

# Psychological Ownership and Citizens Engagement in Government Social Media Services: An Empirical Study

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**Abstract:** Governments need to engage citizens, the ultimate stakeholders, in governmental process to improve the quality of public service. To that end, social media platforms, these days, opened up opportunities for governments to establish effective and interactive communications with their citizens on almost real time basis. However, not all governments are succeeding in extracting desired benefits from the interactive trait of social media to increase engagement with citizens. To examine what factors motivate citizens to effectively engage in interaction with the government in its social media platform, this research puts forward a new construct namely, psychological ownership of a social media window. The hypotheses have been tested by analyzing data from an online survey conducted amongst 269 facebook users of Bangladesh Government's a2i (Access to Information: a program responsible for implementing e-government initiatives in Bangladesh) facebook page. The analysis finds strong positive relationship between citizen's psychological ownership of Government's social media window and his/her active engagement with it. The outcome of the study gives cue to government organizations about the importance of paying due attention and strategizing social media services in a way that would create feeling of psychological ownership of citizens.

**Keywords:** Citizen's engagement, psychological ownership, social media, e-government.

## Introduction

Social media is more and more being used as tools for government-citizens knowledge sharing and interaction (Cormode and Krishanmurthy, 2008; O'Reilly, 2007). As a low cost and effective communication platform, social media is a strong instrument for government to disseminate information among citizens who are social network service (SNS) users. Subsequently, it enables government to have greater level of interactive engagement with its citizens. Participation and involvement of citizens in governmental processes can play pivotal role in improving quality of public services by aligning the services with the needs of people, and holding the public officials accountable (Milakovich, 2010). Moreover, government can use social media for its stakeholders to generate innovative ideas that could be employed for improving the quality of service

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delivery. Unfortunately, not all governments are succeeding in harnessing true potentials of its interactive nature of social media to improve citizens' engagement (Brainard and Derrick- Mills, 2011; Brainard and McNutt, 2010; Mergel, 2013). Therefore, there is a need to find out the underlying factors that would motivate citizens to effectively engage with government's social media services. This study aims at finding out the factors that inspire a SNS user to spontaneously engage him/her in government social media.

E-government research, of late, looked closely into a number of key behavioral outcomes of social media adoption of e-government, such as government-public relationship (e.g. Hong, 2013), citizens' participation (e.g. Zavattaro and Sementelli, 2014), collaboration (Linders, 2012). However, enough attention has not been given to examine the process of formation of such behaviors. Past research such as (Al-Debei et al., 2013; Lee and Kwak, 2012, Bonsón, 2015) call for further research on citizens' engagement with government's social media platforms since fostering citizens' participation in social media platforms remains as a challenge for both researchers and practitioners. Therefore, insights in the motivating factors for citizens to actively engage in the e-governments social media services would equally benefit researchers who have been trying to explain technology use behavior and practitioners of public administration, who want to effectively use the technology for citizens' engagement.

Taking cue from the psychological ownership (PO) theory (Pierce et al., 2003), this study makes an attempt to understand whether the perception of psychological ownership of government social media services influences users' (citizens') social media engagement. Pierce et al., (2001) explains psychological ownership as a feeling of possessing an object and of being psychologically connected with it. Earlier research finds that members with psychological ownership of a virtual community make greater contribution (Lee and Suh, 2015). Similarly, this research proposes that if citizens have psychological ownership of government's social media services, they would engage and interact more with those services. Citizens' social media engagement has been looked into from following three perspectives in this research: 1) to engage interactively with government through dialogue; 2) to promote government's social media-led services to social media friends resulting in positive word of mouth (WOM) effect for e-government services, and 3) to remain as loyal users of e-government social media services.

This research, therefore, suggests 'psychological ownership' as a new and useful construct in the field of e-government research. Psychological ownership may aid public service practitioners to use SM more effectively to harness maximum benefit from using SM services.

The upcoming part of this paper has been organized in the following manner: First, a theoretical background has been constructed by critically examining and reviewing the existing literature in the field of the use of social media in e-government systems to

conceptualize citizens' engagement and psychological ownership. Then, a research model is proposed and hypotheses are developed. After that, the research model is tested and cross-validated by analyzing primary data collected from the users of an interactive Facebook page of Bangladesh government. Next, the results of the analysis and findings are presented and implications of them for practitioners and researchers are discussed. The paper concludes with some interesting future research suggestions.

