contained one hundred and twenty-six records (following deletion of four cases for missing data). In this dataset set, close to 56% ( $n = 71$ ) were females, and 47% ( $n = 59$ ) were students (the remaining held a university degree or above). Approximately 34% and 19% of the participants work for the government and for non-government organizations, respectively. The average participant's age was 27.413 years ( $SD = 8.533$ ) and the average daily social media use in the sample was 3.183 hours ( $SD = 1.376$ ). Every respondent to our questionnaire indicated that he or she owns a smart phone and has access to a high-speed internet connection (mobile- or home-based).

Because at least one third of our data come from government-employed individuals and given that the sample consists of those who follow government social media accounts, it is likely that the dataset covers only those who have a high level of trust in government social media. Therefore, it is imperative that we test against any unintentional biases. We did so in two different ways. First, we tested the differences between responses of government and non-government employees on age ( $M_g = 32.98$ ,  $M_{ng} = 35.42$ ,  $t = -1.397$ ), daily social media usage time ( $M_g = 3.09$ ,  $M_{ng} = 3.17$ ,  $t = -0.204$ ), quality ( $M_g = 3.848$ ,  $M_{ng} = 3.687$ ,  $t = 0.909$ ), trust ( $M_g = 4.116$ ,  $M_{ng} = 3.715$ ,  $t = 1.692$ ), and adaptation ( $M_g = 3.825$ ,  $M_{ng} = 3.597$ ,  $t = 0.937$ ). All t-values are *not* significant at the alpha level of .05. Second, we explored descriptive statistics of overall trust in government social media as perceived by government-employees ( $M = 4.116$ ,  $SD = 0.984$ , Skewness = -0.220, Min = 1.333, Max = 6.333) and other employees ( $M = 3.715$ ,  $SD = 0.821$ , Skewness = 0.068, Min = 1.833, Max = 5.500). Overall, the results the two tests indicate no evidence of bias in our dataset.

### 5.1 Analysis and results

Table 1 lists verification results for the convergent and discriminant validities of reflective indicators. Convergent validity was examined using the composite reliability (CR) and average variance extracted (AVE) of all reflective constructs. Results indicate that the CR and AVE of all constructs exceeded 0.80 (ranging from 0.803 to 0.924) and 0.50 (ranging from 0.577 to 0.803), respectively. To examine discriminant validity, the square root of each latent variable's AVE was compared with its correlations with other latent variables. All inter-correlations for a given latent variable were lower than the square root of AVE for that latent variable. These



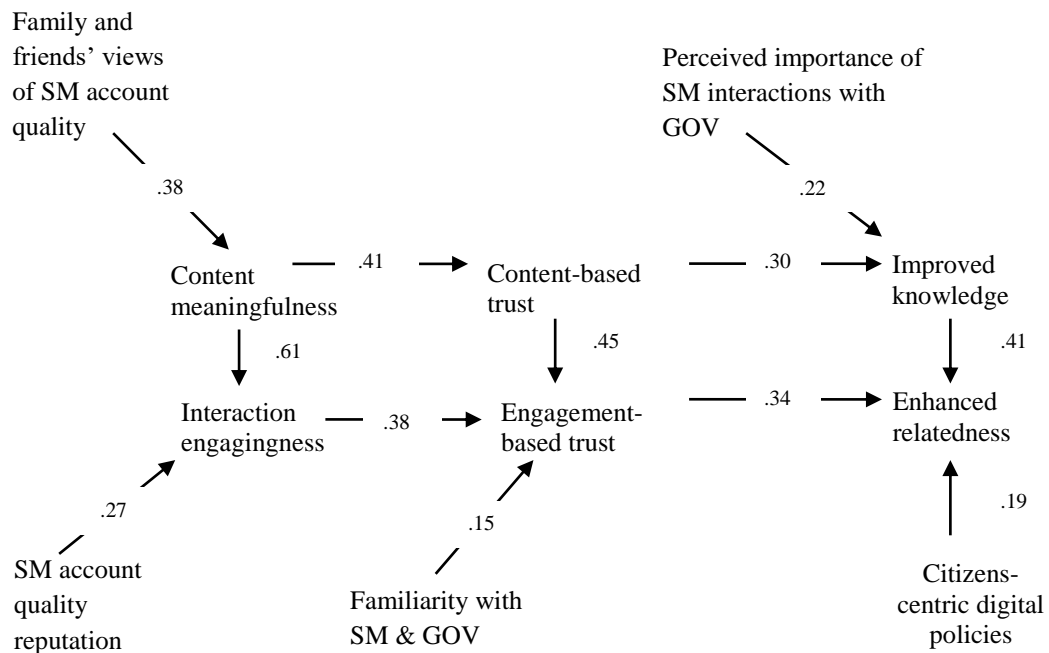
findings confirm the convergent and discriminant validity of the four reflective scales. Finally, the validities of the two formative scales (meaningfulness and engagingness) were tested by examining the co-linearity scores of their respective items; tests revealed no collinearity in these items, as all VIF scores were lower than the cut-off point of 5.