### **Theoretical Background**

User engagement in social media is action orientated and involves activities like posting, comment, like, sharing, votes, +1s, links, tweets, re-tweets, video views, content embedding, etc. (Campbell, et al., 2014). This study, however, considers a broader scope of user engagement in social media. It regards users' (citizens') engagement as behavioral manifestation with following three elements: 1) Participation: the degree of active engagement of users of government social media as both consumer and contributor of information. 2) WOM: Recommending government social media services by users of the services to other citizens, and 3) Continuance intention: users' (citizens') level of willingness to carry on their engagement/relationship with government social media services. This research pivots on the expectation that Psychological Ownership (PO) of government's social media services by the users will define the level of citizens' engagement with the social media. PO is the emotional state of mind of user that makes him/her feel that he/she owns something and motivates him/her to remain engaged with it. It is an intrinsic aspect of human behavior.

### ***Psychological Ownership (PO) in e-government Context***

Marketing research finds that consumers with the feeling of possession of a product or service are more satisfied as they are more willing to pay for it, continue relationship with it, and spread it through positive word-of-mouth (Fuchs et al., 2010; Peck and Shu, 2009). As the government agencies embark upon improving e-government service delivery by considering citizens as 'customers' like in private sector, (Gronlund and Horan, 2004; Heeks, 2006), research on e-government, these days, calls in theories from diverse disciplines to study and explain citizens' behavior towards e-government services (e.g. Park et al., 2015). In that manner, although used largely in organizational management and marketing research, theory of psychological ownership could well be employed to explore influence of the use of social media in e-government on citizens' engagement in terms of use of e-service use, knowledge sharing and endorsing e-government services to others. Psychological Ownership – the feelings that an object is 'mine' or 'ours' – is being used continually by researchers and practitioners as a significant indicator to forecast attitudes and behaviors of employees in organizations (e.g. Dyne and Pierce, 2004). Psychological Ownership is one's *feeling of possessiveness and of being psychologically tied to an object even if it is not legally theirs* (Pierce et al.,

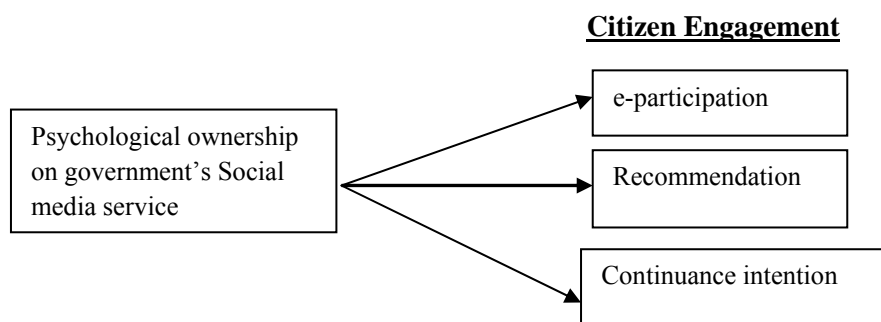
2001; Avey et al., 2009). Such ownership feelings of tangible or intangible ‘targets’, makes people feel connected with those targets (Dittmar, 1992). When individuals feel such possession of targets, it can become so much deep rooted in them that they view the targets as integral part of their identity (Dittmar, 1992). Researchers identified three potentially interrelated routes to psychological ownership (Pierce et al., 2001, 2003; Avey et al., 2009; Pierce and Jussila, 2011), which are: (a) effected command over the object, (b) get to closely know the object, and (c) investment of the self into the object. Above routes of psychological ownership garnered cross-discipline recognition, including in the literature of psychology, social psychology, human development, organizational behavior, and sociology. However, the degree of influence of these routes over individuals may vary (Karahanna et al., 2015).

A careful review of literature unveils that a greater majority of prior research stresses on the effect of psychological ownership on organizational behaviors such as performance and work attendance, and on attitude (e.g., satisfaction). Those research, however, were done predominantly on organizations working in offline set up. Since unlike offline organizations, the virtual communities do not have tools to employ reward systems to consolidate ownership, further studies are required to examine the adoption and extension of psychological ownership in online environment (Lee and Suh, 2015). This research attempts to further the study of psychological ownership in the context of e-government by considering social media services as target of ownership.

### Hypothesis Development

The main intentions of government’s social media such as promoting government services, providing easy access to government information, and developing relationship between citizens and governments will be realized if citizens actively engage in that channel. Figure 1 depicts the proposed research model and predicts that the feeling of psychological ownership (PO) by citizens of the government’s social media (SM) will act as a stimulator for their active engagement in that media.

**Figure 1: Research Model**



**Control:** Length of association in government's SM, Perceived ease of use, previous e-Govt. use experience and Demographic characteristics.

***Consequences of PO on government's Social media service:***

Rogers and Freundlich (1998) state that the employees, who have the feelings of ownership of their organizations, feel like having the right to sway the directions of and demonstrate to have a 'deeper responsibility' than the ones, who lack that feelings. If people feel ownership of an organization, they are proactive in making behavioral contributions to the organization, investing time and energy to benefit the organization (Dyne and Pierce, 2004). In their study on virtual community context, Lee and Suh (2015) empirically found that there is a positive relationship between psychological ownership of a virtual community and positive evaluative judgments about the community which positively influence members' contribution in the community. We, therefore, expect that when the government's SM provide citizens with a feeling of PO, they will be provoked to reciprocate (Gouldner, 1960) which lead them to investing time and energy to benefit the services i.e. they will engage proactively with the SM for its success. This study seeks to examine whether citizens' feeling of PO leads them to engage more in the government social media in terms of 1) active participation in the dialogic interaction with the government, 2) recommending social media led e-government services to his/her social media friends, and 3) continuance of the use of e-government social media services.

***Participation***

This study defines participation as the extent to which citizens are actively engaged in the social media both in terms of information consumption and contribution. According to Burgoon et al., (2000), citizens' participation means active engagement as opposed to giving monologues, passively observing, or lurking. Government deploys social media platform to increase the capacity for citizens' participation and participation implies the active involvement of citizens in government decision making" (O'Leary et al., 2006, p. 7). Koh and Kim (2003) regarded participation as a voluntary-helping behavior in virtual community (e.g., providing valued information and knowledge for help-seeking members). They argue that although contributing knowledge to a virtual community is completely voluntary and is not supported by formal compensations, a feeling of psychological ownership over the community may lead one to be keener to contribute knowledge they believe valuable for the interests of the community. Feeling of PO over a target stimulates individuals to feel that they have a 'deeper responsibility' than those who do not feel ownership (Rogers and Freundlich, 1998). In the same sense, when citizens have psychological ownership on government social media, they will proactively share knowledge to make contributions on that media. Therefore, the hypothesis is

**H<sub>1</sub>:** Psychological ownership has a positive relationship with citizens' participation in government social media.

### ***Recommendation***

Users' recommendations about services to other users create Word-of-mouth (WOM) effect. WOM is defined in this study as *citizens to citizens recommendation about government social media services* (based on File et al., 1992). Word-of-mouth is particularly useful for service providers who offer intangible and experience/credence-based items (Taghizadeh et al., 2013) because, consumers of such services rely heavily on the advice and suggestions from people who have used the service. Wang and Doong (2010), in their study on Taiwanese e-government promotional effort, found that citizens communicate their own usage experiences about e-government services across their social networks. Dichter (1966) argued that product involvement results in WOM which directs Asatryan and Oh (2008) to empirically test the positive relationship between psychological ownership and WOM in service industry. They suggested that intimate knowledge about the object of PO may result in excitement about the target of ownership and evoke the customer's desire to share his/her experiences with others in his/her personal network.

Moreover, PO is positively associated with the performance of extra-role behavior (Pierce et al., 1991; Vande Walle et al., 1995). Extra-role behavior is constructive work efforts that benefit the organization and go beyond the required work activities and is not formally rewarded by the organization, (Katz and Kahn, 1978). Based on the above arguments, this study predicts that when citizens develop feelings of possession towards the governments' social media, this feeling should stimulate willingness to share information and experience about the service with others in their network. They will find themselves responsible for the success of the services and will consequently promote it positively. Hence, this research hypothesizes that

**H<sub>2</sub>:** Citizens' feeling of psychological ownership on government social media services positively influences recommendation intention.