Table 1  
*Validity results for reflective scales*

Variable	CR	AVE	1	2	3	4
1. Enhanced relatedness	0.924	0.803	<b>0.896</b>			
2. Improved knowledge	0.887	0.725	0.544	<b>0.851</b>		
3. Content-based trust configuration	0.803	0.577	0.476	.375	<b>0.759</b>	
4. Engagement-based trust configuration	0.867	0.686	0.523	.342	.600	<b>0.828</b>

After establishing the scales' measurement properties, the 2<sup>nd</sup>- and 1<sup>st</sup>-order structural models were examined. First, given the nature of the formative and reflective scales in this study, the authors created three 2<sup>nd</sup>-order formative factors: approved adaptation (loadings for relatedness-based approval = .610 and knowledge-based approval = .528), configured trust (loadings for content-based trust configuration = .487 and engagement-based trust configuration = .631), and anticipated quality (loadings for content meaningfulness = .515 and interaction engagingness = .578). The analyses show that anticipated quality significantly influenced configured trust (.53,  $p < .05$ ), whereas only trust significantly influenced approved adaptation (.46,  $p < .05$ ). Second, the contextual variables (familiarity with social media and government services, importance of interaction with the government, account quality reputation, family members' and friends' views, and citizen-centric digital policy) were added to the model to test the remaining hypotheses. The analyses of the 1<sup>st</sup>-order model show that it explained 45.7% of the variance in relationship-based approval, 18.5% in knowledge-based approval, 48.4% in engagement-based trust, 25% in content-based trust, 51.1% in content meaningfulness, and 14.4% in interaction engagingness. More specifically, the results (Fig. 4) indicate that only improved knowledge (.41,  $p < .05$ ) and engagement-based trust (.34,  $p < .05$ ) influenced enhanced relatedness significantly. Only content-based trust positively influenced improved knowledge (.30,  $p < .05$ ). Moreover, the findings show that the perceived importance of interactions with government services influenced improved knowledge (.22,  $p < .05$ ), and digital policy influenced enhanced relatedness (.19,  $p < .05$ ). Content-based trust (.45,  $p < .05$ ) and interaction engagingness (.38,  $p < .05$ ) each significantly predicted engagement-based trust; however, only content meaningfulness positively influenced content-based trust (.41,  $p < .05$ ). In addition, familiarity influenced engagement-based trust (.15,  $p < .05$ ) but not content-based trust. Although content meaningfulness (.61,  $p < .05$ ) and reputation (.27,  $p < .05$ ) each predicted interaction engagingness, only family members' and friends' views influenced content meaningfulness (.38,  $p < .05$ ). Together, these results support H1, H2, and H3a–H5b.

Fig. 4. Detailed results of 1<sup>st</sup> order model testing (all paths are significant at the .05 level)



## 6. Discussion

The current study aims to contribute new knowledge by developing and testing a new theory-driven representation of government–citizen interactions. The SocioCitizenry model measured key constructs using a citizen-focused, experientially founded conceptualization by differentiating between content and engagement-style dimensions of social media and considering the social context within which these interactions occur.

An initial goal of this investigation was to propose and test a new theory, termed SocioCitizenry theory. Although recent relevant reviews and frameworks (Alryalat, et al., 2017; Kapoor, et al., 2018; Ngai, et al., 2015) have identified a host of reference theories, concepts, and relationships, no study has yet proposed a theory with theoretical underpinnings and components similar to SocioCitizenry. A major strength of this study was its deliberate integration of several theories to devise an original theory of government–citizen interactions and novel conceptualizations of its primary constructs (quality anticipation, trust configuration, and approved adaptation). This strategy concurred with a recent call for more theory-driven research (Alryalat, et al., 2017) while supplementing current research on governmental social media.

This investigation was also designed to empirically test SocioCitizenry theory. Results reveal that anticipated social media quality influenced configured trust, which in turn shaped the extent of approved adaptation. The former finding seems to align with findings from previous work (Cheng, et al., 2017), whereas the latter appears consistent with the results of (Kamboj, et al., 2018). Although the results of the present study corroborate previous conclusions, the current findings extend previous work on many levels. First, this study found that anticipated quality created a sense of confidence in an account’s content and set the stage for favorable citizen perceptions

of its engagement style. Second, findings suggested that citizens' trust in the content and communication style of a governmental social media account promoted their participation in and contribution to governmental operations. Third, these three core constructs were found to be differentially influenced by familiarity with social media and government services, perceived importance of interactions with government services, account quality reputation, family members' and friends' views of account quality, and citizen-centric digital policies.