### ***Continuance Intention***

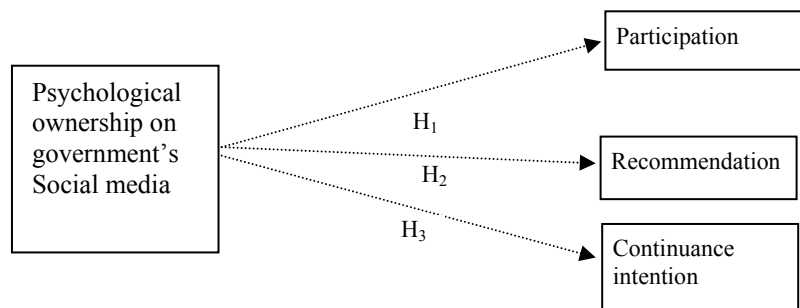
A high level of PO tends to result in a higher willingness to continue a relationship with the target of PO (Pierce et al., 2003; Pierce et al., 1991; Vande Walle et al., 1995). Strongly attached individuals incorporate a target as part of their self (Mikulincer, 2007) and hold salient thoughts and feelings about it. Research on brand engagement behavior showed that perceived oneness with a brand motivates consumers to enact relationship-sustaining behavior. Because, possessions help create "a place", which is symbolically captured by the concept of "home" (e.g. citizens might feel the government's SM as their online home) (Dreyfus, 1991). Therefore, the hypothesis is

**H<sub>3</sub>:** Citizens' feeling of psychological ownership on government social media services positively influences the continuance intention of this media.

### ***Control Variables***

Demographic factors such as age and gender could potentially affect IS-related phenomena (e.g. Kim and Son, 2009; Venkatesh et al., 2003). Prior research indicates an association between an individual's demographic characteristics in the adoption of e-government services as well as of social media service. This study therefore, controls the effect of these variables. Figure 2 below presents the research model that includes the hypotheses to be tested with the users of e-government social media services.

**Figure 2:** Research model



### **Methodology**

Quantitative research methodology has been employed in this study. The research model is empirically tested using primary data collected through a cross-sectional online survey. Users of the Facebook page (<https://www.facebook.com/a2iBangladesh/>) of Bangladesh Government's Access to Information (a2i) program were the respondents of the survey. The Official Facebook Page of a2i is a social media platform which Bangladesh Government operates in order to promote e-government services and initiatives, establish citizen-government connection, ensure citizen access to government information, and ensure responsiveness and transparency. Number of Facebook users in Bangladesh tallies up to 21 million (June 2017, internet world statistics) and growing, constituting 34% of country's population. The a2i Program, therefore, made a clever choice to use Facebook to reach out to citizens widely and, thus, motivate them utilize the e-government system. The interactive Facebook page of a2i propagates government information, where users can provide their critical views, feedback, comments on government services and also can post contents. Government administrators can and do respond to those feedbacks. Interactive nature and popularity of a2i Facebook page has prompted us to choose its users as respondents to test their search model.

The measurement items were borrowed mainly from existing scale that has proved reliable and valid in previous research works. For all variables, 5 point Likert-type scale measures ranging from 1 for “strongly disagree” to 5 for “strongly agree” were used. Following Dyne and Pierce (2004), psychological ownership is conceptualized as a uni-dimensional construct, summing the four aspects of PO (Lee and Shu, 2015) into a singular scale. The items measuring the participation dimension include scale used by Chan-Olmsted, (2013). Recommendation was measured using three items adapted from Srinivasan et al., (2002) and for continuance intention 3 items were adopted from Udo et al., (2012). Each of the control variables (i.e. age, gender, and occupation) were measured using a single item scale.

To attain reliability and construct validity level of the scales, a pilot survey was conducted with 50 questionnaires. Cronbach’s alpha was used to ensure reliability and confirmatory factor analysis (CFA) was performed for construct validity (Gefen and Strub, 2005). We also conducted Composite Reliability (CR) and Average Variance Extracted (AVE) test to measure convergent validity. We then sent invitation to the 500 active (in terms of giving like, share or comments on the contents of the page) Facebook users randomly chosen from the official Facebook page of a2i using the message option of their Facebook account. A total of 328 users agreed to participate in the survey. Responses were collected using google forms, and 269 responses (82 percent) were found usable. Around 4 percent of respondents are female and about 90 percent are between 18 and 35 years. The ratio of private organization employees and government employees are around 22 percent and 8 percent respectively.

## **Analysis and Results**

### ***Data Analysis Approach***

Structural equation modeling with partial least squares (PLS) technique was adopted using Smart PLS V2.0M3. The PLS model included PO and three factors of citizens’ engagement as first-order, reflective constructs.

The reliability scores of all the principal constructs are above 0.8, which exceed the recommended cutoff value of 0.70. All multiple-item constructs achieved Cronbach’s alpha of 0.71 or higher. The square root of the average variance extracted (AVE) for each construct was much larger than all cross-correlations between the constructs (Chin, 1998). All AVEs were above the recommended value of 0.50 (Bagozzi and Yi, 1988; Fornell and Larcker, 1981). All these tests indicate that the measurement items have achieved high internal consistency and reliability. Table 1 summarizes the measurement quality and reliability of the measurement scale.

Cross-factor loadings and the square root of the AVE (diagonal elements) for all constructs were checked to confirm discriminant validity between constructs (Fornell and Larcker, 1981).

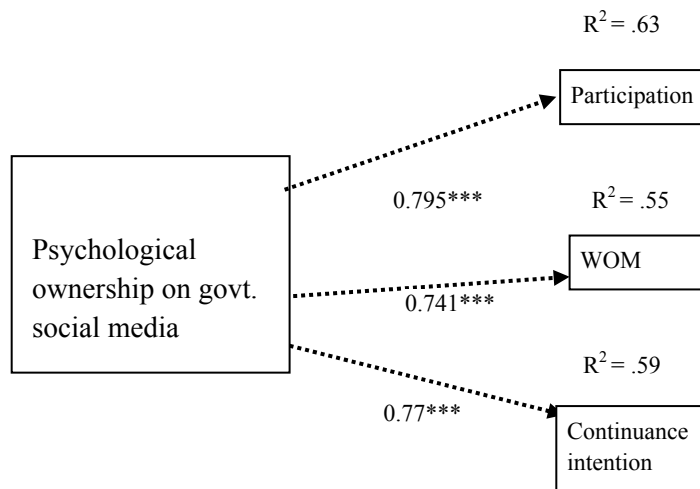


**Table 1: Measurement Quality, Cronbach's Alpha, Reliability**

	AVE	Composite Reliability	Cronbach's Alpha
CEng	0.591	0.9407	0.9306
Cnt	0.8782	0.9558	0.9307
PO	0.6465	0.9013	0.863
Prt	0.6631	0.9077	0.8728
WOM	0.8302	0.9362	0.8976
Occu	1	1	1
Age	1	1	1
Gen	1	1	1

Note: : CEng= Citizen engagement, Cnt= continuance Intention, Gen=gender, Prt= Participation, PO= Psychological Ownership, WOM= Word-of-Mouth, Occu=Occupation

### **Structural Model**

**Figure 3: Result of Data Analysis for Hypotheses**

**Control** : Age : 0.092, -0.10, Gender: 0.008, -0.031, Occupation: -0.005, -0.031

**Note:** P values (\*\*\*) means  $P \leq 0.001$

Figure 3 shows the result of the analysis of the structural model generated by PLS method. The results include the path coefficients, t-values of the paths based on two-tailed t-tests, and the amount of variance explained, i.e. R-squares. A bootstrap procedure

with 1000 subsamples was conducted to find the significance of the path estimates statistically. The results show that the hypothesized relationship between constructs are significant. PO ( $\beta_1=0.795$ ;  $t= 28.72$ ;  $p <0.001$ ,  $\beta_2=0.741$ ;  $t= 14.91$ ;  $p <0.001$ , and  $\beta_3=0.77$ ;  $t= 11.85$ ;  $p <0.001$ ) have significant effects on citizen's participation, recommendation and continuance behavior in government social media services. Therefore, Hypotheses 1, 2 and 3 are supported. We also found that PO explains 0.63% of the variance of citizens' participation, 0.55% of the variance of citizens' recommendation and 0.59% of the variance of citizens' continuance intention behavior.

### **Discussions and Implications**

Since practitioners and researchers confront major challenge in nurturing citizens' engagement, which is a fundamentally important success factor for government's social media (e.g. Al-Debei et al., 2013; Lee and Kwak, 2012, Bonsón, 2015), they have expressed need for more research on government SM platforms from the point of view of citizens' engagement. The basic question this research attempted to answer was whether psychological ownership played conclusive role to foster citizens' engagement in the government's Social Media. The result confirms that psychological ownership of Social Media (PO) is a strong stimulus to realize citizen's engagement in government's Social Media. Findings demonstrate that a large part of the variance of citizens' participation (63%) and continuance intention (59%) are explained by their feelings of ownership (psychological ownership) of the government's Social Media. Psychological Ownership also explains 055% of the variance of how citizens recommend government social media to others. In general, the proposed model of the research has been able to explain 71.7% of the variance ( $R^2$ ) in citizens' engagement with government's social media.