A particularly interesting finding from this study involves the chain of impact of anticipated quality on configured trust and approved adaptation, which appeared to unfold along two paths in the 1<sup>st</sup>-order (i.e., detailed) model: (1) content quality → content trust → improved knowledge, and (2) engagement quality → engagement trust → enhanced relatedness. This new "chain of impact" offers new insight into this issue and unveils the complex nature of the influence of anticipated quality on configured trust along with the influence of both variables on citizens' approved adaptation of the government's social media. This finding also indirectly confirms the multifaceted view of quality of internet-based applications and services (Aladwani & Palvia, 2002), trust in technology (McKnight, et al., 2011), and the nature of interactions between the government and its constituents (Mossberger, et al., 2008; Norris, 2001).

The present study also provides early empirical evidence that the above-described paths are contextually determined within a governmental social media setting. Citizens may come to understand these two sets of relationships by inferring their meaning from the surrounding environment. For example, family members' and friends' views of account quality can exert powerful effects on one's anticipation of social media content quality. In contrast, social media account reputation significantly influences perceived interaction engagingness. Additionally, only when a citizen has a hands-on engagement with governmental social media he or she develops favorable trust beliefs toward it. In a similar vein, a citizen becomes more receptive to governmental social media when he or she becomes convinced of its importance and value, while one becomes more disposed to contribute to the same media when one feels that national digital policies are set in his or her favor. One explanation for these different contextual effects may be that citizens can discover engagement signals faster than content cues, which require deeper cognitive processing. Therefore, citizens become more inclined to rely on their own rich social experience and on guides or feedback from highly trusted individuals to expedite evaluation processes and adaptation of governmental social media.

### *6.1. Theoretical implications*

The findings of this study offer several implications for theory building. First, although research has made many useful attempts to shed light on governmental social media use, no investigation has developed and tested a theory that illuminates how the influence of social media account quality and trust on citizens' approval of governmental social media unfolds. Informed by well-established theories (Berger & Calabrese, 1975; Fulk, et al., 1987; Salancik & Pfeffer, 1978; Walther, 1992), the current study goes beyond existing research by proposing a new theory-driven model to explain why and how citizens interact either favorably or unfavorably with

governmental social media accounts. Overall, the developed and tested model opens a small yet important and novel research avenue into the proposed key issues.

Second, this study adopted a progressive view to understand the connection between anticipated quality, configured trust, and approved adaptation by taking relevant beliefs a step further in assuming a two-way relationship between citizens and the government. Learning from one's experiences was found to be an important aspect of anticipated quality, configured trust, and approved adaptation, all of which involve one's attempt to align cues from social media realities with personal interpretations of these cues. Therefore, citizens' beliefs about the anticipated quality, configured trust, and approved adaptation of governmental social media appeared to change because citizens added meaning to the content (style) originally produced (communicated) by the government.

Third, this study adds to relevant knowledge by measuring interaction constructs using a citizen-focused, experientially founded view. Most studies have assessed interaction simply by counting basic usage numbers such as likes, tweets, and comments or by offering general remarks about usage. This study shifts the attention away from a simplistic view to a more complex perspective that treats interaction as a constellation of theory-based socialized activities and processes. Moreover, in contrast to past studies, this study measures and analyzes the joint and uncombined influences of the content and engagement dimensions of anticipated quality and configured trust on approval outcomes. In the absence of an empirical attempt to differentiate between measurements of content and engagement quality as well as between content trust and engagement trust, the present study pioneers efforts to further examine and develop these constructs.

Finally, the current study proposes and tests a model of social interactions that answers calls from the literature to broaden digital government research to shed light on SocioCitizenry issues. The social context has seldom been examined in prior governmental social media research. Consistent with the adopted theories, this study argues that knowledge is experientially founded on one's interpretation of the information (s)he receives from the surrounding social environment. Specifically, this study argues for the importance of examining the social context in government-citizen interactions and proposes that the anticipated quality of governmental social media, configured trust, and approved adaptation may have completely different relationships depending on whether they are studied in a favorable or unfavorable interaction context. The extensive effort from this study will likely facilitate incremental theory development related to governmental social media and add knowledge to this promising area of research.

## *6.2. Practical implications*

This study also carries implications for public administrators, account administrators, and social media developers. First, although most public officials encourage citizens' interaction with governmental social media accounts, they seldom simultaneously measure citizens' socialized perceptions of anticipated quality, configured trust, and approved adaptation (and the consequences of this interaction). This investigation hence suggests a logical theory public officials can adopt to measure this important interaction process and optimize their engagement with primary stakeholders -

citizens - in modern public organizations. Through such measurement, public officials can uncover whether a genuine need exists to develop new (or to modify existing) policies and procedures to encourage transparency around governmental information, decisions, and operations or promote citizens' participation in public deliberations.

Second, governmental social media account administrators often seek to establish enduring relationships with citizens to translate these interactions into a win-win situation. The proposed model drives citizens' interactions into a more premeditated path that accomplishes the following:

- reduces information uncertainty by encouraging citizens' interactions with the account by matching its content and style with citizens' quality needs,
- fosters predictability by aligning social media account characteristics with citizens' trust needs, and
- culminates in citizens' approval of the content of and engagement with governmental social media.

Better government–citizen interactions can presumably be achieved by focusing on anticipated quality, configured trust, or preferably both. Social media account managers in public organizations are recommended to provide account followers/citizens adequate levels of knowledge- and relationship-based quality and trust signs to help them develop appropriate judgment rules that facilitate account engagement.

Third, this research has shown that family members' and friends' views of social media quality could influence citizens' anticipation of account quality, especially with regard to content meaningfulness. Content quality was revealed to be a strong direct determinant of content-based trust and an indirect determinant of engagement-based trust; therefore, social media developers should find a way to incorporate new features into their platforms that recognize the importance of social context as an essential element in government–citizen interactions. A potential way to address this issue would be to add interactive social media functionalities to allow users to rate content, style quality, and trustworthiness (separately) and instantly display these four ratings to users within similar social networks.

## **7. Conclusion**

The main objective of this study was to understand government–citizen interactions through social media by proposing and empirically validating SocioCitizenry theory. This article identifies the main concepts and components of the model, demonstrates how they are related, and justifies corresponding relationships. The authors also explain how these relationships are situated within an interaction context. Overall, data analyses from two field studies support the suggested model, and the findings of this study make several noteworthy contributions to area knowledge.

Despite its revelations, the present investigation has some limitations that introduce avenues for subsequent research. First, this study tested the proposed research model using a relatively limited sample, which may not be fully representative of all users of

governmental social media. To improve the generalizability of these findings, follow-up studies could employ much larger random samples from the target population and re-evaluate the research model accordingly. Second, in the absence of an official database detailing all public social media accounts, it was impossible to guarantee that the population of accounts followed by participants was fully representative. Future research should strive to ensure that findings are not biased due to random instances of many participants following the same public-sector account. Third, although Figure 2 describes a complex preliminary theory of the social environment that leads to adaptation of governmental social media, it was not fully tested in the current study due to being a new model; the authors rather began with a simplified version to test the model's rationale and technical aspects. Because this basic model was supported by data, another research attempt may be needed to carefully examine the normative context and proposed relationships outlined in Figure 2 (e.g., citizens' engagement in development objectives, the diffusion of e-democracy, and existence and respect of civil rights laws). Fourth, despite the authors' extensive efforts to empirically test the proposed research model, the network of relationships revealed no clear evidence of causality given the cross-sectional nature of the data. Future work could apply a longitudinal research design and explain time-related influences, such as how interactions between citizens and the government evolve over time (Figure 2). Finally, prior research, e.g., Scott, et al. (2016), has suggested that different e-government user types may possess different perceptions of success. Although this study implicitly considered these usage differences, future research could follow a more explicit approach to examine the influence of passive, active, and participative usage contexts on the validity of the proposed model.

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## Appendix A: Main SocioCitizenry measures

### Improved knowledge – new construct

- I follow the content of this social media account because it:
  - improves my knowledge of governmental operations
  - enhances my understanding of governmental activities
  - increases my awareness of governmental actions

### Enhanced relatedness – new construct

- I interact with this social media account because it helps me:
  - communicate my views about governmental actions to officials
  - express my opinion about public works to decision makers
  - convey my views about governmental activities to public officials

### Content-based trust - modified from Fogg and Tseng (1999) and McKnight (2005)

- I count on the information about governmental operations that come from this social media account because it is:
  - reliable enough for my purposes
  - dependable enough for my needs
  - accurate enough for my activities

### Engagement-based trust – the first two items were adapted from Aladwani (2002) and (McKnight, et al., 2011)

- I trust the engagement style of this social media account because it is:
  - attentive enough for my purposes
  - helpful enough for my activities
  - constructive enough for my needs

### Content meaningfulness - modified from Aladwani and Palvia (2002)

- The information about governmental operations that come from this social media account is complete enough for my needs
- The clear information about governmental operations that come from this social media account lives up to my expectations
- The relevant information about governmental operations that come from this social media account is appropriate for my uses

Interaction engagingness – the first item was adapted from Aladwani (2002)

- The engagement style of this social media account is interactive enough for my purposes
- The receptive engagement style of this social media account fits my needs
- The flexible engagement timing of this social media account matches my expectations



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