Age, gender, and occupation were three control variables used in the research model. Users' age was found not to have any impact on users' engagement in government's social media, probably because of the lack of diverse age-range of respondents. More than 89.44% respondents were below 35. Impact of gender was also found insignificant. Lack of female respondents (only 8.4% of the total respondents) in the study could have played a role in such result. Results also suggest that occupation of citizens doesn't have any link with their engagement behavior in government's social media. These findings of this research carry significant theoretical and practical implications.

First and foremost, this study is one of the pioneering studies that employed theory of psychological ownership (PO) in e-government context. Second, the research explores the mechanism (i.e. PO) that inspires citizens to engage in government's social media. The findings of this study, thus, significantly fill the gap that existed in social media research in e-government context. Third, this study uses a people-centric approach to describe citizens' motivations, needs and engagement behaviors in government's social media. Barring few exceptions (e.g. Hong, 2013; Hong, Park, Lee, & Park, 2012), prior

research adopted an administration-centric perspective (Lovari and Parisi, 2015). Finally, this study successfully introduces the concept of psychological ownership of offline environment to online context, and empirically proves that government's social media services are deserving candidates for target of psychological ownership.

As a whole, this study may inspire researchers a new stream of research in the context of e-government in Bangladesh. Past research dealt with other channel of e-government service delivery. Hossan et al., (2005); Akanda and Roknuzzaman (2012), for example, studied the success of short message service (SMS) based e-government services; Akanda and Roknuzzaman (2013); Shahnewaz et al. (2015) examined e-service provided by Union Information Service Centers (UISCs) of Bangladesh. District e-service center of Bangladesh has also drawn attention of researchers (Salam and Islam, 2013). However, this study pioneers in developing a model to study public sector social media for citizens' engagement in Bangladesh context.

The study gives clue to the administrators of how to utilize social media technology in e-government communication plans and how to improve social media technically and qualitatively. This research establishes that psychological ownership may inspire citizens to maintain active engagement in governments' social media. Therefore, the study demonstrates that government can use social media platform to harness innovative knowledge of citizens by ensuring their high level of engagement with the social media by nurturing citizens' psychological ownership of the government social media.

### **Conclusion, Limitations, and Directions for Future Research**

This study conducts a comprehensive review and empirical examination of the citizen engagement behavior in government social media, a G2C service delivery channel. Social media offers government an opportunity to be more reachable, reliable and transparent as well as allows citizens to actively engage in the e-government systems. By confirming the research hypotheses developed, this study establishes a new insight concerning how social media (facebook) is shaping the landscape of citizen engagement using the theory of psychological ownership. Citizens' feeling of PO on government social media lead them to engage more in terms of 1) active participation in the dialogic interaction with the government, 2) recommending social media led e-government services to his/her social media friends, and 3) continuance of the use of e-government social media services.

Since data analysis of this research has been conducted using mostly self-reported survey data, there remains a possibility of bias in the result. While citizens' engagement behavior can also be influenced by factors other than psychological ownership (such as civic mindset or perceived public value) this study emphasizes only on the importance of creation of psychological ownership for improving citizens' engagement in public sector

social media. Future research may incorporate those factors into their study to broaden the scope of the research. Since this research used a cross-sectional research design, future research may conduct a longitudinal study to reconfirm the causal relations among the variables of the study.

The positive influences of psychological ownership demand future research on the antecedents of psychological ownership in the context of government's social media. It may be worth examining the features of social media and types of service facilities that would create sense of psychological ownership of its users, and the effective way to deploy social media to make it more interactive and more personalized so that citizens feel ownership of it. Finally, future research may also try to find whether psychological ownership of government social media and/or citizens' engagement in it lead citizens ultimately to take up the e-government services in totality.

**Note:** This work is based on a part of the PhD dissertation of the author of this paper. The thesis was done from Yonsei University, South Korea and some of the data sets of the dissertation have been used in this paper.

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